IT strategy and business strategy mediate the effect of managing IT on firm performance: empirical analysis

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Abstract

Purpose – The multifaceted effect of IT in organizations has been widely examined. However, the intervening role of IT strategy and business strategy on the effect of managing IT on firm performance remains less strong. This study examines how managing information technology (MIT) effects on firm performance by looking at the mediating role of IT strategy and business strategy.

Design/methodology/approach – Drawing on the resource-based view of IT and contingency perspective, theoretical insights for managing IT and the mediating effect of IT strategy and business strategy on firm performance are established. The model is empirically tested by using hierarchical regression and structural equation modeling for the data collected through the survey of 194 senior IT and business managers in China.

Findings – The significant and impactful relationship found in the model for the proposed idea. The results show that both IT strategy and business strategy partially mediate the effect of managing IT on firm performance.

Research limitations/implications – The findings highlight that managing IT does not merely influence better firm performance; instead, the coherent amalgamation of IT strategy and business strategy can enrich firm performance. The theoretical and practical implications are also discussed.

Originality/value – In line with the call for rigorous research to integrate the managing IT and firm strategies, this study demonstrates the mediating role of business strategy and IT strategy between the managing IT and the firm performance relationship, hence contributing to the IS research literature.

Keywords Managing IT, IT strategy, Business strategy, Firm performance

Paper type Research paper

1. Introduction

Information technology (IT) has become an indispensable component for business operation in the current fast-paced business environment (Croteau and Bergeron, 2001; Wang *et al.*, 2012; Xu *et al.*, 2016). The managing IT (MIT), e.g. the managerial efforts involving for planning, organizing, controlling and directing IT within an organization has received a considerable attention among scholars and practitioners (Ilmudeen and Yukun, 2018; Wang *et al.*, 2015; Xu *et al.*, 2016). Managing IT has become a broad-ranging domain that includes sophisticated technical and managerial capabilities, multimillion dollar budgets and comprehensive implications for business strategies and operations (Masli *et al.*, 2016). Yet,

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extent research have been done on managing or governing IT with regard to firm performance (Bulchand-Gidumal and Melián-González, 2011; Chen *et al.*, 2014; Wang *et al.*, 2012); much of these studies have implicitly, if not explicitly, applied a higher level lens (Croteau and Bergeron, 2001; Mithas and Rust, 2016; Ravichandran *et al.*, 2005).

In recent years, IT investments have reached a significant amount among Chinese firms (Chen, 2010; Peng *et al.*, 2016). Further, the Chinese economy has shifted towards a massive market base; consequently, IT is believed to be a vital enabler for their business and economic success (Davison *et al.*, 2008; Dologite *et al.*, 1998; Liu *et al.*, 2010). Additionally, the participation in global competition and its growing economy has compelled extensive access to IT investment. Accordingly, IT is believed to be an ever more essential resource for Chinese firms (Chen, 2010). However, the Chinese information system literature has concentrated extensively on industrial, technical and operational issues (Chen, 2010; Davison *et al.*, 2008), the MIT or the multifaceted socio-technical study has relatively received less attention (Ilmudeen and Yukun, 2018). Further, unlike European and North American countries, China has a relatively short history of using IT and managing IT projects (Liu *et al.*, 2010). In this tenet, management of IT still remains unexplored and the empirical investigations on IT issues in China are limited (Chen, 2010; Wang *et al.*, 2015).

Inspired by the seeming presence of the productivity paradox in China, this study reconsiders MIT–firm performance relationship. In a typical organization, business strategies are executed using a series of processes, and IT is assumed to be a part of the business operation. In this way, IT does not directly generate value or improve firm performance alone; rather, it must be a part of business value-creating process with other firm-level IS resources and elements such as IT/non-IT people, management practices, business processes, knowledge assets, structures and policies, which should function in a synergistic fashion (Peng *et al.*, 2016; Powell and Dent-Micallef, 1997; Ravichandran *et al.*, 2005). Firms that solely rely on IT resources and capabilities cannot create business value from IT; instead, they should focus on the effective use of IT management to help competitive strategies and core competencies (Wang *et al.*, 2015; Xu *et al.*, 2016). A typical business manager performs tasks such as directing, determining IT-enabled business solutions, enabling technology services and managing the formulation of business strategies. Hence, IT deployment in functional units becomes increasingly pervasive (Masli *et al.*, 2016). Moreover, IT strategy and managing IT have taken strategic action to support cross units, and firm's IT-related synergies need to be established and synchronized to address global issues (Masli *et al.*, 2016). Synthesizing these views, what is not clear is the relative degree to which managing IT influences the firm performance through IT strategy and business strategy.

In literature, the effect of managing IT on firm performance widely examined and different perspectives have been adopted. For example Wang *et al.* (2015) found that IT assets and IT management effect firm performance in an interactive manner where IT management capability can directly improve competitive advantage and firm performance, whereas IT assets do not directly and independently impact firm performance. Mithas and Rust (2016) found that firms with a dual IT strategic emphasis (revenue expansion plus cost reduction) have a higher market value than firms with a revenue or a cost emphasis. Peng *et al.* (2016) found that the integration of IT capability with a firm's business process management capability and supply-chain management capability can enhance firm performance. The study by Ravichandran *et al.* (2005) suggested that variation in firm performance is explained by the degree to which IT is used to support and improve a firm's core competencies. Rivard *et al.* (2006) found that IT supports firm assets and strategy strongly and can play a vital role in generating competitive value if it is deployed in a better way to leverage firm capabilities. Bulchand-Gidumal and Melián-González's (2011) study shows that the planning and management of IT influence on firm's resources that have positive effects on each of the IT-related areas, which subsequently has positive effects on organizational performance. Prior

research warrants empirical work with either mediation or moderator model to elucidate whether IT creates business value directly or indirectly with firm factors (Cao *et al.*, 2011). Hence, none of the above studies examines either IT strategy or business strategy mediate the relationship between managing IT and firm performance. Moreover, it is not well understood if and how some mediating or contextual factors shape the effect of managing IT on firm performance. Against this backdrop and motives our research questions are:

RQ1. How the effect of managing IT influence on firm performance?

RQ2. How the IT strategy and business strategy mediate the effect of managing IT on firm performance?

