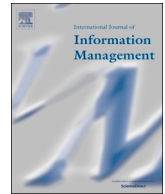




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The prospects of Internet-Based Channel Orientation for the competitiveness of service companies on the domestic market

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ABSTRACT

Drawing upon theories governing micro-institutions and strategic actions on resources, this study proposes a model suitable for assessing the antecedents and consequences of “Internet-Based Channel Orientation” (IBCO) on the operations of domestic companies of moderate or lesser size. Investigation focused primarily on the entrepreneurial capability (ENCAP) of such firms and industrial competition (INDCOM) as predictors of the IBCO of a business. Analysis was conducted as to whether IBCO contributed to heightened market sensing capability (MKTSENSE) and indirectly reinforced competitiveness. To this end, data was sourced from 198 firms based in Nigeria, typically micro-, small- and medium-sized businesses. Statistical analysis indicated that IBCO had a stronger and direct effect on encouraging the fluency of operations at small- and medium-sized enterprises. However, IBCO in combination with a competitive advantage was insufficient to attain competitiveness, the magnitude of such an effect being indirectly anchored to the MKTSENSE of the firm. This study highlights that businesses need to invest in Internet marketing tools and employ them effectively to stay competitive over the long term.

1. Introduction

Information and communications technologies (ICT) have infused with the business operations of firms in recent decades, one of the most prominent being the Internet. The influence of the Internet on competitiveness has been widely studied and reported in the literature (Avlonitis & Karayanni, 2000; Celuch & Murphy, 2010; Doherty, Ramsey, Harrigan, & Ibbotson, 2016; Hamill & Gregory, 1997; Hinson & Adjasi, 2009; Lagrosen, 2005). A lot still remains to be learned about how implementing them as strategic resources effectively translates into competitive advantage for domestic, small- and medium-sized service companies. There exists the desire on the part of academia and industry to comprehend how the approach of a micro-institutional business to customer-facing information systems, such as Internet-based channels (hereafter referred to “Internet-Based Channel Orientation” - IBCO) translates into or impacts its competitiveness (Cristani, Bertolaso, Scannapieco, & Tomazzoli, 2018; Zhou, Zhang, Chen, & Han, 2017). Extensive research has been conducted to discern links between information management (i.e. the gamut of information systems and related communication technologies) and the profitability and long-term

competitiveness of companies (Alalwan, Dwivedi, & Rana, 2017; Dwivedi et al., 2015; Kizgin et al., 2019). The endeavour to seek such insight is primarily driven by the need for stakeholders to gain a better understanding of the role and influence of information management, taking into consideration the extent to which mechanisms such as Customer Relationship Management (CRM), Enterprise Resource Planning (ERP) and a host of other productivity-enhancing information and communication technologies (ICTs) affect a firm, irrespective of its size (Ajibade, 2017; Ako-nai & Singh, 2019; Prajogo, Toy, Bhattacharya, Oke, & Cheng, 2018).

Quinton, Canhoto, Molinillo, Pera, and Budhathoki (2018) stated that firms now view the Internet as a vital and strategic tool for engaging with customers and external stakeholders, with a view to prioritizing efforts to leverage Internet channels as proven tools for addressing and consolidating marketing opportunities.

Small- and medium-sized domestic companies in the service sector, of a type which generally fall under the category of SMEs, are of strategic importance to the economy of a country. Empirical evidence from prior research has shown that they constitute the main engine for economic growth, and they are essential to the socio-economic well-

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being of citizens, since they generate a significant volume of employment opportunities (Gherghina, Botezatu, Hosszu, & Simionescu, 2020; Tripathi, 2019; Wonglimpiyarat, 2016). Accordingly, the workforce engaged in them is the largest concentration of available labour (Amin, 2019; Gourlay & Becker, 2012; Sertić, Barčić, & Klarić, 2018). Several studies have been conducted on the effect of ICTs, these constituting essential factors for growth and net positive contribution, on the sustainable growth and profitability of SMEs (Amin, 2019; Rivza et al., 2019). It has been suggested that the adoption of Internet-based technology has the potential to boost the competitiveness of a firm (Andoh-Baidoo, 2016; Asamoah, Agyei-Owusu, Andoh-Baidoo, & Ayaburi, 2019). In this paper, a different view is taken, hypothesizing that there might not always be an interconnection between IBCO and a competitive edge. Since IBCO is touted as a strategic resource of a lower order, any resultant effect, particularly on competitiveness, is likely to be mediated by a higher-level mechanism. Such a phenomenon is usually referred to as “market sensing capability” (Ghasemaghahi, Hassanein, & Turel, 2017; see also: Celuch & Murphy, 2010; Grant & Yeo, 2018; Zhou & Li, 2010). Several researchers argue that Internet-based channels (IBCO), or digital technologies in general, are not the primary means of achieving competitive advancement (Koch & Windsperger, 2017; Michael, Romana, Christiana, Wolfgang, & Eva, 2019). We deliberate in this paper that adopting IBCO to a heightened extent aids market sensing capability in a symbiotic relationship, thereby enhancing the competitiveness of a business. Thorough investigation is given over to the matter despite the proposal of this hypothesis; indeed, empirical study of IBCO with significant predictors is unusual in the literature, especially as it pertains to domestic companies of moderate or lesser size engaged in the service sector. It has been contended that entrepreneurial capability (ENCAP) directly affects capacity for outreach via the Internet, specifically in terms of marketing (see Bengtsson, Boter, & Vanyushyn, 2007; see also Glavas & Mathews, 2014; Mostafa, Wheeler, & Jones, 2006). Notably, further research has been called for in past works to discern which associations exist between ENCAP and endeavour in supportive marketing on the Internet (Mostafa et al., 2006; Palese & Usai, 2018).

It has been suggested that firms leverage the Internet, via instruments such as transactional digital platforms, to retain competitive relevance in a business environment that is undergoing rapid change driven by technological innovation (Gawer & Evans, 2016; Gawer, 2014; Maduku, Mpinganjira, & Duh, 2016; Senyo, Liu, & Effah, 2019). This view is shared by Bengtsson et al. (2007) and Chatterjee and Kar (2020), who stated that market pressure was a key factor that led small- to medium-sized firms to adopt Internet-based marketing as part a strategy to stay competitive. A study by Iacovone, Pereira-Lopez, and Schiffbauer (2016) presented novel analysis of the competitive pressures that propelled Mexican businesses to adopt Internet-based tools, such as social media, for marketing purposes and engendering customer engagement, alongside methods for on-line sale of products; such instruments potentially brought about greater profitability and growth in market share. Their findings are consistent with those investigating the role of ICTs (including the Internet) in boosting the competitiveness of firms of all sizes (Cerchione & Esposito, 2017; Gawer & Evans, 2016; Hosseini, Fallon, Weerakkody, & Sivarajah, 2019; Senyo et al., 2019). However, such research does not provide insight into the circumstances that affect small- and medium-sized enterprises in the service sector. This paper seeks to address a significant gap in the literature by gauging whether extraneous factors, such as the extent of competition in the sector (INDCOM), encourage companies of the given type to pursue IBCO. The other aim is to assess what relationship exists between IBCO, INDCOMP and ENCAP, arguing that the latter two constitute strong predictors of the other. As a consequence, this study is rooted in what is described as a framework of resource, strategic action and competitive advantage (Ketchen, Hult, & Slater, 2007), combined with a micro level view to identify processes involving IBCO that a firm implements to boost competitiveness.

Integrating these two areas of investigation permits analysis of antecedent and consequent factors relating to IBCO, while the paper in general seeks to stimulate new academic thought on the topic. Although great consideration is given over to how said companies can gain a competitive edge in the contemporary and challenging business environment, the focus here is on understanding the process through which IBCO potentially influences competitiveness, in addition to identifying its predictors. We posit that the initial findings of the study could have some positive and practical implications for the managers of the type of organizations targeted, permitting them to discern sustainable paths to competitiveness.

The paper is laid out as follows: a brief theoretical foundation of the study, discussing the two primary theoretical approaches; a conceptual model and formulation of hypotheses; the methodology and results; debate, the theoretical contribution of the study and insight for management; and lastly, concluding remarks

2. Theoretical background

As previously disclosed, this study adheres to a framework encompassing resource, strategic action and competitive advantage (Ketchen et al., 2007) in conjunction with the micro-institutional perspective on the firms in question (Scott, 2001). Combining these two aspects permits any inadequacies and limitations to be identified. The authors considered it necessary to adopt an intuitive approach to reasoning, involving axiomatization of relevant components from theories to achieve a logical and semantic composite. According to Horvath (2019), axiomatic fusion enables researchers to create an inferential connection between elements of a component of different theories, giving rise to a new supposition synthesized from them. Two avenues of research permitted comprehension of the degree of competitiveness inherent to the service companies analysed, with a view to IBCO. The aforementioned framework attests to the fact that most decisions made by management are informed by internal strategies geared towards practical and prolific attributes initiated by the firm (Grant & Yeo, 2018; Kapoor, Dwivedi, & Williams, 2014). These attributes aid the conduct of fluent business operations (Armstrong, 2006). This is why actions taken by small- to medium-sized organizations eventually result in a positive outcome, in aspects like competition and sustainability. This is a key approach adopted by researchers to modelling the progress of micro-enterprises (Abed, 2020; Rumelt, 1997). The fundamental assertion of strategic action theory is that such entities encourage trade through their internal activities alongside consideration of competitive and environmental factors.

