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UNLOCKING COMPETITIVE ADVANTAGE: THE NEXUS OF INFORMATION TECHNOLOGY, ABSORPTIVE CAPACITY, AND DYNAMIC CAPABILITIES IN ORGANIZATIONAL PERFORMANCE

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Abstract

Objective: This study aims to empirically examine the influence of information technology (IT), absorptive capacity, and dynamic capabilities on firm performance.

Methodology: A quantitative research approach was adopted, utilizing survey data collected from a sample of firms across various industries. Structural equation modeling (SEM) was employed to analyze the relationships between the variables.

Results: The findings indicate significant positive relationships between information technology utilization and firm performance, absorptive capacity and firm performance, as well as dynamic

capabilities and firm performance. Furthermore, absorptive capacity was found to mediate the relationship between information technology and firm performance.

Conclusion: This study underscores the importance of information technology, absorptive capacity, and dynamic capabilities in enhancing firm performance. Managers should focus on developing IT infrastructure, fostering absorptive capacity through knowledge acquisition, and nurturing dynamic capabilities for sustainable competitive advantage. Future research could explore additional factors that may influence these relationships and investigate their implications across different contexts

Keywords

Information technology, absorptive capacity, dynamic capabilities, firm performance

Introduction

Recently, firms made significant network technology and information systems (IS) advancements due to increased digital business strategy. As a result, traditional business strategies are being reshaped by accepting innovations in the context of a resource-based (RBV) approach (Garcia-Morales et al., 2018). The utilization of IT and its infrastructure has played a crucial part in the firm's long-term development; nevertheless, only a few studies have found the value of IT in achieving superior performance. In addition, ACAP, frequently perceived as a firm's information-based perspective, not only acquires and utilizes external knowledge to enhance the firm's innovation activities but may also impact the firm's internal structure for the advancement of operational tasks and business performance. Firms can't incorporate and implement external expertise without ACAP (Khan et al., 2017a). In literature, limited studies investigate the relationship between IT and ACAP, even though IT utilization and infrastructure are essential factors in the firm's development, especially for SMEs (Chang et al., 2018). Firms will only succeed if they improve their internal and external environmental consciousness (Teece, 2016). DCS must be built to incorporate and reconfigure internal and external competencies to counter significant developments in the firm's work environment (Khan et al., 2019; Teece et al., 1997). Unfortunately, very few studies address this relationship (Simon et al., 2015), and much of the literature has been rooted in a single case study (Grant & Verona, 2014). Based on these findings, we have conducted empirical research focusing on the relationship between IT, DCs, and FP in the view of ACAP as a mediator. The primary motivation of the

study is limited research on the relationship between IT and ACAP. To better understand Second, having a strong IT team with dynamic capabilities to handle the latest technologies and bulk of information will enhance the performance. As a result, this study employs an empirical technique to validate and assess the relationship between IT, ACAP, and DCs of FP. Thus, the current research is unique(Bharadwaj, El Sawy et al. 2013)

Theoretical Background

The present study is based on dynamic capability theory, an extension of the resource-based view (RBV), and ACAP as a knowledge-based view of the firm. DCS are essential to recognize, evaluate, and analyze new opportunities in the workplace. According to DC theory, markets are more dynamic, and firms differ in the capacities they acquire and employ diverse resources. These discrepancies explain inter-firm performance variation over time (Wang & Kim, 2017). Teece et al. (1997) describe DCs as higher order capacities for selecting, developing and coordinating ordinary capabilities: sensing, seizing and transforming. These capabilities also allow firms to change information based on their requirements. It also promotes learning and experimentation, recombines resources for creating new goods, and transforms existing systems (Jiang et al., 2018), increasing the firm's performance. A firm with DCs can integrate and redeploy knowledge sources to achieve higher performance. Previous studies accepted that DCs could lead firms to achieve higher performance (Khan et al., 2021). Acquiring, assimilation and developing new knowledge is necessary to upgrade operational capabilities with new knowledge and skills (El Sawy & Pavlou, 2008). Changes in the dynamic environment will impact the creation, search, and dissemination of knowledge, which has been recognized as an improved indicator of knowledge creation capability (Denford, 2013). In such cases, ACAP serves as a knowledge-based view of the firm. ACAP is a multidimensional framework for which various scholars have identified different aspects and measures. Some studies have linked ACAP to organizational learning (Lane & Lubatkin, 1998), innovation (Guisado-González et al., 2017), and DCs (Andreeva & Kianto, 2012) by offering RBV (Barney, 1991), and Knowledge-based view (Sasson & Douglas, 2006). Cohen and Levinthal (1990) described ACAP as a collection of processes involved in knowledge acquisition, assimilation, transformation, and exploitation of knowledge (Zahra & George, 2002). The capacity of a firm to investigate and recognize the knowledge required by an organization is referred to as acquisition capability. Once the inside

has been identified, it may be translated following organizational requirements (Daspit & D'Souza, 2013). Secondly, the ability to acquire new knowledge is also known as the assimilation ability. It encourages corporations to analyze and interpret newly acquired knowledge in terms of existing knowledge (Jansen et al., 2005). Thirdly, the ability to adapt to new knowledge and integrate existing knowledge with new possibilities is known as the transformation ability. Finally, exploitation involves leveraging knowledge to produce value for firms and customers(Ma, Khan et al. 2021).