This study has several noteworthy contributions to the IS literature and practices. First, firms cannot simply rely on managing IT; instead, they need to focus the effective integration of IT strategy and business strategy to strengthen their firm performance. Hence, this study is the first attempt where firm IT strategies and business strategies have been conceptualized as mediators on the effect of managing IT on firm performance. Second, this study attempts to pinpoint the practical implications for Chinese firms that strive to leverage firm performance through managing IT and contribute to Chinese IS literature that has relatively received less attention. Further, in contrast to past studies that explicitly assumed that managing IT could have direct effects on firm performance, the findings of this study can provide a basis for firms in other countries to explore more in their business context. Third, this research adds to the existing literature as we build upon strategy as a mediator in the growing body of IS research literature that accumulates this study's finding in the Chinese firm context.

The remainder of the paper proceeds as follows. Next section continues theoretical background, followed by research model with hypothesis (§3), research methodology and analysis (§4), results and findings (§5), discussion and implications (§6), and limitations and conclusion (§6).

2. Theoretical background

This section discusses two themes of literature that offers theoretical basis for this study. First, the resource based theory (RBV) offers firm as the bundle resources firm deploys them in achieving firm performance. Second, contingency theory that IT investment as a management intervention demonstrates its connection with performance improvement subject to the contextual factors.

2.1 Resource based theory (RBT)

RBT is broadly accepted as one of the foremost theories for describing, explaining and predicting IT-organizational relationship (Barney *et al.*, 2011; Rivard *et al.*, 2006; Xu *et al.*, 2016). It has been used as the underlying theory in areas such as the benefits of ICT use in organizations and IT management practices (Seddon, 2014). RBT indicates that firms have bundle heterogeneous resources that are rare, immobile and hard to replicate controlling over these scant resources, firms can become more profitable than their peers and enjoy a competitive advantage (Barney *et al.*, 2011; Ravichandran *et al.*, 2005; Seddon, 2014; Tallon, 2007; Turel *et al.*, 2017; Wang *et al.*, 2012; Xu *et al.*, 2016). Firm resources include all assets, capabilities, firm processes, firm attributes, information and knowledge (Barney, 1991, p. 101; Rivard *et al.*, 2006). IT management is concerned with a firm's capabilities for building and deploying new capabilities. Hence, a firm with durable IT infrastructure and superior IT management have the ability to effectively arrange a new application, modify or redesign enterprise systems with structural sophistication, as well as solve maintenance hurdles (Chen *et al.*, 2014; Wang *et al.*, 2015). In information system literature a large body of scholarly works

have been accepted the RBV as the main theoretical background to explain how IT can be a basis of competitive advantage (e.g., Kearns and Lederer, 2003; Melville *et al.*, 2004; Rivard *et al.*, 2006; Wade and Hulland, 2004; Wu *et al.*, 2006). By drawing on RBV, the principal notion of managing IT investment has been expressed in various ways, such as effective IT governance (Wilkin *et al.*, 2016; Wu *et al.*, 2015), IT capabilities (e.g., IT management and IT technical skills) (Chen *et al.*, 2017), IT practices (Turel *et al.*, 2017) and IS resources (Wade and Hulland, 2004), and management of IT investment (Ilmudeen and Yukun, 2018).

Further, the IT is believed as an essential part of business processes and IT extends all business functions. As a result, firm designs and recombines IT resources towards alignment between business and IT functions that enables internal fit under RBV (Turel *et al.*, 2017). The value generated by the IT within a firm can be tough to reproduce if the alignment is difficult to replicate (Kearns and Lederer, 2003; Tallon, 2007). Hence, RBV highlights the managing IT investment supports effective execution of IT and business strategies to achieve superior alignment, and then attains better firm performance. Besides, there is a less agreement that IT resources alone can create business value (Peng *et al.*, 2016). Though, most prior studies adopted the resource-based view's positive IT contribution to firm performance (e.g. Ravichandran *et al.*, 2005; Rivard *et al.*, 2006), some studies limit this point. For example, Powell and Dent-Micallef's (1997) IT alone has not produced sustainable performance advantages in their retail industry study. Furthermore, as IT being a part of an organization's resource portfolio, it functions alone may not meet the RBV criteria (Wu *et al.*, 2006). Hence, the contingency perspective offers novel insights to support this research further.

2.2 The contingency theory

The contingency perspective's key idea is the success of management intervention is crucially dependent on a fit between the intervention and a firm's internal and external environment, i.e., the contexts (Xu *et al.*, 2016). Accordingly, IT investment as a management intervention demonstrates its connection with performance improvement, which is subject to the effect of contextual factors (Xu *et al.*, 2016). Accordingly, Sambamurthy and Zmud (1999) stated that firms are subject to the pressures of multiple rather than single contingency forces, and they examined how multiple contingency forces influence the mode of IT governance. In the context of contingency RBV, Cao *et al.* (2011) argued that IT is an integral part of a system of interrelated organizational factors where the level of IT business value depends on the degree of systems fit (or misfit) with various moderators and mediators. Xu *et al.* (2016) reviewed microeconomic theory, resource-based view, and institutional theory to critique about the above theories with the contingency perspective and explained more about IT productivity variance.

According to McAdam *et al.* (2016), the contingency theory is useful when there is a lack of an established theoretical framework with an emphasis on contextually grounded approaches based on contingency fit rather than a single best way to manage an organization. Researchers claimed that the contingency theory inferences that "performance is a consequence of the fit between several factors: structure, people, technology, strategy, and culture" (Tosi and Slocum, 1984). The IT business value with firm's strategy research under contingency theory highlights the fit between the business strategy and IT strategy (Ilmudeen *et al.*, 2019; Sabherwal and Chan, 2001). Further, the organizational performance is contingent on a number of variables such as structure, size, strategy, task, and individual characteristics (Cao *et al.*, 2011).