Several studies have compared the competitiveness of small- and medium-sized companies to large corporations by applying the framework described earlier. These highlight significant differences in how SMEs tackle strategic issues on staying competitive, such as internationalization. For example, SMEs in emerging economies are more likely to be motivated to internationalize to exploit their cost advantage, with the additional benefit of gaining knowledge not available domestically and strengthening their standing in the home market (Kazlauskaitė, Autio, & Modestas Gelbūda Tadas Šarapovas, 2015). The authors Ramon-jeronimo, Florez-lopez, and Araujo-pinzon (2019) applied a resource-based concept to assess the competitiveness of SMEs in comparison with larger corporations, finding that management control systems (MCSs) mediated the effect exerted by the resources of an SME on its capabilities, while such resources and capabilities in turn affected performance. They went on to state that MCSs have a dual, interrelated mediating influence pertaining to the impact of resources on performance; in particular, two significant indirect effects were pointed out – one on financial resources, the other on physical resources, while control of behaviour, building customer relationships and performance were affected alongside both. Larger corporations have more resources at their disposal, making it far easier for them to experiment and take risks, whereas SMEs are not afforded the same

luxury (Casson, 2016; Khan, 2016).

Reflecting on works by Aragón-Correa, Hurtado-Torres, Sharma, and Garcia-Morales (2008) and Palese and Usai (2018), the underlying premise for the survival of SMEs hinges on the competitive nature of their trade and the external pressures of the given business environment. Costa, Soares, and de Sousa (2020) and Tilley (1999) stated for a micro-enterprise to be efficient and effective, an inherent dependence exists on internal resources and skills. Niemimaa, Järveläinen, Heikkilä, and Heikkilä (2019) and Russo and Fouts (1997) discussed analysis by Michael Porter of industrial organograms and competitiveness in relation to positioning.

Alternatively, a micro-institutional view of a domestic company takes in the premise that radical innovations actually inhibit the implementation of (and contest against) advances that would otherwise broaden the outlook of a firm (Peng, Sun, Pinkham, & Chen, 2009; Van Dijk, Berends, Jelinek, Romme, & Weggeman, 2011). In contrast, the rationale behind the micro-institutional perspective described herein pertains to cohesion of different strategic thought that curbs crises faced by the target domestic companies in the short to long term. This study also offers insight into leveraging the opportunities presented by the Internet to obtain a competitive edge, from the viewpoint of resource-based theory in combination with capability. This is of particular interest considering how other theoretical perspectives, such as organizational learning theory and the evolutionary approach, serve to shape the comprehension of their practitioners through provision of credible evidence from academic research (Barney, 2001; Sergio, 1997).

3. Conceptual model and hypothesis development

Fig. 1 gives a visual representation of the relationship between

entrepreneurial capability (ENCAP) and industry competitiveness (INDCOMP) in contrast with Internet-Based Channel Orientation (IBCO). It also shows the interconnection between IBCO and market sensing capability (MKTSENSE), as the hypothesis is that the latter is dependent on the former. Another element highlighted is that competitive advantage might constitute a function of investment in training. The survey incorporated gauges such as expenditure by the SMEs on their human resources to raise the educational standard of employees, thereby perpetuating the growth and competitiveness of employers. The entrepreneurial capability of a firm from the point of view of resources essentially relates to utilizing the resources at its disposal to position itself in business with the aim of achieving profitability for the entity and its shareholders, while still delivering a value proposition to customers. In this context, IBCO pertains to the use of the Internet by the company to reach out to customers, in turn defining its market sensing capability; the latter being its approach to extending existing market share by seizing new opportunities that arise.

3.1. Entrepreneurial Capability (ENCAP) and Internet-Based Channel Orientation IBCO

The internet as a strategic resource has proven over time to be very important to businesses of all kinds. Empirical evidence has shown that the appropriate internet enabled technologies has enabled companies to achieve competitive advantage over their rivals within the same industrial sector (Casson, 2016; Khan, 2016; Palese & Usai, 2018). Harigan, Ramsey, and Ibbotson (2012) described that options for business marketing by SMEs differed from those available to larger business organizations. Hence, it is imperative to understand the variance that exists between them, particularly concerning how SMEs

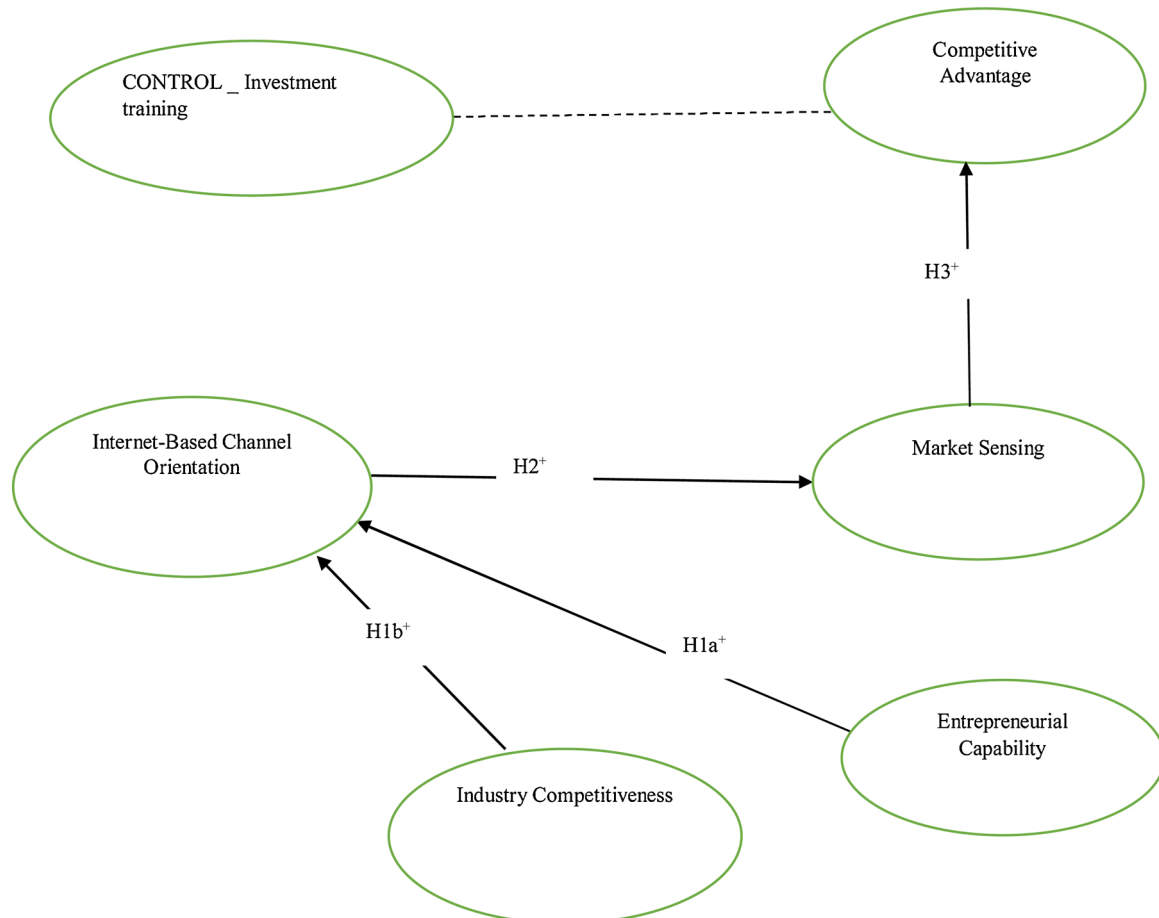


Fig. 1. The research model.

leverage technology and the Internet to enhance their entrepreneurial capability and competitiveness. Al-Abdallah (2015) argues that internet enabled technologies can affect the overall performance of a firm in many aspects such as planning, decision-making, retail and consumer engagement. Particularly in the area of engaging the consumer in ways that meets them at their points of need, Internet-based channels have proven to be particularly useful in helping companies gain market share and build brand equity. He further states that the importance of the internet in specialised business processes such as marketing is increasing because the internet has now become a powerful tool and medium, especially as internet and mobile penetration continues to increase globally. The perspective on increasing internet and mobile penetration as a factor that can be leveraged by businesses is supported by research on the increasing use of Mobile banking channels in the Jordanian banking and financial services industry conducted by Alalwan et al. (2017) who argue that several Jordanian banks introduced mobile banking as a competitive necessity, also with the intention of improving customer experience.

In addition, Muthee and Ngugi (2014), argues that there is a link between the competitiveness of SMEs, their continued survival and the marketing strategies they adopt and implement. They stated that if too few of such strategies anchored on innovation and technology, e.g. e-CRM and the Internet, their competitiveness could be significantly constrained (Baillette, Barlette, & Leclercq-Vandelannoitte, 2018; Muthee & Ngugi, 2014). Harigan et al. (2012), in research conducted in Northern Ireland, supported the statement by Muthee and Ngugi (2014), saying that the use of the Internet by SMEs significantly helps to build up customer relationships, through the occurrence of rapid and close interactions with customers. This benefits these firms as they lack sufficient financial resources to expand into new markets through the usual promotional channels, such as television, hoardings and print media (Cant & Wiid, 2016; Rabie, Cant, & Wiid, 2015; Roncevic, Lukcic, & Spoljaric, 2019; Todor, 2016). Zeng and Glaister (2016) approached the subject from the viewpoint of "firm-specific advantages" (FSAs), declaring that companies which adopt an "Internet channel only" methodology to marketing are more likely to achieve a sustainable competitive edge over those not doing so, due to the flexibility and experimentation it affords. After reviewing evidence from the literature, the suggestion is that proper utilization of Internet-based channels constitutes an effective equalizer for SMEs competing against larger entities. The following hypothesis is formulated to study what links exist between the entrepreneurial capability of SMEs and Internet-Based Channel Orientation:

H1a. ENCAP positively correlates with IBCO, in consideration of which other factors remain constant.