Hypothesis Development

Information Technology and Absorptive Capacity

In this study, we offer IT as a source for fostering knowledge processes at the organizational level. It provides many implementations to establish more resilient contact networks and better connectivity to external knowledge. However, rich knowledge structures may be developed through inter- and intra-organizational knowledge sharing, whilst powerful IT platforms can add innovative potential to the firms (Srivardhana & Pawlowski, 2007). These capabilities include knowledge infrastructure capabilities, such as technology framework and culture, and knowledge processing capabilities, such as acquisition, transformation, application, and knowledge security, which develop the base of organizational knowledge. These capabilities improve the firm's capacity to recognize, assimilate and apply new knowledge (Gold et al., 2001). An IT application, on the other hand, provides quick and easy access to external expertise while also opening up new and more intensive communication channels (Corso et al., 2003). Interaction between organizational members can be fostered through technology-based resources such as emails, chat, video conferencing, web-based cloud systems, and instant messaging, which encourages knowledge collection processes (Bolívar-Ramos et al., 2013). These technologies enable knowledge to be gained and disseminated inside the firm and teams that participate in interdependent activities, as well as to gather more information for the organization (Griffith et al., 2003). It broadens the breadth of knowledge processes for transferring expertise (Young-Choi et al., 2010), and expanding IT use would be expected to improve organizational ACAP to achieve the firm's performance.(Ma, Khan et al. 2021) Thus, we argue that:

Information Technology and Dynamic Capabilities

DCS skills enable an organization to build learning and knowledge management processes. Zaidi and Othman (2014) suggest that in times of significant technical and market instability, it is crucial to connect technology management with DCS. According to Kyläheiko and Sandström, .firms must manage market dynamics and technological volatility to maintain competitive advantages. Aside from firm effectiveness, managers are critical individuals for adequate information availability (Dwivedi & Madaan, 2020), demonstrating the relevance of the dynamic capabilities of managers in firms. According to the literature on IT architecture flexibility, coevolution is the fundamental tenant of IT-enabled dynamic capabilities, which means flexibility in the line-up of IT resources (Mikalef et al., 2021). Together, information technology and its dimensions enable firms to improve their IT dynamic capabilities which help improve organizational processes (Mikalef et al., 2016). Literature has also identified IT-enabled DCs, which support the firm's evolutionary fitness by increasing agility, leading to improved firm performance (Mikalef & Pateli, 2017). In this article, we address IT at the solid level for supporting DCS sensing (SN), seizing (SZ), and transforming (TF). Employees may use IT to integrate existing knowledge across firms, harness creative thoughts and strategies, help in the connection of various disciplines, and exchange ideas with known and unknown personalities (Plattfaut et al., 2015). It is a critical component in the DCS context, supporting software in inter-functional collaboration and coordination of knowledge in practice; this is dependent on the firm's ability to facilitate integration mechanisms that support local (function-based) and global (computer-embedded) levels of knowledge and activity (Sher & Lee, 2004). These processes often play a crucial role in generating and maintaining DCS. The preceding explanation illustrates the significance of IT in searching for and absorbing external knowledge that is available in the workplace to improve DCS; thus, we pro
pose the following hypotheses(Lambrou 2016)

Absorptive Capacity and Firm's Performance

Previous research linked ACAP to various corporate sectors, with some delving into the organizational learning perspective. In this study, we aim to provide ACAP with a view of the firm's efficiency. Researchers also noted that the overall aim of the firm is to improve its financial performance (Kim & Lee, 2010) and that improving its financial performance without ACAP is challenging. ACAP refers to knowledge obtained from external sources (Cohen &

Levinthal, 1990); hence, ACAP has helped maintain a firm's performance in highly volatile markets (Lane et al., 2006; Zahra & George, 2002). Firms must regulate each dimension of ACAP concurrently with their achievement to achieve performance development (Zahra & George, 2002). The authors also referred to two subcategories of ACAP, Potential absorptive capacity (PACAP) and realized absorptive capacity (RACAP), impacting a firm's competitive advantage and performance. PACAP is responsible for developing and assimilating external knowledge to facilitate the organization's production of new knowledge. PACAP alone will not suffice to achieve higher performance until it is turned into RACAP by incorporating new knowledge into products and processes (Murray & Peyrefitte, 2007). Firms with higher ACAP levels will better understand and utilize the current command to facilitate innovation activities (Tsai, 2001). Without ACAP, the firm's ability to absorb and transmit knowledge from outside sources will be limited. As a result, effective internalization of external experience will improve the firm's development and success (George et al., 2001). Dobrzykowski et al. (2015) suggest that the firm's overall objective is to optimize financial efficiency by raising the variance of client needs, committing to improved information management capabilities, and consistently developing the links between IT and customers. In addition, the authors contend that the firm's financial performance is linked to its knowledge processing practices. This study investigates the influence of ACAP on FP by employing all ACAP measurements to obtain superior performance. With these dimensions, the firm may create expertise by integrating new and established knowledge following its job requirements. Therefore, we offer the following hypotheses(Alfionita, Syairudin et al. 2019):