According to the RBV, sources of competitive advantage begin with the notion that firm resources may be mixed and immobile (Barney, 1991). Similarly, a firm's competitive advantage can be sustained when it implements a strategy that is not easily copied by its rivals (Martinez-Simarro *et al.*, 2015; Wu *et al.*, 2006). Prior studies combined RBV with other

theories, e.g., competency theory and competitive strategy theory, and conceptualized IT support for competitive strategies and IT support for core competencies (Wang *et al.*, 2012). IT functioning as alone may not fulfil the RBV (Wu *et al.*, 2006), and IT resources proposed in the traditional RBV simply cannot create value in a vacuum (Chen *et al.*, 2014). Thus, IT needs to be integrated with other organizational factors to create business value (Cao *et al.*, 2011). According to Mao *et al.* (2016) a contingent resource perspective extends the traditional RBV and supports the exogenous context and endogenous variables, including management intervention, business strategies, and other industry-level and firm-level variables (Chen *et al.*, 2014; Xu *et al.*, 2016). Therefore, the contingency approach used to study the effect of contextual factors on firm performance gained novel insights and is recognized as an effective approach (Xu *et al.*, 2016). Drawing on the RBV and contingency perspective, we posit that business strategy and IT strategy can serve as a catalyst in mediating the effect of managing IT on firm performance.

3. Research model and hypothesis development

We propose a research model that connects four constructs: managing IT, IT strategy, business strategy and firm performance. The managing IT refers the efforts involve in planning, organizing, controlling and directing IT within an organization. The IT strategy and the business strategy are the operational plans that are intended to achieve firm performance. Firm performance is the aggregate performance (financial return, operational excellence and market performance) that best measure compare to competitor (Ilmudeen *et al.*, 2019). Drawing on the extensive literature, we posit that the integration of IT strategy and business strategy on the effect of managing IT on firm performance will enhance performance outcomes better than its direct effect. This section discusses the hypothesized relationship among the constructs in the model. Figure 1 shows an overview of the relationship between the constructs in the model.

3.1 Managing IT and IT strategy

The multifaceted role of IT in organizations has been widely examined (Wang *et al.*, 2015). Despite this, MIT has been receiving significant interest and is ranked as a pinnacle concern in many enterprise-wide surveys (Rivard *et al.*, 2006). IT is an integral part of a system of interconnected firm factors, which requires a holistic approach to knowing when, how and

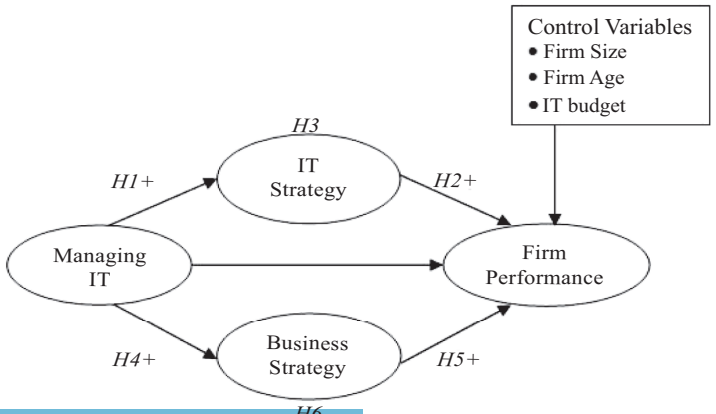


Figure 1.
Research model

why IT creates business value (Cao *et al.*, 2011). Adopting IT management practices will bring the firm closer to alignment between IT and business goals which, in turn, uplifts firm performance (Tallon *et al.*, 2000). In this similar vein, Wu *et al.* (2015) found that business strategy and IT strategy aligned and fully mediates the impact of IT governance mechanisms on firm performance. The higher levels of IT management sophistication guarantee a good level of fit between IT and business strategies, which then leads to proper selection and utilization of IT resources (Karimi *et al.*, 2000). In addition, the better the senior executives' shared knowledge and mutual trust (roles served by IT in maintaining / enhancing the firm's competitiveness, developing a high-quality set of business and IS plans, and stronger agreement on IT management issues) the greater the possibility that the firm will be successful in applying IT (Johnson and Lederer, 2010; Masli *et al.*, 2016). Moreover, firms can support to its performance with the solid managing IT by orchestrating activities across various business units, synchronize IT and business units, simplify operation processes, lower production cost, frequently check IT priorities and timely allocation of IT assets (Wang *et al.*, 2015). Therefore, our first hypothesis is stated as follows.

H1. Firms that tend to have greater managing IT practices positively contribute to their IT strategy.

3.2 IT strategy and firm performance

IT can be used to (1) *reduce costs* by refining productivity and efficiency; (2) *increase revenues* by completely exploiting opportunities through either existing or creating customers, channels, and products / services; or (3) *reduce costs and increase revenues* concurrently (Mithas and Rust, 2016). The study by Mithas and Rust (2016) suggested that at low levels of IT investment, the firm may need to choose between revenue expansion and cost reduction, but at higher levels of IT investment, a dual emphasis in IT strategy or IT strategic ambidexterity increasingly pays off for firms. Due to the lack of solid IT strategy, IT contribution to firm performance may fall short of expectations (Chen, 2012; Martinez-Simarro *et al.*, 2015). Hence, Rivard *et al.* (2006) highlight that the effects of both IT support for the business strategy, and IT support for firm assets improves firm performance. IT strategies enable firms to focus on the application of IT to improve the business and to understand the business-IT links and help concentrate on the application of IT, which enables the business strategy (Papp, 1999). According to Rivard *et al.* (2006), IT support for strategy has an impact on performance, where IT can be used to support cost leadership strategies, marketing differentiation strategies, and innovative differentiation. Hence the second hypothesis is stated as follows.

H2. Firms that tend to have greater IT strategy positively influence on their firm performance.

Researchers believed that the IT contribution to firm performance is an essential management issue (Rivard *et al.*, 2006). IT is playing a strategic role and believed that the core to business operations in today's fast-paced business environment (Alaceva and Rusu, 2015; Sabherwal and Chan, 2001). To understand how IT strategy functions as a mediator in managing IT and firm performance relationship, it is obvious that a firm has to focus on strategic directions when it chooses various IT strategies thus managing IT alone is insufficient in achieving firm performance. A firm can choose IT strategy as a foremost strategic objective, which can be revenue expansion, cost reduction, or a dual emphasis in which both goals are pursued (Mithas and Rust, 2016). The firm's physical IT systems merely cannot be a source of a sustainable competitive advantage as they are easy to replicate, rather, unique capabilities such as managerial abilities with intangible assets and the inclusion of IT business strategies

(Wilkin *et al.*, 2016). Once IT is strategically aligned with the business, firms have the abilities to grasp their strategies and move towards the shared IT goals, consequently, it brings better firm performance (Turel *et al.*, 2017). Hence, firm alignment between the core business strategy and IT strategy is likely to mediate the impact of IT governance mechanisms on firm performance (Wu *et al.*, 2015). Therefore, the hypotheses are stated as follows:

H3. A firm's IT strategy mediates the effect of managing IT in their firm performance.