3.2. Industry Competitiveness (INDCOMP) and Internet-Based Channel Orientation (IBCO)

Wang and Zhang (2015) argues that there are two perspectives to understanding how the internet affects industry competitiveness. Firstly, there is the perspective of Porter based on his five forces analysis on industry competitiveness which suggests that the internet generally intensifies the rivalry among competitors; secondly, there is the "winner-take-all" perspective which suggests that the internet could be beneficial in helping industry winners further strengthen their competitive positions and reduces the competitive power of smaller or weaker competitors, which ultimately results in a less competitive industry structure. However, while both perspectives seem to be in disagreement, there is significant body of evidence from the academia and industry that suggests that businesses especially those in the small and medium sized segment that have been able to proficiently adapt their models to meet changing consumer behaviours and demands particularly by leveraging on the internet have been able to successfully position themselves for sustainable medium to long-term growth within

their industrial sectors (Ingram, LaForge, Schwepker, & Williams, 2015; Pan et al., 2015; Visinescu, Sidorova, Jones, & Prybutok, 2015). Hence, Bacik, Gavurova, and Gburova (2017) argues that when Internet-based channels are managed strategically by an SME for market sensing activities, such as promoting products or services to prospective clients, it ushers in the option to improve existing marketing activities.

This view is supported by other academics who have investigated connections between customer-facing ICTs, e.g. social media, applied for promotional purposes and the profitability of the SME (Palese & Usai, 2018), particularly through optimizing engagement in marketing and advertising in ways that reduce costs across all transactional processes (Zhang, Weng, & Zhu, 2018), these traversing the initial inquiry, use of the product after purchase and after-sales support (Bacik et al., 2017; Gedik, 2019; Mazzarol, 2015; Mogoş, 2015; Palese & Usai, 2018). They also identified several opportunities for cutting operational costs via the Internet in the management of business-to-business (B2B) supply chains. The effects of Internet-Based Channel Orientation on the industry competitiveness of the SME also include how it alters operating expenses (OPEX). Andoh-Baidoo, Osatuyi, and Kunene (2014) argued that communication and data generation constitute the primary utilities of the Internet and other information and communication technology (ICT) tools. Marketing is all about communication for companies of all sizes, while any data gleaned through analytics provides insight applicable to planning, forecasting and determining consumer preferences (Aziz & Omar, 2013; Gedik, 2019; Mogoş, 2015; Grant & Yeo, 2018). Harigan et al. (2012, p. 41) further elaborate on the importance of communication to the SME in boosting competitiveness, since the relationships a firm has with its customers could engender a major competitive advantage over larger competitors if managed properly, especially by harnessing technologies (such as e-CRM) to build on such relationships. Herein, the hypothesis below is proposed to study connections between competitiveness and IBCO:

H1b. The industry competitiveness (INDCOMP) of an SME is significantly derived from the adoption and utilization of Internet-based channels for marketing and other customer-facing activities.

3.3. Internet-based channel orientation (IBCO) and Market Sensing Capabilities (MKTSENSE)

According to Alalwan et al. (2017), the quest to improve customer experience and gain market competitiveness over rivals resulted to several Jordanian-banking institutions to adopt mobile banking as a means of delivering financial services to their customers. The drive to digitally transform banking services as a means of improving the market sensing capabilities of a firm operating in the financial services industry is a typical example of how Internet-based channels can be leveraged as a means of improving the overall competitiveness of a business by gaining brand equity, improving service delivery and competitiveness. Depending on the nature of the business activities carried out by the firm, its ability to leverage on the internet for market sensing can be varied. It is not expected that a small-scale construction firm would be able to leverage the internet in the same way that a firm that has its core business as apparels and garments retailing. Nevertheless, the emergence of digital platform-based business models is now rapidly transforming and increasing the scope of market sensing that can be achieved through the use of Internet-based channels for business organisations of all sizes (Gawer & Cusumano, 2015; Hess, Matt, Benlian, & Wiesböck, 2016; Nwaiwu, 2018). Hence, this makes it imperative for scientific inquiry that would explain the relationship between technology (in this case internet-based channels) and the market sensing capabilities of a business organisation.

Hence, it is imperative to investigate how IBCO affects the entrepreneurial capabilities of an SME, particularly its industry competitiveness and market sensing capability. To understand the interconnections, it is imperative to examine the impact of the Internet and

related marketplace through a multidimensional lens as it pertains to the performance of the SME, such as its influence on customer relationships, financial performance (profit and loss, balance sheet), operating expenditure (OPEX) and brand equity (Abed, 2020; Zhou et al., 2017). Since having a competitive advantage is important to any business, as it drives sustainable growth and secures the continued survival of the firm (Harigan et al., 2012; Palese & Usai, 2018; Porter & Kramer, 2006; Vorhies & Morgan, 2005), it is self-evident that entrepreneurial capability is tied to competitiveness, while also being linked with communication activities. Efforts put into social media, as well as business and trade constitute a source of market intelligence upon which the activities of the SME can be anchored (Grant & Yeo, 2018; O'dwyer, Gilmore, & Carson, 2009, p. 47). The literature, in works such as by Ragins & Greco (2003), establishes ties between IBCO and market sensing capability. It is stated that effective e-business strategies are founded on the capacity to provide value to the customer in terms of proposition and deliverables superior to those of rivals. It has been long postulated that, for market sensing, communication via the Internet has no impact on strategic flexibility, without a resulting positive outcome for the SME, when greater conditions for IT market-oriented alignment exist (Celuch & Murphy, 2010). Herein, a hypothesis is proposed to gauge interconnections between IBCO and market sensing capability, as follows:

H2. With other factors at a constant, IBCO positively correlates with MKTSENSE.

3.4. Internet-Based Channel Orientation (IBCO), Market Sensing Capabilities (MKTSENSE) and Competitive Advantage (COMPADV)

An understanding of how technology especially the internet when applied as a channel or medium of engaging with customers or strategic 3rd parties such as suppliers and business to business partners of a firm, and how this connects with the market sensing capabilities of the firm are instrumental in understanding how they both shape the industry competitiveness of the company will be affected in the long run. This is because empirical evidence has shown that the competitive advantage of a firm is connected to its level of technology proficiency and how it is able to leverage technology in growing its market share and brand equity. Ingham, Cadieux, and Mekki Berrada (2015) supports this view by arguing that there is an increase in the numbers of consumers that are migrating to electronic commerce as a viable alternative to traditional shopping in their search for information and purchase of goods and services. In addition, Visinescu et al. (2015) comments that online retailing has become a viable, and often preferred, alternative to traditional brick and mortar stores, and as the technology through which we access the Internet continues to evolve, businesses are being pressured to refine their technology adoption and use strategies particularly those technologies that are customer facing.

According to Porter (2001), "many of the companies that succeed will be ones that use the Internet as a complement to traditional ways of competing, not those that set their Internet initiatives apart from their established operations." This position is corroborated by Vorhies and Morgan (2005), who conducted research appraising the correlation of eight different factors that affected competitiveness. One of the factors investigated was the impact of customer-facing ICTs, such as the Internet, on marketing capability. They found that such technologies created the opportunity to heighten market sensing capability and competitive advantage; the reason being that technologies facilitated by the Internet make it possible to establish distinctive strategic positions unachievable with older forms of IT (Porter, 2001). Vorhies and Morgan (2005) discerned that appropriate deployment of technologies significantly bolstered marketing endeavours, a position reinforced by Leeftang, Verhoef, Dahlström, and Freundt (2014). Said authors believed wider use of the Internet across the globe would turn digital-based channels into key sources of competitive advantage in the

business-to-consumer (B2C) and business-to-business (B2B) sectors. The hypothesis formulated to explore the relationship between IBCO, market sensing capability and competitive advantage, while taking into consideration factors such as investment in training, is as follows:

H3. With factors such as investment in training as a constant, MKTSENSE positively mediates the relationship between IBCO and COMPADV.

Such exploration is guided by the conceptual framework given in Fig. 1 below:

4. Methodology

4.1. Data collection procedure and sample overview

This study calls upon independently conducted surveys, stemming from a recent research project sponsored by the university faculty. The parties targeted were primarily domestic companies based in Nigeria, typically micro, small and medium in size. These SMEs operated in various business sectors, including financial services (e.g. insurance brokers and small "micro-finance" banks). A total of 198 questionnaires (89.59 %) out of 221 received were found to be complete and applicable for analysis. The given entities employed between 10 and 49 employees each, and the respondents for the most part (83 %) comprised male executives. The participating firms were located in southern Nigeria. Approximately 51 per cent of them declared investment was made, at least once a year, into developing the skill levels of employees.

4.2. Construct operationalization

Measurement of response was defined in a five-point scale, ranging from strongly disagree to strongly agree. A summary of constructs, operationalization and supporting literature is found in Table 1: Measurements of Constructs).

4.3. Common Method Variance (CMV)

Since this study drew upon independently gathered data, there was the potential for common-method variance. In accordance with recommendations in the literature (e.g. Kock, 2015; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), ex-ante and post-hoc analyses were carried out. Respondents were assured that there was no right or wrong answer to each question in the survey, and their personal data would be treated as confidential. A simple way to test if CMV affects a study is to implement Harman's single factor test, which brings everything together (latent variables) under one common factor. If total variance for a single factor is less than 50 %, then CMV is unlikely to affect the data. Results from Principal Axis Factoring (PAF), especially applying the rule of Harman's (unrotated) method, revealed at least three factors with Eigenvalues greater than one; similarly, variance attributed to a single factor equalled less than 15 %. Therefore, any trace of CMV was minimal at best.

5. Results

The partial least squares structural equation model (PLS-SEM) was employed to obtain measurements and test the hypotheses proposed. The results were generated with the aid of statistical software (ADANCO 2.0; according to Schuberth, Henseler, & Dijkstra, 2018). PLS is noted as appropriate for testing hierarchical latent variable models, hierarchical component models and higher-order constructs. Comparison was made with the covariance-based structural equation (Hair, Ringle, & Sarstedt, 2011). Descriptive statistics of the measurements are reported in Table 2. In addition, detail is given of sampling adequacy (Table 2), the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (0.850) and Bartlett's test for sphericity (statistically significant

Table 1
Constructs measurements.