Dynamic Capabilities and Firm's Performance

By maintaining FP via innovation, DCs increase the capacity to be better positioned to scan opportunities in a competitive market (Yoshikuni et al., 2021). Firms with dynamic capabilities can respond to opportunities and challenges by expanding, changing, and producing first-order changes (Hoopes & Madsen, 2008). DCS is conceptualized differently in information system literature owing to their approaches; for example, DCs ACAP is one form of DCS or ambidexterity that can encompass the three capabilities (sensing, seizing, and transforming) (Steininger et al., 2021). DCS are the firm's processes that utilize resources, that is, integrated for reconfiguration, procurement, and release of resources to balance and establish demand

transition (Peteraf et al., 2013; Ringov, 2017). DCS has been viewed as a strategic option that allows firms to shape their existing functional competencies when the opportunity or demand arises (Pavlou & El Sawy, 2006). DCS are related to the firm through several aspects, including their impact on the firm's performance, by allowing challenges to be explored by implementing new processes, products, and services(Ma, Khan et al. 2021).

Similarly, these capabilities increase the firm's pace, productivity, and efficiency in adjusting to the environment (Tallon, 2008). Furthermore, it improves the firm's ability to deal with environmental change and effectively affects FP by allowing the Company to capitalize on revenue-enhancing opportunities while reducing costs. Lastly, offer a firm with previously unavailable choice options and the potential to enable higher-performance contributions, such as increased sales or profits (Drnevich & Kriaučiūnas, 2011). Eisenhardt and Martin (2000) discovered that DCs might evolve by increasing conventional capabilities—expanding existing resource configurations to result in new decision options. According to DCS literature, the effect of DCS may not be automatic. Thus, DCs should be positively correlated to competitive advantage and performance.

Furthermore, DCs stimulate a firm's sensing capabilities, allowing them to be more creative in their product and service offerings; by acquiring knowledge from the web, raising revenue and financial performance, improving information and knowledge, and stimulating the firm's innovative measures (Hang et al., 2014). However, product innovation is driven by knowledge flow to provide financial performance (Zahra & Hayton, 2008). As a result, the preceding discussion demonstrates the direct and indirect relationships (Pavlou & El Sawy, 2011) between DCs and FP. Despite existing literature that uses DCs to analyze organizational environments and their influences on a firm's innovation, we associate DCs with FP. Firms that use DCS improve their performance more than those that do not have these capabilities. Therefore, we argue that(O'Reilly III and Tushman 2008):

Absorptive Capacity and Dynamic Capabilities

According to Zahra and George (2002), research reveals the ability of ACAP to generate DCs, where the four suggested capabilities—acquisition, assimilation, transformation, and utilization are integrated, and together they produce complex organizational capabilities. The authors describe ACAP as a capability for producing DCs, emphasizing the construct's strategic

character. The authors discuss how the four capabilities generate and modify expertise to build additional operational capabilities. Research demonstrates that these capabilities allow firms to gain a competitive advantage and increase their performance (Zahra & George, 2002). ACAP deals with evaluating and utilizing external knowledge, that is, learning with potential partners, integrating external information and transforming it into ingrained capability within the organization (Alves et al., 2016), allowing firms to respond inefficiently to strategic changes (Sun & Anderson, 2008). In addition, Zahra and George (2002) consider A CAP to be a DC in and of itself. In this article, we are presenting ACAP and its effect on the firm's DCs. Firms can only improve their capabilities if they have adequate knowledge management. ACAP enhances knowledge management capabilities in acquiring and transferring knowledge to meet the firm's needs. Therefore, we argue that(O'Reilly III and Tushman 2008):

Information Technology Support the Firm's Performance

IT and its impact on FP is a growing research area (Peng et al., 2016; Wu et al., 2015). It draws the interest of executives, decision-makers, developers, and funding agencies (Ilmudeen & Bao, 2018). It is a critical enabler for gaining strategic flexibility since firms rely on IT to cut costs, automate processes, and improve job performance (Bhatt & Grover, 2005). Bharadwaj et al. (2013) argued that IT encourages a firm's business models, supports or transforms policies and strengthens relationships between firms, partners, and consumers. It offers advanced computational capability in firms and various capacities such as knowledge management, analytical, and enhanced empowerment capabilities, allowing them to enter new markets and develop new business approaches. According to Ilmudeen and Bao (2018), good IT management contributes to FP by coordinating operations across various units, simplifying operational processes, reducing development costs, organizing units, managing IT properties, and allocating IT assets on time (Wang et al., 2015). It has been proven in a large group study of manufacturing firms to promote the development of firm profitability by enhancing their inventories (Shah & Shin, 2007). Firms that use web-based technology to expand their online sales channels realize synergies between online and offline sales channels and grow into the global market (Wu et al., 2017). Classical studies define the relevance of IT to the viability of firm profitability and address their direct relationship (Shin, 2001). For example, in early research, Cron and Sobol (1983) analyzed the effect of IT expenditure on the financial output of wholesale medical

suppliers. Markus and Soh (1993) investigate the relationship between various IT-related steps, such as expenditure, computerization optimization, the share of IT services, and firm profitability. Rai et al. (1997) investigate IT investments for solid performance using three types of IT investments, aggregate IT, client/server system, and IT infrastructure, and three types of performance measures firm-out, economic, and intermediate (labour/organizational productivity) performance. Keeping these classical and modern studies in view, we argue that (Li, Hallerman et al. 2016)