3.3 Managing IT and business strategy

In a typical firm, IT supports businesses by collecting and analyzing their operational data and customer and supplier information to gain a competitive advantage and galvanizes impressive changes in firms through performance improvement (Xu *et al.*, 2016). Further, IT application is deeply woven into business operations while requiring a large sum of investment and often calls for stable management practices (Masli *et al.*, 2016). When the business strategy is the driver of IT strategy (Henderson and Venkatraman, 1993), the role of IT executives as strategy implementers who ensure that IT line up with business strategy. IT strategies typically depend on business strategy and business – IT alignment is the extent to which the IT strategy facilitates and drives the business strategy (Cuenca *et al.*, 2011). Accordingly, Cragg *et al.* (2002) investigated the alignment of business strategy and IT strategy among small UK manufacturing firms and linked it with firm performance. As stated by Mao *et al.* (2016) when IT investment is correctly managed, favorable conditions are created for the alignment of IT resources and business strategies. To link the IT and business strategy in modern business firms, researchers warrants fresh approaches to address the ways to exploit synergies between strategic business unit and functional-level activities (Coltman *et al.*, 2015). Thus, the hypothesis is stated as follows.

H4. Firms that tend to have greater managing IT practices positively contribute to their business strategy.

3.4 Business strategy and firm performance

IS strategy is linked with business applications, and it should be aligned with business strategy (Das *et al.*, 1991; King, 1978; Zviran, 1990). Accordingly, Drnevich and Croson (2013) argued that while IT actions remain integral to functional-level strategies, they play numerous significant roles in business strategy, with considerable performance implications in the organization. Hence, the strategic IS can support or even shape business strategy (Croteau and Bergeron, 2001), and the relationship between alignment and business success depends on the business strategy (Sabherwal and Chan, 2001). In many cases, IS supported the business operation for instance, for research and development, IS integrated various applications to foster knowledge generation, which may cover general applications (groupware) to specific applications (expert systems) (Martinez-Simarro *et al.*, 2015). A firm's activities such as operations, research and development, and marketing potential allow to execute a business strategy that mirrors its customer needs (Chen, 2012).

H5. Firms that tend to have better business strategy positively influences on their firm performance.

IT creates business value by improving the operational efficiency of intermediary business processes (Soh and Markus, 1995). The technology-driven strategy alone does not directly influence firm performance, while it advances or obstructs a firm's strategic capabilities, in turn positively influence firm performance (Hao and Song, 2016). Lack of alignment between business and IT strategies will obstruct the performance outcomes (Avison *et al.*, 2004); this is because when the firm fail to manage and govern IT (Turel *et al.*, 2017). In a typical firm,

strategic and operational issues are addressed when specifying business units IT-related requirements, overseeing the establishment of IT-enabled business solutions, and confirming that these solutions are aligned with current and planned business strategies (Masli *et al.*, 2016; Tallon, 2007). In this similar way, the mediating role of business strategy was highlighted in the prior studies for example the alignment between core business strategy and IT strategy fully mediates the impact of IT governance mechanisms on firm performance (Wu *et al.*, 2015). Hence, the hypotheses are stated as follows.

H6. The firm's business strategy mediates the effect of managing IT on their firm performance.

4. Research methodology and data analysis

4.1 Construct development

All the constructs in the research model are extracted from the prior studies. Managing IT is the reflective construct and its items are extracted from the past studies (Chen *et al.*, 2014; Croteau and Bergeron, 2001; Prasad *et al.*, 2010; Wilkin *et al.*, 2016; Wu *et al.*, 2015). The IT strategy and business strategy are the formative constructs that has nine items (Chen, 2010; Cragg *et al.*, 2002; Hussin *et al.*, 2002; Wu *et al.*, 2015). The nine business strategy items are intended to serve parallely for the nine IT strategies items. Firm performance has traditionally been measured by using financial matrices. Contrary to this, firm performance is a multidimensional construct, and only financial measures may be misleading because of "their (1) inadequate handling of intangibles and (2) improper valuation of sources of competitive advantage" (Bharadwaj *et al.*, 1993; Morgan and Strong, 2003). Hence, we included measures such as financial returns, operational excellence and marketing performance to best evaluate the firm's total performance relative to its competition (Wu *et al.*, 2015). The firm performance consists of three first-order formative constructs: financial return (Wu *et al.* 2006, 2015; Yayla and Hu, 2012), operational excellence (Ravichandran *et al.*, 2005; Wu *et al.*, 2015) and marketing performance (Wu *et al.*, 2006). All items are measured using a five-point Likert scale ranging from "1 – strongly disagree" to "5 – strongly agree." We used control variables such as firm size (Ilmudeen and Yukun, 2018), firm age (Mao *et al.*, 2016), and IT budget (Ilmudeen and Yukun, 2018) which could explain the variance in the dependent variable.

4.2 Sample and data collection procedure

We used key informant approach for the data collection which is a common method in IS research (e.g., Ilmudeen *et al.*, 2020; Ilmudeen and Yukun, 2018; Wu *et al.*, 2015). The data collection started from October 2016 to January 2017. This study's sampling frame is the senior IT and business managers who work in Chinese firms. These working managers completed their MBA/EMBA program from the School of Management, Huazhong University of Science and Technology. These postgraduate programs are conducted in the major metropolitan cities of China (Wuhan, Shenzhen, Suzhou, Guangzhou, Jinan and Nanjing). The Center for Modern Information Management at this School maintains a database for all the alumni working professionals. The researcher could be able to get the target respondent's e-mail addresses from this accreditation center. The researchers developed e-version of questionnaire in a paid Chinese electronic platform (www.sojump.com). To avoid multiple responses from a respondent researcher set one respondent can answer for only one questionnaire. The invitation letter explained the target respondents, objectives of the study and confidentiality of the information with questionnaire link emailed to 100 working mangers to each city, for 2015 and 2016 batch. Originally, we received 221 responses that yielded to the overall response rate of 18.42%. We eliminated 27 records

having incomplete, same answer for all items, and missing responses. Finally, we obtained a usable sample of 194 valid records accounted for 87.78% valid response rate for this study. The sample of this study appears an exact representation of the population of interest thus 44.8% of respondents are IT professionals (Head of IT and MIS managers), and 46.9% of respondents are business professionals (department manager and marketing manager). Among the respondents 53% of them have above six years of working experience and within this 10.7% of them have above 12 years of experience. This study sample includes wide range of industry sectors such as manufacturing 37.8%, IT and technology 29.6%, construction 8.7%, transport/logistics 8.3%, banking/finance/insurance 6.3%, trade and business 5.5% and others 3.8%. Table 1 shows the demographic profile of the sample.