Construct	Operationalization	Sourced
Internet-Based Channel Orientation	IBCO1: My company believes strongly that we can use the Internet to promote/market our products/service. IBCO2: My company believes strongly that Internet usage is relevant to our business activities. IBCO3: Using the Internet is key to the success of our company in the future.	Harigan et al. (2012), Muthee and Ngugi (2014), Zeng and Glaister (2016)
Market Sensing	MKSENSE1: To a large extent, we are capable of easily understanding the dynamics/changes in our industry as well as the macro-market environment as a whole. MKSENSE2: To a large extent, we have the capacity to identify and understand market trends.	Fang, Chang, Ou, and Chou (2014), Harigan et al. (2012), O'dwyer et al. (2009), Porter and Kramer (2006), Ragins and Greco (2003), Vorhies and Morgan (2005)
Industry Competition	INDCOM1: Our business/company operates in a highly intense business environment. INDCOM2: There are many promotional "wars" in our market INDCOM3: Anything that our competitor can offer, others can equally offer it in our market	Anandarajan, Anandarajan, and Wen (1998), Chaston and Mangles (2003) Chaston and Mangles (2003) Harigan et al. (2012), Jaworski & Kohli, 1993, Ragins and Greco (2003), Sørensen (2009)
Entrepreneurial Capability	ENCAP1: Relative to our competitors, our company has a higher tendency to engage in strategic planning activities. ENCAP2: Relative to our competitors, our company has a higher ability to identify customer needs and wants. ENCAP3: Relative to our competitors, our company has a higher level of innovation. ENCAP4: Relative to our competitors, our company has a higher ability to identify new business opportunities. ENCAP5: Relative to our competitors, our company has a higher ability to endure in making the vision of our business a reality.	Harigan et al. (2012), Laukkanen, Nagy, Hirvonen, Reijonen, and Pasanen (2013), Muthee and Ngugi (2014), Zeng and Glaister (2016)
Competitive Advantage	COMPADV1: Within the last 1–2 years, my company has been able to exploit nearly all market opportunities that have been presented to our industry/market. COMPADV2: In the last 1–2 years, our company has to a large extent been able to neutralize all competitive threats from rival companies in our industry/market.	Leeflang et al. (2014), Porter (2001), Vorhies and Morgan (2005)
Investment training	As a control variable; 'Yes or No'	Authors' own

Table 2
Descriptive Statistics.

Construct	N	Minimum	Maximum	Mean	Std. Deviation
ENCAP	198	2.00	5.00	3.3848	0.63308
IBCO	198	1.00	4.00	2.6448	0.75630
MKSENSE	198	1.50	5.00	3.0985	0.63458
COMPADV	198	1.00	5.00	2.7879	0.72864
INDCOMP	198	1.33	4.67	3.0370	0.60154

KMO and Bartlett's Test:
The measure of Sampling Adequacy ≥ 0.850
Bartlett's test of Sphericity ≥ 3546.840
Df. ≥ 105
Sig. ≥ 0.000

Note: ENCAP = entrepreneurial capability, IBCO = internet-based channel orientation, MKSENSE = market sensing, COMPADV = competitive advantage, and INDCOM = industry competition
Source: Authors processing for SPSS.

at $P = 0.000$ with an approximate chi-square value of 3546.840 and a degree of freedom of 105).

5.1. Test of the measurement model

In line with recent recommendations on PLS-SEM in the literature, the reliability of the constructs was checked via the method of Dijkstra & Henseler for rho along with that of Cronbach for alpha coefficients with an estimated bootstrapping procedure of 5000 replacement sample values as recommended by Hair, Risher, Sarstedt, and Ringle (2019). Table 3 shows the values that exceeded the cut-off points of 0.7.

Table 3
Construct reliability and convergent validity.

Construct	Indicator reliability	Dijkstra-Henseler's rho (ρ_A)	Cronbach's alpha(α)	AVE	
ENCAP	Encap1	0.87[68.99]	0.97	0.97	0.89
	Encap2	0.93[134.63]			
	Encap3	0.87[46.77]			
	Encap4	0.90[86.24]			
	Encap5	0.89[83.90]			
IBCO	Iorient1	0.81[37.11]	0.94	0.93	0.88
	Iorient2	0.94[188.69]			
	Iorient3	0.87[62.96]			
MKSENSE	Mksense1	0.96[71.35]	0.97	0.97	0.95
	Mksense2	0.93[55.81]			
COMPADV	Compadv1		0.90	0.90	0.91
	Compadv2				
INDCOMP	Indcomp1	0.82[70.33]	0.89	0.88	0.81
	Indcomp2	0.79[38.47]			
	Indcomp3	0.80[43.69]			

Authors' processing from ADANCO 2.0.

Table 4
Correlation Among Constructs.

Construct	MKSENSE	IBCO	COMPADV	INDCOMP	ENCAP	TRAININ
MKSENSE	<i>0.95</i>					
IBCO	0.26	<i>0.88</i>				
COMPADV	0.17	0.45	<i>0.91</i>			
INDCOMP	0.59	0.40	0.28	<i>0.81</i>		
ENCAP	0.27	0.22	0.15	0.27	<i>0.89</i>	
TRAININ	0.01	0.12	0.18	0.13	0.23	1.00

Note: Squared correlations; AVE in the diagonal [in bold and italicized font]. TRAININ (Investment in training is operationalized here as a binary response). Authors' processing from ADANCO 2.0.

Concurrently, the loadings of the reflective constructs all equalled ≥ 0.89 . Table 3 presents data on convergent validity, demonstrating that the AVEs passed the minimum threshold of 0.5. Regarding discriminant validity, apart from applying the recognized criterion of Fornell Lacker (1981), analysis also utilized the recently introduced Heterotrait-Monotrait Ratio of Correlations (HTMT) by Henseler, Ringle, and Sarstedt (2015). The findings from the two criteria indicated that the constructs satisfied the basic and stringent assumptions of discriminant validity. HTMT inferential statistics determined a value of 0.89 for MSENSE and INDCOMP. The constructs detailed herein, therefore, not only displayed good internal consistency, but also had higher reliability, while convergent and discriminant validity were equally supported (see Table 4).

5.2. Test of the structural model

In terms of statistical methodology, this study relied exclusively on PLS-SEM; for an overview of its benefits see, for example, Hair, Sarstedt, Hopkins, and Kuppelwieser (2014). All statistical computations were aided by ADANCO 2.0 (Henseler & Dijkstra, 2015) and IBM SPSS Statistics software.

A brief outline of path coefficients is given in Table 5 wherein the construct “industry competitiveness linked with IBCO” appears to have the strongest (direct) effect on enhancing the fluency of operations at small- and medium-sized firms ($\beta = 0.529$, $p \leq 0.001$), followed by market-sensing capability ($\beta = 0.512$, $p \leq 0.001$), with entrepreneurial capability recording a weak but still significant effect for IBCO ($\beta = 0.201$, $p \leq 0.001$). By highlighting the significant relationships of the constructs, the authors gauged an indirect effect by the construct “IBCO and COMPADV are mediated to, yet insufficient for, achieving strong gains in competitiveness”; instead this effect was indirectly anchored via MKTSENSE ($\beta = 0.326$, $p \leq 0.001$). Based on analysis of the data shown in Table 4, the authors affirmed that all of the hypothetical relationships were statistically significant; hence, all four (4) hypotheses were supported.

TRAINIV again correlated significantly with COMPADV ($\beta = 0.326$, $t = 5.100$, $p \leq 0.001$), thereby supporting H3. Although IBCO and COMPADV were indirectly mediated with MKTSENSE ($\beta = 0.162$, $t = 3.517$, $p \leq 0.001$), the relationship was moderately weak.

Predictive power, thus the coefficient of determination (R^2) of the regression model, indicates the percentage of variation in the dependent variable explained by a predictor (independent) variable. Table 5 shows an estimated value for R^2 of 0.43 for industry competition (INDCOMP) and entrepreneurial capability (ENCAP), hence the figure of 43 % for variance in the dependent variable “Internet-based channel orientation (IBCO)”. Testing also determined that the R^2 for market sensing (MKSENSE) related to 26 % in variation assigned to IBCO (as the independent variable), while the R^2 of 27 % for competitive advantage (COMPADV) indicated variation explained by MKSENSE (as the dependent variable). Table 5 presents the R^2 estimated for their respective constructs. See also, in the appendix, the estimated structural (conceptual) model as Fig. A1.

Table 5
Results of Path coefficients.

Effect	β	Cohen's f^2	SE	Percentile bootstrap quantiles		
				t-value	2.5 %	97.5 %
Direct						
ENCAP - > IBCO	0.201	0.052	0.075	2.684	0.061	0.358
INDCOMP - > IBCO	0.529	0.358	0.070	7.553	0.379	0.654
IBCO - > MKSENSE	0.512	0.354	0.052	9.809	0.399	0.605
Control						
TRAINIV - > COMPADV	0.322	0.063	5.100	0.198	0.443	
Indirect						
IBCO - > COMPADV	0.162		0.046	3.517	0.076	0.256
Coefficient of determination - R²						
IOrient					0.43	
MKSENSE					0.26	
COMPADV					0.27	

Authors' processing from ADANCO 2.0.

Verdicts concerning the propositions of the authors are summarised in Table 6 below.

6. Discussions

Companies irrespective of their size find themselves thrust into a fiercely competitive marketplace shaped by the intense and far-reaching disruptions of the digital era, the rapidly transforming organisational environments leads to both internal and external pressures on companies that are not only seeking to achieve sustainable competitiveness, but also struggling to stay alive and relevant within their industrial sector. The volatility that confronts various companies manifests in rapid changes in competition, demand, technology and the regulatory environment in which they operate, this makes it imperative more than ever for companies to be able to respond and adapt to their environment. Consequently, the pressure on firms for aligning their business strategy with the changes in their technological situation has significantly increased with the emergence and growing importance of new digital technologies particularly those that are internet based and relevant in their customer engagement processes, such as Social Media, Cloud Computing, Big Data and Analytics, Embedded Devices, and Artificial Intelligence (often used for chatbots). This study demonstrated and empirically tested the model of Internet-based channel orientation (IBCO) as a criterion for proffering a strategic position for small- and medium-sized companies. The inspiration for this research is informed by the desire to contribute to the existing body of knowledge on market sensing capability, competitive advantage, entrepreneurial capability and industry competition, which is borne out of the belief that the entrepreneurial capabilities and industry competitiveness of a firm are connected to how the firms adopts and implements Internet-based channels for sales, marketing and other consumer engagement activities. The results from the research also shows that Internet-based channels over the long-term generally leads to enhancements in the market sensing capabilities of the firm, and ultimately results in a boost to its competitiveness.