Mediating Role of Absorptive Capacity

According to the literature from the early 1990s, knowledgeable firms know where new opportunities can be found and how to exploit them (Cohen & Levinthal, 1990); however, unless they are willing to take advantage of these opportunities (Pérez-Luño et al., 2011). This might explain why some firms can acquire and assimilate knowledge produced from outside but cannot utilize it to create innovation (Caccia-Bava et al., 2006). In addition, Tsai (2001) claimed that ACAP could mitigate complicated problems and improve the firm's capacity to recognize and respond to new opportunities. In early 2000 established, the connection between ACAP and FP (Liao et al., 2003). ACAP, they added, is a complex set of knowledge-based activities. The relationship between knowledge flow, ACAP (George et al., 2001), and ACAP are linked to firm performance (Daspit et al., 2014). The roles of PACAP and RACAP are not mutually exclusive but complementary. Both ACAP subsets co-exit and learn to improve the FP. In addition, firms may acquire and assimilate knowledge, but they may lack the ability to transform and leverage it. Therefore, a high PACAP does not inherently mean an increase in performance. The transition is included in RACAP (Khan et al., 2017b) and exploits the acquired knowledge by integrating it into the firm's activities. PACAP can be viewed as an accumulation of new knowledge, whereas RACAP can be considered a mechanism for exposing and implementing this valuable knowledge. It is also highly advisable to store and preserve newly-generated expertise within the organization, thus enabling accessibility for the organizational participants that leverage it. Otherwise, RACAP will be destroyed as well as valuable knowledge (Leal Rodríguez et al., 2014). Recent IT research has focused on the influence of ACAP on the FP in both the public (Khan et al., 2017a) and private sectors. In addition, the development and use of ICTs inside an organization provide an intelligence channel for promoting ACAP-related

knowledge, including assimilation, acquisition, transformation, and exploitation (Bolívar-Ramos et al., 2013). According to the preceding explanation, IT has a positive impact on ACAP, and ACAP has a positive effect on FP. Therefore, we predict that(Mathews and Zander 2007):

Method

Prior studies are used to establish context for relationships between the variables in this study (Bhatt & Grover, 2005; Cohen & Levinthal, 1990; Duncan, 1995; Makadok, 2010; McDermott, 1999; Zahra & George, 2002). Figure 1 depicts the proposed model. FP is viewed as a dependent variable while IT is regarded as an independent variable; ACAP and DCs are either influenced by IT or affect FP. H1 predict the impact of IT on ACAP, H2 indicates the effect of IT on DCs, H3 predicts the impact of ACAP on FP, H4 predict the influence of DCs on FP, H5 predict ITs outcomes on FP, and H6 denote the power of ACAP on DCs. Whereas ACAP acts as a mediator between IT and FP. In this study, we follow (Anderson & Gerbing, 1988), Confirmatory techniques to test the measurement and structural model (Garver & Mentzer, 1999) and Analysis of Moment Structure (AMOS) 24.0 to validate our results and support the predicted hypothesis(Rauch, Wiklund et al. 2009)

Process

A structural questionnaire based on prior studies was used to collect data for this study. The target group was the initial stage in testing the hypothesis mentioned above. IT officers, IT executives, IT directors, IT managers, and business managers are all targeted. The study used a Likert Scale ranging from 1— strongly disagree to 7—strongly agree. A total of 241 samples were obtained from respondents who represented their firms. Table 1 shows the demographic information for the samples. We gathered data from private firms in different geographic locations in China, Anhui Taryn Tongda Mechanical & Electrical Co., Ltd, Hefei, Anhui, Anhui Quanmeng Electric Power Technology Co., Ltd, and Youfei High Tech Zone. The survey was conceived and maintained in English before being translated into Chinese by Chinese natives. In the knowledge management industry, these translators serve as professors. This process was followed to ensure a reliable translation by the professors familiar with information management concepts. The questionnaire was then sent online to the intended demographic, with each item being obligatory to eliminate missing values. We utilized this approach to minimize the cost of paper while maximizing rapid responses. The questionnaire comprised an

introduction, the study's goal, and respondent confidentiality. In Figure 1, we followed Zahra and George's (2002) study to measure ACAP in four dimensions: acquisition, assimilation, transformation, and exploitation. DCS is measured by three dimensions "sensing, seizing, and transforming" (Teece, 2007). Moreover, Firm performance demonstrates the firm's financial measurements, namely Sales and Market share of the firm(Echtner and Ritchie 1993).