4.3 Data validation

4.3.1 Non-response bias. The external validity was confirmed through *t*-tests to check the existence of non-response bias. Based on the assumption that the last group of respondents is most similar to non-respondents, an assessment of the first and last timed quartile of respondents demonstrate a test of non-response bias in our sample (Armstrong and Overton, 1977). Hence, the first and last quartiles were compared and it shown there was no significant difference between the early and late respondents. *t*-tests on the means of independent variables such as MIT ($p = 0.374$), ITS ($p = 0.874$), and BS ($p = 0.565$). It demonstrates the evidence that there is no significant threat of non-response bias for this study sample.

4.3.2 Common method bias. The common method bias (CMB) was addressed by using several methods. First, the Harman's single-factor test: If all variables load variance on one factor or one factor explains majority of the variance, there is a high level of common method bias (Podsakoff *et al.*, 2003). The principal component factor analysis produced six factors; the highest variance explained by first factor is accounted for 41.6% out of 70.1% of the total variance that is below than the cutoff value of 50% in Harman's single factor test (Podsakoff *et al.*, 2003). Due to the growing demerits on the Harman's single-factor test, we re-confirmed CMB using other methods. First, any high correlation ($r > 0.90$) is also the sign for the CMB (Gaskin, 2011; Lowry and Gaskin, 2014). In this study, the Pearson's correlations r value is less than this threshold value (Table 2: $r < 0.9$). Second, if all VIFs generated from a full collinearity test has equal or less than 3.3, the model is free from common method bias (Kock, 2015). In this study all the VIF value are below 3.3 (Table 2: VIF < 3.3). Third, we tested CMB using common method factor. With our PLS model added a common method factor and linked all the principal constructs' indicators with it and compared the substantive factor loadings with the method factor loadings (Armstrong and Overton, 1977; Shao *et al.*, 2016). In this approach, we calculated indicator's variances explained by the principal construct (R_1^2) and indicator's variances explained by the method construct (R_2^2). This revealed that most of the substantive factor loadings are positive and significant while, most of the method factor loadings are insignificant. Using these approaches, the presence of the common method bias is an insignificant threat for our sample.

4.4 Data analysis method

We employed a partial least square (PLS) smart PLS 3.0 with the structured equation modeling (SEM) technique. PLS-SEM is selected as it works efficiently with a small sample, can handle a complex model, has no assumptions about original data, easily measures reflective and formative measurement models and features high efficiency in parameter estimation and offers greater statistical power (Hair *et al.*, 2017; Hair *et al.*, 2016; Wang *et al.*, 2016). In this study, the reflective constructs comply with the criteria suggested by Jarvis *et al.* (2003) and are reliable for those in the prior research. In addition, The Kaiser-Meyer-Olkin (KMO) measure value is 0.922 > 0.5, and the Barttlett's Test of Sphercity value is 0.000 < 0.05

Category	*N*	%
Position		
CEO	5	2.6
General Manager	11	5.7
Head of IT	54	27.8
MIS Manager	33	17
Depart. Manager	42	21.6
Market Manager	49	25.3
Experience		
3.1–6 years	91	46.9
6.1–9 years	64	33.0
9.1–12 years	28	14.4
12.1–15 years	10	5.2
15.1–18 years	1	0.5
IT budget % in sales		
<1 %	51	26.3
1.1–2%	38	19.6
2.1–3%	19	9.8
3.1–4%	24	12.4
4.1–5%	23	11.9
>5%	39	20.1
Total sales in last year		
<100 million $	49	25.3
100–499 million $	36	18.6
500–999 million $	15	7.7
1,000–1,499 million $	16	8.2
1,500–1999 million $	7	3.6
>2,000 million $	71	36.6
Employees		
Less than 100	38	19.6
100–500	42	21.6
500–1,000	17	8.8
1,000–1,500	16	8.2
1,500–2000	6	3.1
More than 2000	75	38.7
Org_Age		
<4.9 Years	27	13.9
5–9.9 Years	37	19.1
10–14.9 Years	29	14.9
15–19.9 Years	17	8.8
>20 years	84	43.3

Table 1.
Demographic profile of the sample

	Mean	SD	MIT	ITS	BS	FP
MIT	3.556	0.912	*0.847*			
ITS	3.561	0.852	0.728			1.375
BS	3.794	0.898	0.497	0.522		1.371
FP	3.478	0.838	0.617	0.611	0.604	

Note(s): Diagonal italicized value is the square root of AVEs; these should exceed the inter-construct correlations for adequate discriminant validity for reflective construct. Nondiagonal elements are the correlations between the constructs. Above diagonal values are the VIF for formative constructs

Table 2.
Descriptive statistics, correlation and square root of AVE

signifies the measure of sampling adequacy for the data analysis (Peng *et al.*, 2016). The data analysis includes two steps. First, we calculated the measurement model for proper psychometric properties. Second, measured the structural model Hair *et al.* (2016).

4.5 Measurement model

For the reflective construct we measured internal consistency and reliability, convergent validity and discriminant validity as recommended by Hair *et al.* (2016). The Cronbach's alpha values above 0.7 confirm internal consistency and reliability. For convergent validity, we used two measures (1) average variance extracted (AVE) and its value over 0.50 and (2) composite reliability (CR) values above the suggested thresholds of 0.70, these prove satisfactory convergent validity. The square roots of AVE values above all other cross-correlations satisfy the sufficient discriminant validity. Table 2 presents the descriptive statistics with correlations. Moreover, item factor loadings above 0.66 signify good indicator reliability. Table 3 shows all construct measurement item properties of formative and reflective constructs.