The results of the study showed that Internet-based channel orientation has direct positive interconnections with the set of enumerated constructs. The information gathered possesses the potential to enable SMEs to put superior organizational strategies in place when adopting and implementing Internet-based channels and other customer-facing ICTs, in their quest to boost competitiveness in a fast-changing and highly competitive marketplace. The findings are

Table 6
Summary of hypothesized remarks.

Hypothesis	Remarks
H1a: ENCAP positively correlates with IBCO, in consideration of which other factors remain constant.	Supported
H1b: The industry competitiveness (INDCOMP) of an SME positively benefits from adoption and utilization of Internet-based channels for marketing and other customer-facing activities.	Supported
H2: With other factors at a constant, IBCO positively correlates with MKTSENSE.	Supported
H3: With factors such as investment in training as a constant, MKTSENSE positively mediates the relationship between IBCO and COMPADV	Supported

consistent with other research conducted on the role of ICTs as enablers of competitiveness (Cerchione & Esposito, 2017; Gawer & Evans, 2016; Hosseini et al., 2019; Senyo et al., 2019), especially given the advanced digital environment which firms now inhabit (Powell & Dent-Micallef, 1997; Teo & Pian, 2003). Such circumstances mean that onus lies in the ability of the company to position itself in light of this progress in technology. Our findings reveal that the more an SME integrates IBCO, the greater the propensity to lure additional customers into its fold and stand out from the vast array of competitors, thereby sustaining the enterprise in the wider business context. This assertion is consistent with other works (Baillette et al., 2018; Becherer, Halstead, & Haynes, 2003; Celuch & Murphy, 2010; Hamill & Gregory, 1997; Mostafa, Wheeler, & Jones, 2005), who conclude effective competition hinges on embracing IBCO. This study investigated entrepreneurial capability as informed by the on-line activities of SMEs. Thus, such a firm, having outlined an initial mission in mind and made headway, should subsume both scenarios. The results presented here support this affirmation with statistically significant measures or hypotheses. Given the core mandate of a micro- or small-sized business, i.e. survival in a competitive environment, it is expedient to examine carefully how IBCO and INDCOM are achieved, as these represent the means of their survival. Indeed, the findings reported indicate that a positive relationship ensues from possession of both competitiveness and IBCO. This lends credence to the work of Siu (2002), who determined that although traditional marketing methods were still applicable in the digital world, small Internet-based firms needed to adopt and implement suitable, innovative marketing techniques to compete in business on the fast-moving Internet. In this dynamic, technology-driven society, it is clear that commercial survival demands incorporation of Internet-based channel orientation in operations.

Results from this study also showed that IBCO positively affects the company's market sensing capability, thereby corroborating the findings by Foley and Fahy (2004) and Jones, Hecker, and Holland (2003) on how Internet-based technologies adopted by firms have proven to be effective in enabling them survive and achieve sustainable competitiveness within their sector of operation. This also connects to the profound transformation of the strategic context of organizations how it leads to changes in the structure of competition within a market and how the changing behaviours and expectations of the consumer is the primary factor driving the changes in market competition. Hence the need for companies to go beyond just acquiring technologies without a deep understanding of how to apply such technologies in transforming the ways their business is conducted, the way products are manufactured and services are delivered, also their internal processes and ultimately, the nature of their entire industrial sector. Hence, SMEs considering the adoption of IBCO in the initial stage of operations should bear in mind the given environment in which they function, i.e. the kind of customers they deal with. Boumediene (2009) wrote that SMEs were more influenced by technological and organizational factors than environmental ones, he used results from his research to argue that larger companies with a greater advantage over others, have the opportunity to experiment with technologies prior to putting them in production, support from senior management and heightened organizational readiness were more likely to deploy enterprise-grade systems. This is made possible by the fact that larger companies have the luxury

of more resources at their disposal for taking risks associated with experimentation of novel processes and technologies which smaller resource constrained firms do not have. A similar observation was made by Andoh-Baidoo, Osei-Bryson, and Amoako-Gyampah (2012), who looked into the effects of the firm and IT characteristics on the value of e-commerce initiatives. Their research provided useful insight and proposed a roadmap for developing theory on e-commerce and cumulative abnormal returns for firms leveraging on the Internet in the service of clients.

6.1. Theoretical contributions and implications

This study makes theoretical contributions to the body of knowledge on how the entrepreneurial capability of a firm and competitive pressures within its commercial sector act as predictors of willingness to adopt Internet-based channels, which would allow it to remain competitive and profitable within its sector. The Internet and other ICTs have become necessary for boosting the productivity of enterprises of all sizes. The research conducted provides empirical insight into firms, specifically domestic SMEs, with an emphasis on those providing financial services - e.g. insurance brokers and small - and suggests means for sustaining trade. Generally, the result of this study adds to the theoretical understanding on technology use, market sensing in terms of discovery and expansion, and competitiveness as it relates to small and medium sized businesses. The most consistent results that supports the relationship between the competitiveness of a company, its use of internet-based channels and how this affects its market sensing capabilities combines to provide a holistic theoretical understanding of the challenges faced by small and medium-sized businesses

On a granular level, the competitiveness of companies in the SME sector (or domesticated services firms as conceptualised in this study) face competitiveness pressures that are well explained by theories on competition such as Porter's five forces or the Schumpeterian creative destruction which have not adequately explored the complexities associated with the peculiar contextual realities of SMEs. The theoretical understanding of the interplay among theories on how small and medium sized business organisations strategically utilise resources, and the complex interactions on how technologies in the business environment particularly consumer facing technological systems such as Internet-Based Channels impact on the operations on the type of companies covered by this research, makes it imperative for a broad-based scientific inquiry that addresses the gaps in theories. Hence, the justification for focusing the investigation primarily on the entrepreneurial capabilities of such firms and their industry competitiveness as predicting factors of its internet-based channel orientation. The theoretical contribution of the research also sought to address the relationship between a firm's internet-based channel orientation and how it influences its market sensing capabilities and competitiveness.

This study also goes beyond the two integrated proposed theories by including a new controlled variable alongside the constructs tapped from the two theories; and proposing new causal relevance or paths between the main antecedences of (TRAINIV - > COMPADV and IBCO - > COMPADV). This, in turn, validates a vital contribution to the expansion of the two theoretical approaches used for the study.

6.2. Managerial implications of the study

From a managerial point of view, it is important to consider contributions made by previous research on the topic. This study proposes that the impact of managerial influence on small- and medium-sized businesses in relation to their competitiveness, sustainable growth and profitability is anchored on their ability to routinely assess and take steps aimed at ensuring the continuous training and development of human resources. This in effect will serve as a cornerstone for blending forms of IBCO to gain a competitive edge over the short to long term. In this context, the findings confirmed that a significant relationship exists between the two earlier constructs, with a focus on training and development constituting their interception. The managerial aspect is significant, as it enables management to comprehend the role and importance of technology to business processes, operations and, ultimately, organizational goals. IT systems are adopted and implemented in businesses as a result of the perceived needs and benefits that they promise to usher in, making it imperative that those in decision-making positions, i.e. responsible for driving the process, understand how these IT systems translate into profitability.

This study provides insight for effective IBCO decision-making. The authors suggest managers invest in initiatives that increase the levels of IBCO and MKSENSE, and through this obtain a greater competitive advantage, which is especially pertinent to domestic companies in the service sector. Moreover, the positive mediating effect of market sensing capability means that the scope of the MKSENSE construct potentially augments positive effects stemming from entrepreneurial capability and industry competition leveraged by IBCO. Ultimately, an understanding of the primary motivating factors for business leaders - the quest for profitability and sustainable long-term growth of their companies illuminates the managerial implications of this research. Company management continues to seek knowledge and information that enables them to better understand the consumers, market environments, technology and business processes. Considering that this research has attempted to address key issues relating to technology use (internet-based channels), firm competitiveness and how these issues connects with the firm's ability to discover, enter and expand its presence in markets (market sensing), the results from the research becomes valuable to business executives who find themselves on the journey of knowledge discovery that is of strategic value to the long-term growth and profitability of their business organisations. Hence, it is in the best interests of business executives to pay careful attention to the results from this study in order to ensure that they are in a good knowledge position to correctly deployment of ICTs in operations and realization of the optimal benefits of the technology.

Moreover, the results of this study provided clues for Nigerian's small and midsized or lesser enterprises about the important influence of investment in training and development of employees in general in this modern era where competition abounds. Therefore, small or lesser enterprises should endeavour to assist financially in employee training, so far as internet -based/ICT technical know-how is concerned. This will unearth any administrative bottlenecks that will hinder the growth of these lesser or medium enterprises in less developed economies (Salisu & Abu Bakar, 2019; Wellalage & Fernandez, 2019). Practically, increasing technological education in these so-called small or lesser enterprises does not only enhance their performance efficiently and effectively but also positively reflects on the enterprise's sustainability in the business as earlier envisaged (Duan, Edwards, & Dwivedi, 2019; Maroufkhani, Tseng, Iranmanesh, Ismail, & Khalid, 2020).

Also, noteworthy, Nigerian small and lesser or medium enterprises could also leverage breakthroughs in the social media as a form of internet-based channel orientation prospect to conduct their operations and stay longer in business, albeit lure more customers in their fold. Hence, investments in attractive videos posted on YouTube, Facebook, Twitter could promote these lesser or medium enterprises.