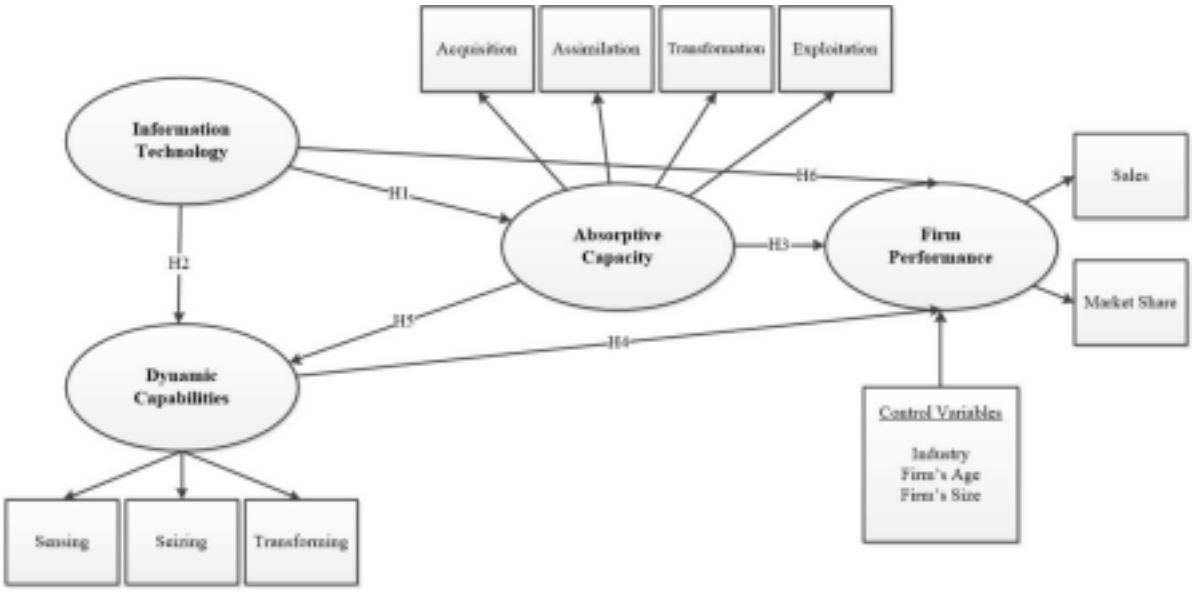

Figure 1. Conceptual model.

Indicators, "Sales and Market share"—using three items to gauge overall FP- were adapted from Dobrzykowski et al. (2015). These three items reflect the degree to which the firms improve their sales market share (α= .900). The three items were averaged as an overall FP measure—c*ontrol variables.* In our study, we used three control variables: industry type (i.e., service or manufacturing), and we treated the type of industry as a dummy variable; for example, 1 indicates the service industry, and two shows the manufacturing variables affect FP. First, IT is assessed using a scale adapted from prior literature (Duffy, 2000a; Nonaka & Takeuchi, 1995). The measure contains four items that reflect the overall impact of IT on the FP (α=.905). Second, ACAP is measured using the scale adapted from Flatten et al. (2011). The scale contains a total of 11 items that are oriented to measure the four dimensions of ACAP, that is, acquisition

measured by three entities, assimilation measured by three things, transformation measured by three items, and finally, exploitation estimated. These four dimensions reflect the firm's comprehensive knowledge processes (α=.936). Third, we utilized measures adapted from Plattfaut et al. (2015) and Pöppelbuß et al. (2011) for DCS. DCS is measured in three subcategories in this study: SN, SZ, and TRF, each measure including two items. These three measures of DCs reflect the firm's dynamic capabilities (α=.913). Please see Appendix 1(Echtner and Ritchie 1993).

Data Analysis

Before using structural equation modelling (SEM) for the predicted hypothesis, we performed an exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to validate the psychometric validity of the survey construct (Churchill & Jr, 1979). We used SPSS 25.0 to test EFA and AMOS 24.0 to analyze CFA and the research model(Rauch, Wiklund et al. 2009).

Exploratory Factor Analysis

Before applying any statistical technique to the data sample, we applied EFA to ensure that all items load into their respective measures used for things which are less than .40 and cross loading on two or more variables at ≥.40. The reliability analysis should indicate an item-to-total correlation of over .40. Table 2 summarizes the construct factor loadings and illustrates that the loading of all elements on a single factor suggests one-dimensionality. As a result, the fact that no item had multiple cross-loadings supports the scale's preliminary discriminant validity. We used Cronbach's alpha, composite reliability (CR) of constructs to assess convergent validity, and average variance extracted (AVE). Table 2 reports Cronbach's alpha verified from .900 to .936, significantly above the benchmark of .70 (Liu et al., 2013). These findings indicate that the measurement model's convergent validity is adequate(Hurley, Scandura et al. 1997).

Confirmatory Factor Analysis

CFA denotes suitable reliability measuring approach for theoretical construct space (Chin & Todd, 1995) by demonstrating the connection between the observed items and the construct they measure. We initially examine each component's convergent validity using within-scale factor analysis before comparing the thing load to the suggested minimum value of .60 (Chin et al., 1997). Table 2 describes the loading of the items and demonstrates that all of the measures

are significant on their path loading, indicating satisfactory convergent validity. Furthermore presents the loading of the measurements, which can also be seen in Figure 2. We carry out a multicollinearity test since the multiple inter-constructs in Table 4 exceed the .60 benchmark. The thumb rule for estimating multicollinearity is whether the variance inflation factor (VIFs) is >10 or <0.10. The results reveal that the highest and lowest VIF are 2.378 and 1.008, respectively, indicating that multicollinearity was not a problem(Hurley, Scandura et al. 1997).