Regarding the formative construct, we measured the items weights, multi collinearity between items, and discriminant validity (Hair *et al.*, 2016). As seen in Table 3, the formative construct items have satisfactory weight. The collinearity diagnostic to check the multicollinearity issue using variance inflation factor (VIF) for formative constructs Table 2, ranging 1.371–1.375 (<5) signifying a non-critical level of multicollinearity (Hair *et al.*, 2016). For the discriminant validity of the formative construct, intra-construct item correlations measured that should be greater than inter-construct item correlations (Wang *et al.*, 2017). We used PLS item weights for individual indicators, and we computed composite construct scores for measuring item-to-item and item-to-construct correlations. It shown that intra-construct item correlations higher than inter-construct item correlations and individual items had greater correlations with their composite scores than with other constructs. In total, these measures evidence to confirm that the formative constructs of this study have satisfactory measurement properties.

5. Results and findings

5.1 Structural model and hypothesis testing

We used 5,000 subsamples in bootstrapping to measure path coefficients and evaluated the significance of the paths in the model. To test the model fitness of the full model, we followed the procedure proposed by Tenenhaus *et al.* (2005) to calculate the goodness of fit ($\text{GOF} = \sqrt{\overline{\text{AVE}} \times \overline{R^2}} = 0.56$) which is much greater than the threshold value of 0.36 hence the model perform well. The structural model accounted for 53% of the variance (R^2) in firm performance and confirmed the predictive validity (Hair *et al.*, 2016). In addition to the R^2 values, we measured the predictive relevance Q^2 value of the constructs to confirm the structural model has satisfactory predictive relevance. The Q^2 values > 0 confirm predictive relevance in contrast, Q^2 values of 0 and below shows a lack of predictive relevance (Hair *et al.*, 2016). In this study, the blindfolding procedure shows that for ITS ($Q^2 = 0.301$), BS ($Q^2 = 0.088$), and firm performance ($Q^2 = 0.249$) demonstrate acceptable predictive relevance (Hair *et al.*, 2017). The hypotheses H1 = ($\beta = 0.728$***, $p < 0.001$), and H2 ($\beta = 0.234$*, $p < 0.05$) are supported. Hence, firms that tend to have better managing IT practices positively contribute IT strategy, which in turn positively influences on their firm performance. H4 = ($\beta = 0.496$***, $p < 0.001$), and H5 ($\beta = 0.331$***, $p < 0.001$) are also supported. Thus, firms that tend to have better business strategy positively influences on their firm performance, which in turn positively influence on firm performance.

Measurement item properties	Weight	Loading	STDEV	*T* statistics
Managing IT CA = 0.902; CR = 0.927; AVE = 0.718	0.217	0.831	0.03	27.784
MIT1 We have a set of mechanisms to request, prioritize, fund, monitor, and implement IT investment decisions to ensure IT investments deliver value to the organization				
MIT2 Executives and boards of directors have a responsibility to ensure that the organization's IT systems sustain and extend its strategies and objectives	0.267	0.82	0.029	27.859
MIT3 Our company has established formal processes to govern and manage IT projects	0.23	0.846	0.031	27.21
MIT4 Our company has established a formal prioritization process for IT investments and projects in which business and IT is involved	0.239	0.876	0.024	36.405
MIT5 Our company has a steering committee composed of business and IT staff focusing on prioritizing and managing IT projects	0.228	0.861	0.025	34.353
Business Strategy	0.211	0.296	0.115	2.579
BS1 We attempt to remain ahead of our competitors through cheaper pricing of our products				
BS2 We attempt to remain ahead of our competitors by focusing on quality products rather than price	0.204	0.585	0.108	5.438
BS3 We attempt to remain ahead of our competitors by ensuring that our products are distinctively different from those of our competitors	0.286	0.513	0.131	3.905
BS4 We attempt to remain ahead of our competitors by introducing new products	0.267	0.763	0.095	8.033
BS5 We attempt to remain ahead of our competitors by offering a wide range of products	0.278	0.686	0.092	7.479
BS6 We constantly strive to improve the efficiency of our production process	0.512	0.865	0.064	13.538
BS7 We attempt to remain ahead of our competitors by providing quality service to our customers	0.325	0.736	0.115	6.38
BS8 We attempt to remain ahead of our competitors through the intensive marketing of our products	0.281	0.732	0.088	8.315
BS9 We attempt to achieve growth by expanding into new markets	0.307	0.72	0.094	7.634
IT Strategy	0.247	0.726	0.067	10.893
ITS1 Our current systems assist in reducing our costs				
ITS2 Our current systems help us to distinguish our products from those of the competitors	0.242	0.781	0.061	12.795
ITS3 Our current systems allow us to improve the quality of our products	0.241	0.838	0.048	17.602
ITS4 Our current systems enable us to introduce new products earlier than our competitors	0.204	0.75	0.063	11.949
ITS5 Our current systems help improve the efficiency of our production process	0.235	0.825	0.057	14.494
ITS6 Our current systems enable our company to diversify our products	0.307	0.776	0.056	13.856
ITS7 Our current systems enable our company to provide quality customer service	0.223	0.872	0.04	21.682
ITS8 Our current systems enable us to embark on intensive marketing of our products	0.216	0.8	0.069	11.582
ITS9 Our current systems assist us in identifying new markets	0.265	0.76	0.068	11.149

(*continued*)

Table 3.
Constructs and measurement item properties

Measurement item properties	Weight	Loading	STDEV	*T* statistics
Firm Performance	0.233	0.66	0.093	7.093
FR1 Our company's return on investment (ROI) is better compared to other companies in our industry				
FR2 Our company's return on equity (ROE) is better compared to other companies in our industry	0.251	0.737	0.079	9.337
FR3 Our company's return on asset (ROA) is better compared to other companies in our industry	0.211	0.711	0.098	7.235
OE1 Our company has better productivity improvements compared to other companies in the same industry	0.577	0.935	0.034	27.167
OE2 Our company has a better timeline of customer service compared to other companies in the same industry	0.213	0.821	0.065	12.566
OE3 Our company has better production cycle times compared to other companies in the same industry	0.215	0.782	0.067	11.717
MP1 Our company performs much better than competitors in sales growth	0.268	0.629	0.095	6.63
MP2 Our company performs much better than competitors in market share	0.251	0.658	0.081	8.117
MP3 Our company performs much better than competitors in product and market development	0.278	0.692	0.08	8.593

Note(s): CA: Cronbach's Alpha, CR: Composite Reliability, AVE: Average Variance Extracted

Table 3.