6.3. Limitations and future research direction

Given that this study concentrated on the Nigerian services sector, it is pertinent to state that the findings of the study cannot be generalized for the length and breadth of sub-Saharan Africa, since it addressed a particular sector, and within only the territory of Nigeria. Even assuming the data could be generalized to encompass all SMEs in Nigeria, a minor issue is that all the accumulated data points for the study were entirely cross-sectional. As a consequence, future investigation ought to embark on longitudinal research to test for the causality of the variables. The authors encourage others to base further research on this study, or to consider it an impetus to look at other trade sectors in the African sub-regions or developing nations as a whole

7. Conclusion

The rapid integration and application of ICT by organizations, especially SMEs, continues unabated, although several decades have passed since the infusion of Internet-based technologies into contemporary business processes. It cannot be denied that SMEs or firms in general are increasingly looking to use on-line channels to connect with a wider audience; as such, marketing is on the rise. In view of this, the study used a theoretical approach that benefits from a combination of the resource strategic action-based view of the firm with the micro-institutional perspectives to inquire into the dynamics of competitiveness and market-sensing capabilities of the firm based on the influence of its consumer-facing internet-based channels technology adoption strategies. This produced results with significant theoretical and managerial implications that benefit stakeholders in both industry and academia. These intentions align with platforms tailored for this purpose, and these are becoming core strategic tools for ensuring the competitiveness and survival of firms in the global marketplace. This research took inspiration from resource-strategic action-competitive advantage and micro-institutional theories to test what correlations existed between ENCAP and INDCOM, on one hand, and IBCO on the other. Hence, this study theorized about the aforementioned constructs that influence SMEs to optimize use of ICT (or IBCO). Such application of IBCO could further propel SMEs, in particular, and permit them to harness the potential benefits of ICT. The findings of this research reveal how IBCO mediates and influences a significant relationship between ENCAP and the COMPAD of small-scale firms providing financial services, i.e. the domestic SMEs, within the context of a developing economy, specifically Nigeria. Analyses based on 198 domestic SMEs from the biggest economy in Africa (Nigeria) validated the relationships of the constructs stated for research purposes.

CRedit authorship contribution statement

Michael Adu Kwarteng: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization, Writing - original draft, Writing - review & editing. **Abdul Bashiru Jibril:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization, Writing - original draft, Writing - review & editing. **Fortune Nwaiwu:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Validation, Visualization, Writing - original draft, Writing - review & editing. **Michal Pilík:** Funding acquisition, Investigation, Project administration, Resources, Supervision, Validation, Visualization, Writing - review & editing. **Miloslava Chovancova:** Funding acquisition, Investigation, Project administration, Resources, Supervision, Validation, Visualization, Writing - review & editing.

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Appendix A

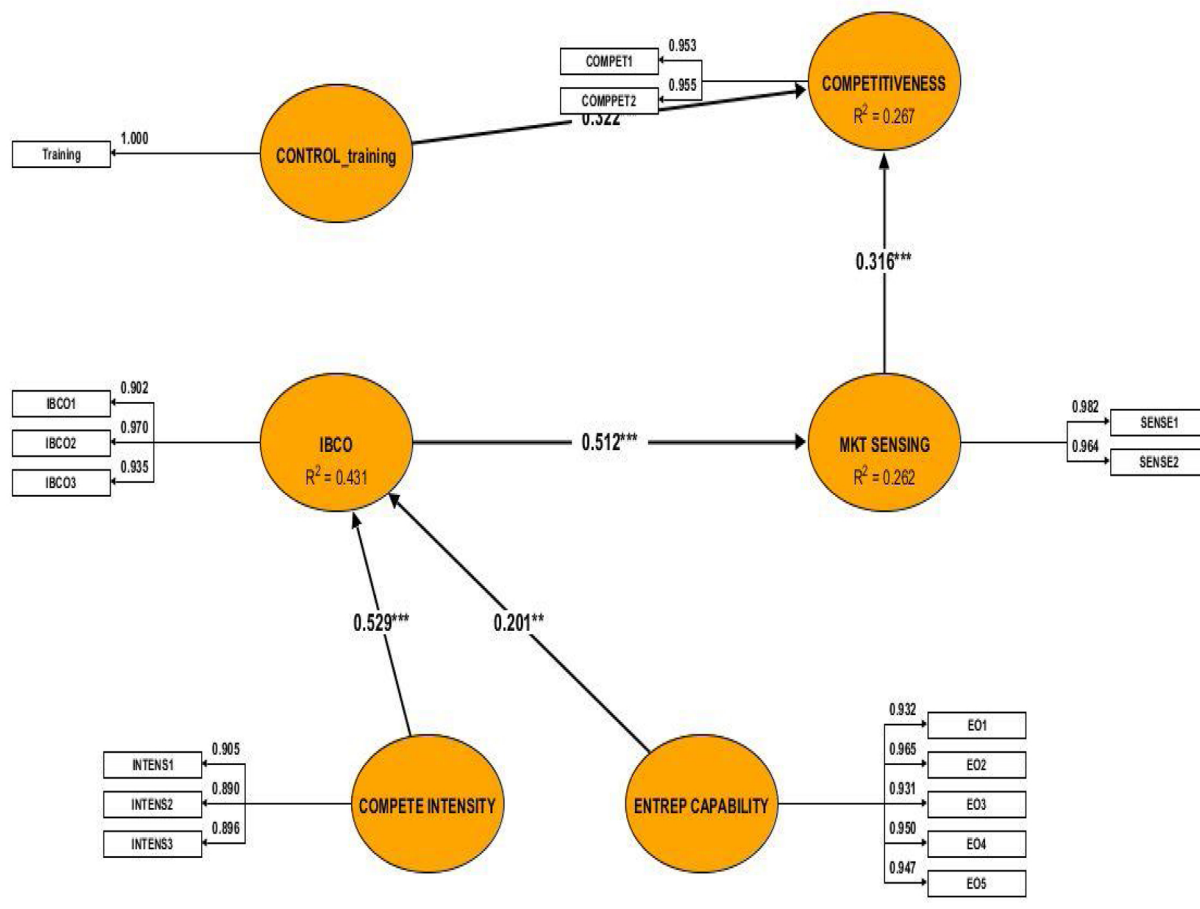


Fig. A1. Estimated research model from ADANCO 2.0 processing software.

Appendix B. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.ijinfomgt.2020.102223>.

References

Abed, S. S. (2020). Social commerce adoption using TOE framework: An empirical investigation of Saudi Arabian SMEs. *International Journal of Information Management*, 53, Article 102118.

Ajibade, P. (2017). Efficient information management as organisational performance drivers in South Africa. *Journal of Social Sciences*, 53(2), 95–106. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=edo&an=ejs45089312&scope=site>.

Ako-nai, A., & Singh, A. M. (2019). Information technology governance framework for improving organizational performance. *South African Journal of Information Management*, 21(1), 1–11. <https://doi.org/10.4102/sajim.v21i1.1010>.

Al-Abdallah, G. (2015). The impact of internet marketing on achieving competitive advantage. *International Journal of Arts & Sciences*, 8, 619–627.

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110. <https://doi.org/10.1016/j.ijinfomgt.2017.01.002>.

Amin, M. (2019). Towards economic growth. *Journal of Security*, 9(1), 241–255. [https://doi.org/10.9770/jssi.2019.9.1\(18\)](https://doi.org/10.9770/jssi.2019.9.1(18)).

Anandarajan, M., Anandarajan, A., & Wen, H. J. (1998). Extranets: A tool for cost control in a value chain framework. *Industrial Management & Data Systems*, 98(3), 120–128.

Andoh-Baidoo, F. K. (2016). *Organizational information and communication technologies for development*.

Andoh-Baidoo, F. K., Osatuyi, B., & Kunene, K. N. (2014). ICT capacity as the investment and use of ICT: Exploring its antecedents in Africa. *Information Technology for Development*, 20(1), 44–59.

Andoh-Baidoo, F. K., Osei-Bryson, K. M., & Amoako-Gyampah, K. (2012). Effects of firm and IT characteristics on the value of e-commerce initiatives: An inductive theoretical framework. *Information Systems Frontiers*, 14(2), 237–259. <https://doi.org/10.1007/s10796-010-9234-4>.

Aragón-Correa, J. A., Hurtado-Torres, N., Sharma, S., & Garcia-Morales, V. J. (2008). Environmental strategy and performance in small firms: A resource-based perspective. *Journal of Environmental Management*, 86(1), 88–103.

Armstrong, M. (2006). *Strategic human resource management-A guide to action* (3rd ed.).