Results

Using Amos, we assessed construct reliability (CNR) and average variance extracted (AVE), which represents the internal consistency of the indicators measured in the given construct (Fornell & Larcker, 1981). Table 4 describes all the values for composite reliability (CR) above the benchmark of .70, showing adequate reliability (Nunnally & Bernstein, 1994). Furthermore, the AVE values are above benchmark .5 (Huang et al., 2013). The maximum shared variance (MSV) and maximum reliability (MaxR (H)) is above .70, and pre sending a significant correlation between the measurements. Table 5 shows the FP as a dependent variable; in Model 1, we test the relationship between control variables industry (service and manufacturing), firm's age, firm size, and FP. However, we did not find a significant relationship between control variables and FP. Model 2 presents the positive relationship between IT and FP (β=.592, p<.01). Model 3 demonstrates the relationship between IT, ACAP, and FP β=.228 p<.05, β=.620 p<.01, respectively. Whereas Model 4 establish the positive relationship between IT, ACAP, DCs, and FP β=.201 p<.05, .561, p<.01, and .230 p<.05, respectively(Chin 1998).

Model Fit Indices and Hypotheses Testing

Table 6 presents the overall model of fitness of the proposed variables. The results show that chi-square normalization by the degree of freedom (χ^2/pdf) is 1.747, which should be less than 5, Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Normed Fit Index (NFI) should be ≥.9 (Bentler, 1983, 1988; Bollen, 1989a; Browne & Cudeck, 1993). Moreover, the result shows .957, .957, and .905 for CFI, IFI, and NFI, respectively, which are significant values per criteria (Browne & Cudeck, 1992). The commonly accepted value of root means the square error of approximation (RMSEA) should be ≤.08 (Dudgeon, 2004; Jöreskog & Sörbom, 1993). The adjusted goodness of fit index (AGFI) should be ≥.8. For the current model, RMSEA is

.056, and AGFI is .842, which shows the significant values supporting the proposed model. *Hypotheses testing.* Table 7 presents the hypotheses tested; the first hypothesis predicted that information technology would impact the absorptive capacity for knowledge processes. As indicated, IT influences ACAP (β=.744, p<.001), therefore, H1 is supported. We also predicted that IT would positively impact DCs (β=.182, p=.033), and the findings reveal a significant relationship between these variables, supporting H2. The authors also predicted that ACAP positively influences FP (β=.480, p<.001), which is corroborated by the data and confirms H3. As indicated earlier, DCs positively impact the FP, and the data in Table 6 demonstrate (β=.161, p<.001) that they support H4. We also predicted that ACAP positively influences DCs (β=.318, p<.001), and our findings corroborate this relation and H5. Finally, we indicated that IT would positively influence FP; the data reveal that IT significantly impacts performance (β=.218, p<.001), confirming H6. Using AMOS 24.0, Figure 3 depicts the overall connection of these variables. Our findings show that the control variables (industry, firm size, and firm age) did not affect FP. This might be due to the current study comparing the FP to its major competitors. Slight variations in the control vari tables between firms and their competitors might restrict their ability to explain business performance disparities(Chin 1998).

The approach from IT to FP from DCs (β=.193) has a 95% confidence interval, indicating that ACAP and DCs play.

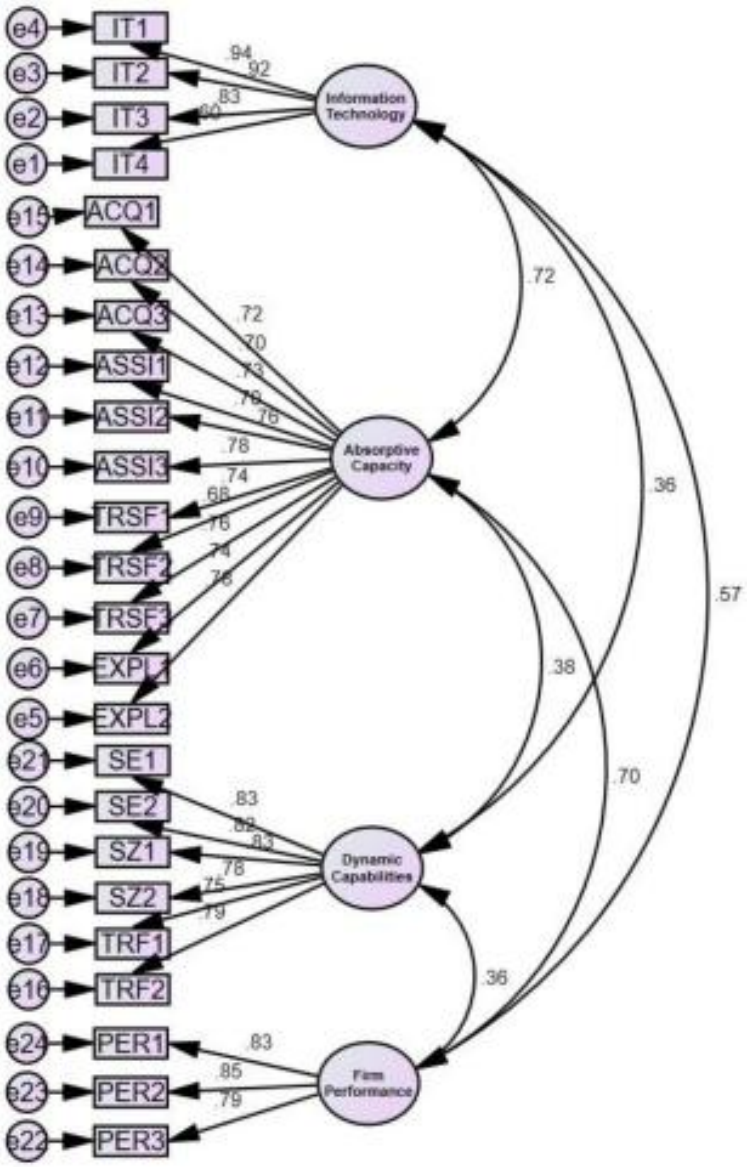

Figure 2. Amos loading.