For the mediation analysis, following the hierarchical regression procedures in prior studies (Mao *et al.*, 2016; Peng *et al.*, 2016; Wang *et al.*, 2017) we systematically introduced predictors to determine the explained variance of the dependent variables. Several models (*M*) were developed in PLS, beginning with control variables to the primary and mediating effects. Model 1 is to assess the direct effect of managing IT with firm performance. Model 2 is to assess the mediating effect of IT strategy with firm performance. Model 3 is to assess the mediating effect of business strategy with firm performance. The purpose of running the series of models are to tease out the incremental variance explained when we move from one model to the next. Table 4 presents the results of the regression analysis of the models, including the standardized path coefficients, variances explained by the independent variables (R^2), R^2 changes (ΔR^2) and *F*-statistics.

The full regression model is as follows:

$$\mathrm{Fp} = \alpha + \beta 1\mathrm{ITS} + \beta 2\mathrm{BS} + \beta 3\mathrm{MIT} + \epsilon \quad (1)$$

where FP = firm performance

ITS = IT strategy

BS = business strategy

MIT = managing IT

Three sub-models with the following constraints were as follows:

$$\text{Model 1 with } \beta 1 = \beta 2 = 0: \mathrm{FP} = \alpha + \beta 3\mathrm{MIT} + \epsilon \quad (2)$$

$$\text{Model 2 with } \beta 2 = 0: \mathrm{FP} = \alpha + \beta 1\mathrm{ITS} + \beta 3\mathrm{MIT} + \epsilon \quad (3)$$

$$\text{Model 3 with } \beta 1 = 0: \mathrm{FP} = \alpha + \beta 2\mathrm{BS} + \beta 3\mathrm{MIT} + \epsilon \quad (4)$$

Among the control variables, IT budget has a significant and positive effect on firm performance (β=0.181, $p < 0.05$), whereas firm size is significant only in the full model (β = 0.077, $p < 0.05$). The results show that the large firms are effective in managing IT and established in their IT and business strategies. In model 1, managing IT has a significant and positive effect on firm performance ($\beta 3 = 0.617, p < 0.001$), and the explained variance in firm performance is 0.417. When one or both strategies are included in other models (Model 2, Model 3 and full model), the coefficient of MIT is lower. This is an indication that the effect of MIT on firm performance is mediated either through IT strategy/business strategy or both. In model 2, IT strategy ($\beta 1 = 0.395, p < 0.001$) and managing IT ($\beta 3 = 0.360, p < 0.05$) have positive and significant effects on firm performance and with explained variance of 0.497. In model 3, the business strategy ($\beta = 0.407, p < 0.001$), and managing IT($\beta = 0.417, p < 0.001$) have positive and significant effect on firm performance with explained variance of 0.531.

5.2 Test for mediation effect

In addition, we used the Sobel test to revalidate the mediating effect. Figure 2 shows the path analysis of the full model generated in Smart PLS 3.0. The Sobel test Z-statistics for the IT strategy mediated path is $Z = 2.171$ ($p < 0.05$) and the business strategy mediated path is $Z = 3.162$ ($p < 0.01$). The IT strategy-directed mediation is significant at a 5% significance level, and business strategy-directed mediation is significant at the 0.1% significance level. Furthermore, we calculated the variance accounted for (VAF), which determines the size of the indirect effect in relation to the total effect (Hair *et al.*, 2016). When the VAF is larger than 20% and less than 80%, it shows that there is a partial mediation (Hair *et al.*, 2016). In this study, both IT strategy and business strategy have VAF values of 0.378 and 0.369, respectively, and have partial mediation with firm performance. Therefore, our hypotheses H3 and H6 are supported and confirm that the effect of managing IT on firm performance is partially mediated by firm's IT strategy and business strategy. Table 5 shows the mediation analysis results.

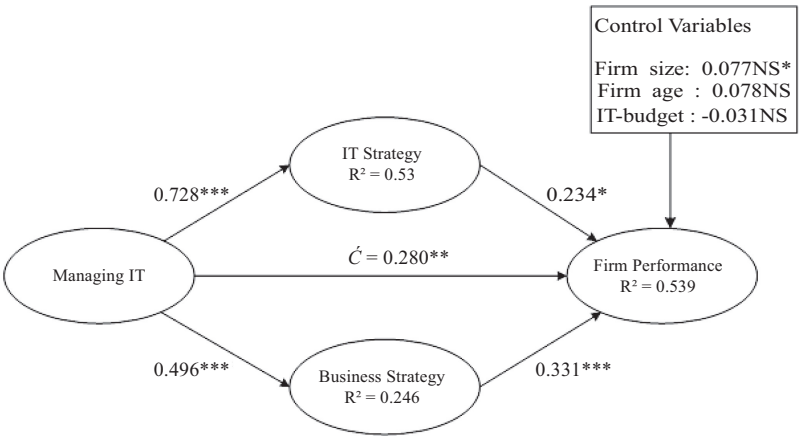
5.3 Robustness check

This study's model shows that IT strategy and business strategy mediates the effects of managing IT on firm performance. To confirm whether the effect of MIT on firm performance is better explained through mediators, we ran the direct model instead of the mediated paths with the bootstrapping of 5,000 resamples. The managing IT has a significant total effect on firm performance ($c = 0.617$, $t = 9.833$, $p < 0.001$). When adding the mediators (Figure 2), MIT's direct effect is decreased on firm performance ($c = 0.280$, $t = 2.728$, $p < 0.01$). The variance explained on firm performance is increased from direct model ($R^2 = 42$ %) to indirect

	Control variables	Model 1 $\beta 1 = \beta 2 = 0$	Model 2 $\beta 2 = 0$	Model 3 $\beta 1 = 0$	Full model
Firm size	0.241	0.072	0.050	0.073	0.077*
Firm age	0.061	0.080	0.098	0.066	0.078
IT budget	0.181*	−0.015	−0.040	−0.015	−0.031
$\beta 1$	–	–	0.395***	–	0.234*
$\beta 2$	–	–	–	0.407***	0.331***
$\beta 3$	–	0.617***	0.360***	0.417***	0.280**
R^2	0.117	0.417	0.497	0.531	0.539
ΔR^2		0.30	0.08	0.034	0.008
F		27.687***	27.895***	28.389***	28.459***