- Asamoah, D., Agyei-Owusu, B., Andoh-Baidoo, F. K., & Ayaburi, E. (2019). Effect of inter-organizational systems use on supply chain capabilities and performance. June *International working conference on transfer and diffusion of IT* (pp. 293–308).
- Avlonitis, G. J., & Karayanni, D. A. (2000). The impact of internet use on business-to-business marketing: Examples from American and European companies. *Industrial Marketing Management*, 29(5), 441–459.
- Aziz, N. A., & Omar, N. A. (2013). Exploring the effect of Internet marketing orientation, Learning Orientation and Market Orientation on innovativeness and performance. *Journal of Business Economics*, 14, S257. <https://doi.org/10.3846/16111699.2011.645865>.
- Bacik, R., Gavurova, B., & Gburova, J. (2017). Social media, corporate website and its impact on consumer purchasing decisions. *Journal of Applied Economic Sciences*, 12(5), 1312–1318. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=e5h&an=135407372&scope=site>.
- Baillette, P., Barlette, Y., & Leclercq-Vandelannoite, A. (2018). Bring your own device in organizations: Extending the reversed IT adoption logic to security paradoxes for CEOs and end users. *International Journal of Information Management*, 43, 76–84.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643–650.
- Becherer, R. C., Halstead, D., & Haynes, P. J. (2003). Marketing orientation in SMEs: Effects of the internet environment. *New England Journal of Entrepreneurship*, 6(1), 13.
- Bengtsson, M., Boter, H., & Vanyushyn, V. (2007). Integrating the internet and marketing operations a study of antecedents in firms of different size. *International Small Business Journal*, 25(1), 27–48.
- Boumediene, R. (2009). Predicting SMEs' adoption of enterprise systems. *Journal of Enterprise Information Management*, 22(1/2), 10–24. <https://doi.org/10.1108/17410390910922796>.
- Cant, M. C., & Wiid, J. A. (2016). The use of traditional marketing tools by SMEs in an emerging economy. *Problems and Perspectives in Management*, 14(1), 64–70. [https://doi.org/10.21511/ppm.14\(1\).2016.07](https://doi.org/10.21511/ppm.14(1).2016.07).
- Casson, M. (2016). *The multinational enterprise: Theory and history*. Edward Elgar Publishing.
- Celuch, K., & Murphy, G. (2010). SME internet use and strategic flexibility: The moderating effect of IT market orientation. *Journal of Marketing Management*, 26(1–2), 131–145.
- Cerchione, R., & Esposito, E. (2017). Using knowledge management systems: A taxonomy of SME strategies. *International Journal of Information Management*, 37(1, Part B), 1551–1562. <https://doi.org/10.1016/j.ijinfomgt.2016.10.007>.
- Chatterjee, S., & Kar, A. K. (2020). Why do small and medium enterprises use social media marketing and what is the impact: Empirical insights from India. *International Journal of Information Management*, 53, Article 102103.
- Chaston, I., & Mangles, T. (2003). Relationship marketing in online business-to-business markets. *European Journal of Marketing*.
- Costa, E., Soares, A. L., & de Sousa, J. P. (2020). Industrial business associations improving the internationalisation of SMEs with digital platforms: A design science research approach. *International Journal of Information Management*, 53, Article 102070.
- Cristani, M., Bertolaso, A., Scannapieco, S., & Tomazzoli, C. (2018). Future paradigms of automated processing of business documents. *International Journal of Information Management*, 40, 67–75.
- Doherty, E., Ramsey, E., Harrigan, P., & Ibbotson, P. (2016). Impact of broadband internet technologies on business performance of Irish SMEs. *Strategic Change*, 25(6), 693–716 C.
- Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of big data—evolution, challenges and research agenda. *International Journal of Information Management*, 48, 63–71.
- Dwivedi, Y. K., Wastell, D., Laumer, S., Henriksen, H. Z., Myers, M. D., Bunker, D., et al. (2015). Research on information systems failures and successes: Status update and future directions. *Information Systems Frontiers*, 17(1), 143–157.
- Fang, S.-R., Chang, E., Ou, C.-C., & Chou, C.-H. (2014). Internal market orientation, market capabilities and learning orientation. *European Journal of Marketing*, 48(1/2), 170–192.
- Foley, A., & Fahy, J. (2004). Towards a further understanding of the development of market orientation in the firm: A conceptual framework based on the market-sensing capability. *Journal of Strategic Marketing*, 12(4), 219–230.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research Policy*, 43(7), 1239–1249. <https://doi.org/10.1016/j.respol.2014.03.006>.
- Gawer, A., & Cusumano, M. A. (2015). *Business platforms: International encyclopedia of the social & behavioral sciences* (second edition). <https://doi.org/10.1016/B978-0-08-097086-8.73012-1>.
- Gawer, E. A., & Evans, P. C. (2016). *The rise of the platform enterprise: A global survey*. New York. Available at: https://www.thecge.net/app/uploads/2016/01/PDF-WEB-Platform-Survey_01_12.pdf (Accessed: 8 March 2018).
- Gedik, H. (2019). *E-marketing applications of SMES in Konya industrial zone*. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=edsair&an=edsair.tubitakulakb.1122a39944aa44367ad188a3779b0f88&scope=site>.
- Ghasemghaei, M., Hassanein, K., & Turel, O. (2017). Increasing firm agility through the use of data analytics: The role of fit. *Decision Support Systems*, 101, 95–105. <https://doi.org/10.1016/j.dss.2017.06.004>.
- Gherghina, Ş. C., Botezatu, M., Hosszu, A., & Simionescu (2020). Small and medium-sized enterprises (SMEs): The engine of economic growth through investments and innovation. *Sustainability*, 12, 347. <https://doi.org/10.3390/su12010347>.
- Glavas, S., & Mathews (2014). How international entrepreneurship characteristics influence Internet capabilities for the international business processes of the firm. *International Business Review*, 23(1), 228–245.
- Gourlay, A., & Becker, B. (2012). SMEs and regional economic growth in Brazil. *Small Business Economics*, 38(2), 217. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=edsjrs&an=edsjrs.41410013&scope=site>.
- Grant, D., & Yeo, B. (2018). A global perspective on tech investment, financing, and ICT on manufacturing and service industry performance. *International Journal of Information Management*, 43, 130–145.
- Hair, F. J., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modelling (PLS-SEM) an emerging tool in business research. *European Business Review*, 26(2), 106–121.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>.
- Hamill, J., & Gregory, K. (1997). Internet marketing in the internationalisation of U.K. SME's. *Journal of Marketing Management*, 13(1/3), 9–28.
- Hair, J. F., Christian Ringle, M., & Sarstedt, Marko (2011). "PLS-SEM: Indeed a silver bullet." *Journal of Marketing theory and Practice*, 19(2), 139–152.
- Harigan, P., Ramsey, E., & Ibbotson, P. (2012). Entrepreneurial marketing in SMEs: The key capabilities of e-CRM. *Journal of Research in Marketing and Entrepreneurship*, 14(1), 40–64. <https://doi.org/10.1108/14715201211246760>.
- Henseler, J., & Dijkstra, T. K. (2015). *ADANCO 2.0. Kleve: Composite modelling*.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <http://www.compositemodeling.com>.
- Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, 15(June (2)), 123–139. Retrieved from <https://hbr.org>.
- Hinson, R., & Adjasi, C. (2009). The internet and export: Some cross-country evidence from selected African countries. *Journal of Internet Commerce*, 8(3), 309–332.
- Horvath, I. (2019). Combining unmergeables: A methodological framework for axiomatic analysis of qualitative design theories. *Proceedings of the Design Society: International Conference on Engineering Design*, 1(1), 3591–3600. <https://doi.org/10.1017/dsi.2019.366>.
- Hosseini, S., Fallon, G., Weerakkody, V., & Sivarajah, U. (2019). Cloud computing utilization and mitigation of informational and marketing barriers of the SMEs from the emerging markets: Evidence from Iran and Turkey. *International Journal of Information Management*, 46, 54–69. <https://doi.org/10.1016/j.ijinfomgt.2018.11.011>.
- Iacovone, L., Pereira-Lopez, M. D. L. P., & Schiffbauer, M. P. (2016). *ICT use, competitive pressures and firm performance in Mexico. Policy Research working paper; no. WPS 7629*. Washington, D.C: World Bank Group. <http://documents.worldbank.org/curated/en/129511467999689857/ICT-use-competitive-pressures-and-firm-performance-in-Mexico>.
- Ingham, J., Cadieux, J., & Mekki Berrada, A. (2015). e-Shopping acceptance: A qualitative and meta-analytic review. *Information & Management*, 52(1), 44–60. <https://doi.org/10.1016/j.im.2014.10.002>.
- Ingram, T. N., LaForge, R. W., Schwepker, C. H., & Williams, M. R. (2015). *Sales management: Analysis and decision making*. Routledge.
- Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, 57(July), 53–70.
- Jones, C., Hecker, R., & Holland, P. (2003). Small firm internet adoption: Opportunities forgone, a journey not begun. *Journal of Small Business and Enterprise Development*, 10(3), 287–297.
- Kapoor, K. K., Dwivedi, Y. K., & Williams, M. D. (2014). Innovation adoption attributes: A review and synthesis of research findings. *European Journal of Innovation Management*, 17(3), 327–348.
- Kazlauskaitė, Rūta, Autio, E., & Modestas Gelbūda a Tadas Šarapovas (2015). The resource-based view and SME internationalisation. *Entrepreneurial Business*, 3(2), 53–64. <https://doi.org/10.15678/EBER.2015.030205> [online]. ISSN 2353883X. Dostupné z:
- Ketchen, D. J., Jr., Hult, T. G. M., & Slater, S. F. (2007). Toward greater understanding of market orientation and the resource-based view. *Strategic Management Journal*, 28(9), 961–964.
- Khan, M. A. (2016). *Multinational enterprise management strategies in developing countries*. Business Science Reference.
- Kizgin, H., Dey, B. L., Dwivedi, Y. K., Hughes, L., Jamal, A., Jones, P., ... Rana, N. P. (2019). The impact of social media on consumer acculturation: Current challenges, opportunities, and an agenda for research and practice. *International Journal of Information Management*, 102026. <https://doi.org/10.1016/j.ijinfomgt.2019.10.011>.
- Koch, T., & Windsperger, J. (2017). Seeing through the network: Competitive advantage in the digital economy. *Journal of Organization Design*, 6(1), 6. <https://doi.org/10.1186/s41469-017-0016-z>.
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration (ijec)*, 11(4), 1–10.
- Lagrosen, S. (2005). Effects of the internet on the marketing communication of service companies". *Journal of Services Marketing*, 19(2), 63–69.
- Laukkanen, T., Nagy, G., Hirvonen, S., Reijonen, H., & Pasanen, M. (2013). The effect of strategic orientations on business performance in SMEs: A multigroup analysis comparing Hungary and Finland. *International Marketing Review*, 30(6), 510–535.
- Leeflang, P. S. H., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014). Challenges and solutions for marketing in a digital era. *European Management Journal*, 32(1), 1–12. <https://doi.org/10.1016/j.emj.2013.12.001>.
- Maduku, D. K., Mpinganjira, M., & Duh, H. (2016). Understanding mobile marketing adoption intention by South African SMEs: A multi-perspective framework. *International Journal of Information Management*, 36(5), 711–723. <https://doi.org/10.1016/j.ijinfomgt.2016.04.018>.
- Maroufkhani, P., Tseng, M.-L., Iranmanesh, M., Ismail, W. K. W., & Khalid, H. (2020). Big data analytics adoption: Determinants and performances among small to medium-sized enterprises. *International Journal of Information Management*, 54, Article 102190.
- Mazzarol, T. (2015). SMEs engagement with e-commerce, e-business and e-marketing. *Small Enterprise Research*, 22(1), 79–90. <https://doi.org/10.1080/13215906.2015.1018400>.