Key areas. First, IT has a significant impact on ACAP; second, IT has a positive effect on DCs; and third, ACAP has a positive impact on FP. Fourth, DCs have a positive effect on FP; fifth, ACAP has a positive impact on DCs and, eventually, an apparent influence of IT on FP. The robustness of the structural model results was validated using 241 datasets acquired from

firms where IT plays a major or minor role in organizational activities. Prior research has established these frameworks for competitive advantage generation (Zahra & George, 2002). However, few studies have been conducted to comprehend the relationship in an interconnected manner, that is, to determine how it interacts with and influences the FP. There is a lack of appropriate comprehension of this study area as to whether and how IT supports the firm's competencies and performance (Chen et al., 2017). Prior research focused on a subset of business activities, such as online procurement and customer services (Fink & Neumann, 2007; Jeffers et al., 2008). As a result, to investigate the aggregated impacts of IT

Findings and Theoretical Implications

According to our findings, IT has both a direct and indirect impact on FP; using IT firms will improve their financial performance. Our analysis focuses on IT as a critical component in gaining a competitive advantage and enhancing FP, implying that investigating IT in terms of the firm's capabilities is a promising research direction. We believe that IT affects FP in terms of sales and market share. This study's argument was statistically proven (β = .218), demonstrating the importance of IT in achieving higher performance. It tends to maximize individual autonomy and encourage centralization in the organization, where the dissemination of information becomes more comfortable quick; when decisions from different sectors are made

Figure shows Results of the structural equation modelling. At once, the firm's efficiency improves. It facilitates internal communication and strengthens firm networking. As a result, the development of networks can also be associated with centralization to

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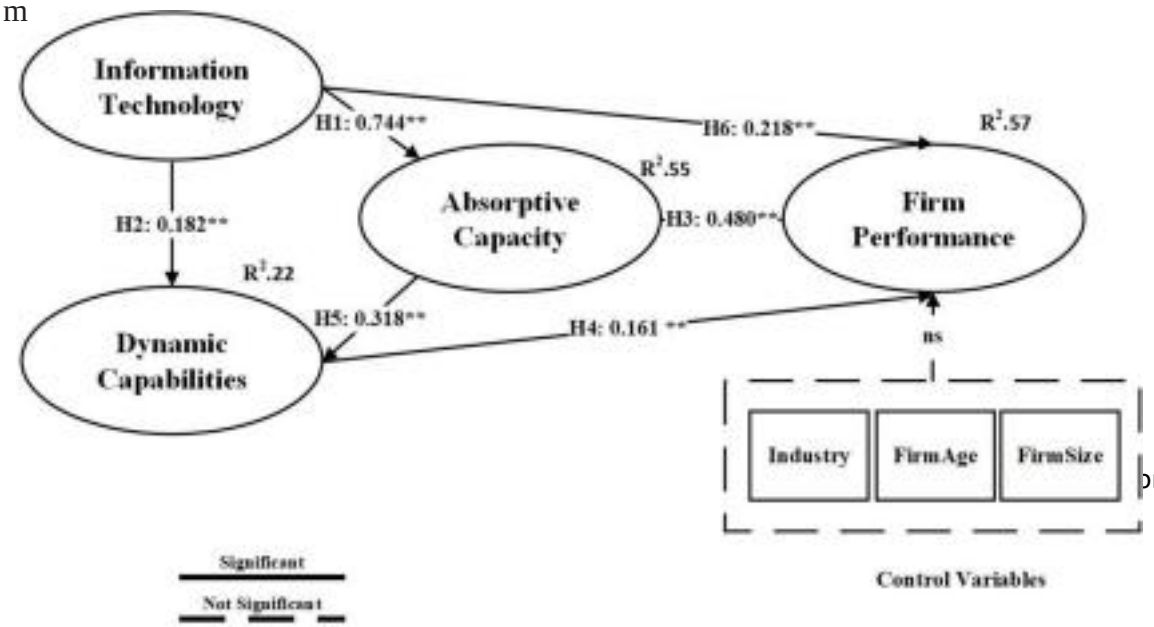