- Michael, R., Romana, R., Christiana, M., Wolfgang, V., & Eva, S. (2019). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management*, 30(8), 1143–1160. <https://doi.org/10.1108/JMTM-01-2018-0020>.
- Mogos, R. I. (2015). Digital marketing for identifying customers' preferences—A solution for SMEs in obtaining competitive advantages. *International Journal of Economic Practices*, 5(3), 240–247. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=edb&an=113828794&scope=site>.
- Mostafa, R. H., Wheeler, C., & Jones, M. V. (2005). Entrepreneurial orientation, commitment to the internet and export performance in small and medium sized exporting firms. *Journal of International Entrepreneurship*, 3(4), 291–302.
- Mostafa, R. H., Wheeler, C., & Jones, M. V. (2006). Entrepreneurial orientation, commitment to the Internet and export performance in small and medium sized exporting firms. *Journal of International Entrepreneurship*, 3(4), 291–302.
- Muthee, J., & Ngugi, K. (2014). Influence of entrepreneurial marketing on the growth of SMEs in Kiambu Town-CBD, Kenya. *European Journal of Business and Management*, 11(11), 361–377.
- Niemimaa, M., Järveläinen, J., Heikkilä, M., & Heikkilä, J. (2019). Business continuity of business models: Evaluating the resilience of business models for contingencies. *International Journal of Information Management*, 49, 208–216.
- Nwaiwu, F. (2018). Review and comparison of conceptual frameworks on digital business transformation. *Journal of Competitiveness*, 10(3), 86–100. <https://doi.org/10.7441/joc.2018.03.06>.
- O'dwyer, M., Gilmore, A., & Carson, D. (2009). Innovative marketing in SMEs. *European Journal of Marketing*, 43(1/2), 46–61. <https://doi.org/10.1108/03090560910923238>.
- Palese, B., & Usai, A. (2018). The relative importance of service quality dimensions in E-commerce experiences. *International Journal of Information Management*, 40, 132–140.
- Pan, Y., Xu, Y. C., Wang, X., Zhang, C., Ling, H., & Lin, J. (2015). Integrating social networking support for dyadic knowledge exchange: A study in a virtual community of practice. *Information & Management*, 52(1), 61–70. <https://doi.org/10.1016/j.im.2014.10.001>.
- Peng, M. W., Sun, S. L., Pinkham, B., & Chen, H. (2009). The institution-based view as a third leg for a strategy tripod. *The Academy of Management Perspectives*, 23(3), 63–81.
- Porter, M. E. (2001). Strategy and the internet. *Harvard Business Review*, 79(3), 62–78. <https://doi.org/10.1108/eb025570.164>.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). *Common Method Bias in Behavioral Research: A Critical Review of the Literature*.
- Porter, M. E., & Kramer, M. R. (2006). The link between competitive advantage and corporate social responsibility. *Harvard business review*, 84(12), 78–92.
- Powell, T. C., & Dent-Micallef, A. (1997). Information technology as competitive advantage: The role of human, business, and technology resources. *Strategic Management Journal*, 18(5), 375–405.
- Prajogo, D., Toy, J., Bhattacharya, A., Oke, A., & Cheng, T. C. E. (2018). The relationships between information management, process management and operational performance. *International Journal of Production Economics*, 199, 95–103. <https://doi.org/10.1016/j.ijpe.2018.02.019>.
- Quinton, S., Canhoto, A., Molinillo, S., Pera, R., & Budhathoki, T. (2018). Conceptualising a digital orientation: Antecedents of supporting SME performance in the digital economy. *Journal of Strategic Marketing*, 26(5), 427–439.
- Rabie, C., Cant, M. C., & Wiid, J. A. (2015). Small and medium enterprise development. *Problems and Perspectives in Management*, 13(4), 79–84. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=edscel&an=edscel.2-52.0-84955094779&scope=site>.
- Ragins, E. J., & Greco, A. J. (2003). Customer relationship management and E-business: More than a software solution. *Review of Business*, 24(Winter (1)), 25–30.
- Ramon-jeronimo, J. M., Florez-lopez, R., & Araujo-pinzon, P. (2019). Resource-based view and SMEs performance exporting through foreign intermediaries. *Sustainability* (2071-1050), 11(12), 3241. <https://doi.org/10.3390/su11123241>.
- Rivza, B., et al. (2019). Digitalization as an essential growth factor contributing in SME development (experience of Latvia and Romania). *Agronomy Research*, 19(1), 261–270. <https://doi.org/10.15159/AR.19.030>.
- Roncevic, A., Lukcic, T., & Spoljaric, P. (2019). Impact of traditional and digital marketing on consumer perception. *Economic*, 330–340. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=edb&an=140447247&scope=site>.
- Rumelt, R. P. (1997). *Towards a strategic theory of the firm. Resources, firms, and strategies: A reader in the resource-based perspective* 131–145.
- Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *The Academy of Management Journal*, 40(3), 534–559.
- Salisu, Y., & Abu Bakar, L. J. (2019). Technological capability, innovativeness and the performance of manufacturing small and medium enterprises (SMEs) in developing economies of Africa. *Journal of Business & Management*, 21(1), 58.
- Scott, W. R. (2001). *Institutions and organizations* (2nd edition). Thousand Oaks, CA: Sage.
- Schubert, F., Henseler, J., & Dijkstra, T. K. (2018). Partial least squares path modeling using ordinal categorical indicators. *Quality & Quantity*, 52(1), 9–35.
- Senyo, P. K., Liu, K., & Effah, J. (2019). Digital business ecosystem: Literature review and a framework for future research. *International Journal of Information Management*, 47, 52–64. <https://doi.org/10.1016/j.ijinfomgt.2019.01.002>.
- Sergio, O. (1997). Resource-based theory and strategic logistics research. *International Journal of Physical Distribution & Logistics Management*, 27(9/10), 559–587. <https://doi.org/10.1108/09600039710188594>.
- Sertić, M. B., Barčić, A. P., & Klarić, K. (2018). Economic determinants and analysis of the European union wood industry SMEs employment. *BioResources*, 13(1), 522–534. <https://doi.org/10.15376/biores.13.1.522-534>.
- Siu, W. S. (2002). Marketing activities and performance: A comparison of the Internet-based and traditional small firms in Taiwan. *Industrial Marketing Management*, 31(2), 177–188.
- Sørensen, H. E. (2009). Why competitors matter for market orientation. *European Journal of Marketing*, 43(5/6), 735–761.
- Teo, T. S., & Pian, Y. (2003). A contingency perspective on Internet adoption and competitive advantage. *European Journal of Information Systems*, 12(2), 78–92.
- Tilley, F. (1999). The gap between the environmental attitudes and the environmental behaviour of small firms. *Business Strategy and the Environment*, 8(4), 238–248.
- Todor, R. D. (2016). Blending traditional and digital marketing. *Bulletin of the Transilvania University of Brasov, Series I: Engineering Sciences*, 9(1), 51–56. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=a9h&an=116699220&scope=site>.
- Tripathi, A. (2019). SMEs in Saudi Arabia – an innovative tool for country's economic growth (April 1, 2019). *Science International (Lahore)*, 31(2), 261–267. Available at SSRN: <https://ssrn.com/abstract=3458372>.
- Van Dijk, S., Berends, H., Jelinek, M., Romme, A. G. L., & Weggeman, M. (2011). Micro-institutional affordances and strategies of radical innovation. *Organization Studies*, 32(11), 1485–1513.
- Visinescu, L. L., Sidorova, A., Jones, M. C., & Prybutok, V. R. (2015). The influence of website dimensionality on customer experiences, perceptions and behavioural intentions: An exploration of 2D vs. 3D web design. *Information & Management*, 52(1), 1–17. <https://doi.org/10.1016/j.im.2014.10.005>.
- Vorhies, D. W., & Morgan, N. A. (2005). Benchmarking marketing capabilities for sustainable competitive advantage. *Journal of Marketing*, 69(1), 80–94. <https://doi.org/10.1509/jmk.69.1.80.55505>.
- Wang, F., & Zhang, X.-P. S. (2015). The role of the internet in changing industry competition. *Information & Management*, 52(1), 71–81. <https://doi.org/10.1016/j.im.2014.10.006>.
- Wellalage, N. H., & Fernandez, V. (2019). Innovation and SME finance: Evidence from developing countries. *International Review of Financial Analysis*, 66, Article 101370.
- Wonglimpiyarat, J. (2016). The new challenge of financing innovative economic growth through SME development in the People's Republic of China. *Technology in Society*, 46. <https://doi.org/10.1016/j.techsoc.2016.05.002>.
- Zeng, J., & Glaister, K. W. (2016). Competitive dynamics between multinational enterprises and local internet platform companies in the virtual market in China. *British Journal of Management*, 27.
- Zhang, Y., Weng, Q., & Zhu, N. (2018). The relationships between electronic banking adoption and its antecedents: A meta-analytic study of the role of national culture. *International Journal of Information Management*, 40, 76–87.
- Zhou, K. Z., & Li, C. B. (2010). How strategic orientations influence the building of dynamic capability in emerging economies. *Journal of Business Research*, 63, 224–231. *Journal of Strategic Marketing*, 26(5), 427–439.
- Zhou, N., Zhang, S., Chen, J. E., & Han, X. (2017). The role of information technologies (ITs) in firms' resource orchestration process: A case analysis of China's "Huangshan 168". *International Journal of Information Management*, 37(6), 713–715.

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