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manageable and sustain FP. We concentrate primarily on the fundamental relationship between IT and FP, driven by our theoretical predictions. We demonstrate that organizations that rely more on IT have a substantial advantage in identifying the external knowledge required in the current situation through quick communication. It enables firms to fulfil the demands for more knowledge processing while also being more adaptable in their information processing. Due to globalization, market challenges, the need for innovation, and strengthening ACAP for firm performance (Maria Teresa Bolivar-Ramos et al., 2013), it is an essential component for success in the recent era. It is critical for creating and sustaining a firm's ACAP (Roberts et al., 2012), as well as affecting the development of FP (Kostopoulos et al., 2011). Thus, when information and communication technologies are applied correctly, they provide significant opportunities for ACAP development (Roberts et al., 2012). Therefore, firms must examine this issue to remain competitive and enhance their performance (Jansen et al., 2005). It does not improve productivity or business performance (Jean et al., 2008), but its practical implementation may improve both FP and competitive advantages (Dehning & Stratopoulos, 2003). In this vein, the current study adds to the literature by recognizing the significant direct and indirect effects of IT on performance and the usage of IT in independent tasks on the development of ACAP and DCs. Our findings indicate that IT facilitates the relationship between individuals executing tasks on an interdependent basis and encourages information sharing beyond geographical boundaries (Rico & Cohen, 2005). It promotes a rich exchange of knowledge and abilities (Alavi & Leidner, 2001). Thus, the current article provides theoretical and empirical evidence that all of these processes influence the development of ACAP. This finding is essential since ACAP is linked to the development of the FP (Kostopoulos et al., 2011). This article also expands our understanding of the importance of ACAP in improving the FP. Prior research investigates ACAP as a facilitator for the organization to successfully acquire and utilize external knowledge, enhance learning ability, adapt to business environment changes, and innovate (Jiménez-Barrionuevo et al., 2011) to achieve superior FP (Kostopoulos et al., 2011). To analyze such a relationship, our investigation provides theoretically and empirically evidence that ACAP relates to the firm's financial performance. The findings support the argument that, besides acquiring external knowledge, firms must exploit knowledge effectively to improve FP (Jiménez-Barrionuevo et al., 2011; Zahra & George, 2002). Over time, ACAP evolves; as Cohen and

Levinthal (1990) argue, the more a firm follows the ACAP processes, the more efficient the external acquisition of knowledge can be. This statement is consistent with our findings, which indicate that firms with low ACAP cannot cope with superficial knowledge as successfully as a firm with high-level ACAP. Moreover, we considered ACAP a mediator in this study, enhancing the firm's knowledge processes capability. Thus, this study represents that ACAP is a partial mediator between IT and FP and directly impacts FP. This article contributes to its knowledge-based view by evaluating the firm's knowledge capabilities. Furthermore, it assists us in improving our understanding of knowledge-related aspects that contribute to performance. Finally, our study contributes to the literature on DCs. Prior research has focused on DCS in terms of innovation and enhancing a firm's knowledge capabilities (Zahra & George, 2002); despite past studies, we analyze a firm's capability

ties in terms of financial performance. The study adds to the existing literature on DCs by addressing their application in the service and manufacturing sectors. Previous studies have demonstrated biases toward products and technological innovation while ignoring firm finances (Tiago and Veríssimo 2014)

Conclusion

This study identified dynamic capabilities as a critical factor for FP. This article contributes to the literature by providing empirical evidence of DCs in service and manufacturing settings. Previous research has found that DCs are more closely connected to products and that innovation is essential. The point of departure for the study reported here is the proposition that to com

Pete effectively in the market, firms must focus on their capabilities to stand out and perform well compared to other market competitors. In testing hypothesis H4 (β=.161), we noted that DCs contribute positively to FP. This also illustrates the significant contribution of DCs to the firm on different levels. A firm with fewer DCs faces more challenges in managing knowledge, and delays in knowledge processes can impact performance. Furthermore, the impact of competition on the relationship between DCS and FP is a fundamental premise of DC theory. However, some researchers believe that context has a substantial effect (Teece, 2007; Teece et al., 1997), and others believe that it does not (Zahra et al., 2006). We support the positive impact of DCs since the findings demonstrate a positive relationship, implying that firms may improve

their performance by developing their capabilities, particularly in a turbulent environment. DCS allow firms to perform well during environmental changes; we identified several studies; for example, Makkonen et al. (2014) and Nair et al. (2014), support DCs and allow firms to perform better during financial crises(Tiago and Veríssimo 2014).

Practical Implications

The study has some implications for business practitioners. First, organizations must adapt IT for the development of knowledge processes. For this, firms must use IT to enhance their capabilities, especially knowledge acquisition and poster sessions, through educating and training current employees. According to this viewpoint, top management must continuously strive to support the establishment of a dynamic working atmosphere to promote the application of external knowledge (Chou, 2005). Second, by encouraging the use of IT in interdependent tasks, it should be considered as a means of achieving the firm's competitive advantages because organizations may create teams beyond the member's physical positions, influencing the capabilities of knowledge processes (Griffith et al., 2003). Moreover, organizations will be able to develop their ACAP, which is essential in this knowledge-intensive business era (Kostopoulos et al., 2011). Third, Managers should prioritize technology to support the growth of knowledge processes. To this end, firms must develop clear policies to support knowledge generation, determine the vital knowledge for their firm under different circumstances, focus on knowledge transfer and integration within the organization, and develop knowledge maps that evaluate the firm's individual and learning systems. Fourth, firms must improve their capabilities by creating internal capabilities. They can enhance their capabilities by utilizing IT for knowledge search; the more knowledge they obtain, the more development they can make in terms of performance. Fifth, the study facilitates governments in growing both the public and private sector firms by increasing employees' dynamic capabilities. These competencies include employing technology and turning information beneficial for government and public organizations using ACAP. These capabilities will increase the productivity of public and private sector firms and enable them to perform well in crucial situations. The government may use these capabilities by applying private-sector techniques in which information usage is an art form to improve the functioning of government organizations(Tiago and Veríssimo 2014).

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