Note(s): *$p < 0.05$ **$p < 0.01$ ***$p < 0.001$

Table 4.
Regression results of full and reduced models



Note(s): *$p < 0.05$ **$p < 0.01$ ***$p < 0.001$ NS: Not Supported

Figure 2.
Path analysis results

Mediated path	Indirect effect	*Z*-statistics	*p*- value	VAF
MIT → ITS → FP	0.170	$Z = 2.172$	$p < 0.05$	0.378
MIT → BS → FP	0.164	$Z = 3.162$	$p < 0.01$	0.369

Table 5.
Significance of mediated paths

model ($R^2 = 54\%$). To rule out the view that the IT strategies typically depend on business strategy (Cuenca *et al.*, 2011) we run the model where direct path from IT strategy to business strategy and found there is a significant relationship ($\beta = 0.616$, $t = 3.181$, $p < 0.01$). It generated variance explained on business strategy is $R^2 = 0.379$. Overall, the robustness check of this study exhibits the evidence and the strength of the proposed model in which the effect of managing IT is mediated by IT strategy and business strategy on firm performance.

6. Discussion and implication

Prior findings in firm performance are either directed by business strategy or IT strategy unidirectional and focus on a single perspective. Hence, we argue that these views are empirically uncertain and theoretically inadequate. Many historical approaches in past research have focused the IT strategy and business strategy in the alignment context (e.g., Chen, 2010; Ilmudeen *et al.*, 2019; Sabherwal and Chan, 2001; Tallon, 2007) regardless of its unique standalone nature. However, this study used the business and IT strategy as separate construct while these were combined to form the construct alignment in the past studies. Today, the managing IT has received much attention among the senior executives as it faces many challenges (Bulchand-Gidumal and Melián-González, 2011; Masli *et al.*, 2016; Wang *et al.*, 2012). Hence, this study links the managing IT with the business strategy and IT strategy; to explore more insights in this research context. This study's overall model can help managers identify a number of interesting conclusions about how to manage IT investment and formulate strategies in their firm. In this respect, the importance of managing IT in the context of firm performance with the mediation effect of IT strategy and business strategy elucidates useful insights from this study.

In this study, when managing IT directly effects on firm performance it has a positive and significant correlation. Once, either IT strategy or business strategy introduced in the model the managing IT exclusive effect disappears. Hence, these both strategies partially mediate the effect of managing IT on firm performance. Accordingly, this study's finding proposes that IT can create business value when it integrate with other capabilities. Further, investment in IT alone does not guarantee to improve the firm performance (Dong *et al.*, 2008; Peng *et al.*, 2016); instead, the combination of IT strategy and business strategy will be more valuable and meaningful. This study's finding is fairly consistent with prior studies. For instance, the study of Peng *et al.* (2016) shows the both business-process management capability and supply-chain management capability mediate the effect of IT capability on firm performance. Similarly, IT strategy and business strategy led to strategic alignment that fully mediating the effect of IT governance mechanisms on organizational performance (Wu *et al.*, 2015).

IT's impact on firm performance through mediators long have been studies in many prior studies (e.g., Ilmudeen *et al.*, 2020; Ismail, 2007; Wu *et al.*, 2015). For instance, Bradley *et al.* (2012) study reveals that the enterprise architecture maturity influences the enterprise agility when IT alignment (degree to which IT strategies support business strategies) incorporated as a mediating variable. Ismail (2007) found the management accounting system as a strategic capacity plays a mediating role between IT sophistication and firm performance. Also, strategic capabilities play a mediating role between technology-driven strategy and firm performance which can exercise a greater impact on firm performance (Hao and Song, 2016). This study further supports with the findings of Mithas and Rust (2016), where the IT strategic emphasis plays an important role between IT investments and firm performance relationship and is found to be a moderator. In the following section, theoretical and practical implications are discussed.

6.1 Theoretical implication

This research study has novel contribution to the theory development and the information system (IS) literature in numerous ways. First, firms are increasingly relying on their business and IT strategies to stay competitive and sustain in the market during the turbulent environment. Similarly, the IS scholars often call for rigorous research to integrate the managing IT and firm strategies to understand how they support each other in the firm performance context. Therefore, the empirical findings of this study with the mediating role of business and IT strategies enriches the IS literature especially in the Chinese context that had relatively received limited attention in the past (e.g., Ilmudeen and Yukun, 2018).

Second, this study demonstrates how the mediating role of IT strategy and business strategy can transform the effect of managing IT on firm performance. We believe that the literature on the mediating effect of business strategy and IT strategy in the managing IT and firm performance context are in its beginning stage. Hence, the future studies that intended to incorporate the business strategy and the IT strategy could benefit by looking this study's modeling. Similarly, by extending this study's modeling the future studies may include the insights and more informative findings into the IS theory development.

Third, to the best of our knowledge, it is among the first studies to assess the mediating effects of business strategy and IT strategy with managing IT in a firm performance context. Hence, we extrapolate from this study's finding to deliver a fresh gestalt in managing IT for firms that are categorized by ubiquity in IT deployment. Unlike the prior studies that explains the underlying aspects of mediator, this study theoretically and methodically supports to direct additional imminent research. The freshness of this research approach is a virtuous avenue for IS academics and researchers to extend and design their research scope in future.

Fourth, authors believe that understanding how managing IT effects on strategy is one of the knowledge requirement that emerging in IS field. Hence, research on the mediating effect of business strategy and IT strategy are rare. Further, this study's model reconciles what had been assumed to be an independent construct in the prior studies. Prior studies used IT and business strategies in a complementary way to form new constructs that direct firm performance (Cragg *et al.*, 2002; Wu *et al.*, 2015). But, this research suggests that how the singular standalone position of the business and IT strategies can direct firm performance.

6.2 Practical implication

This study's finding provides guidance for managers and executives who engage in the managing IT and strategy formulation process. First, although managing IT and firm performance have been a focal point of much interest, it is essential for managers not to see the superficial payoff from IT investment. Instead, the indispensable operational business and IT strategies are especially more vital for increasing IT business value to firms. Hence, for executives who are responsible for managing IT value, this study finding is strong enough that the focus on business and IT strategies will generate constructive conditions, which in turn improves firm performance. Second, this study revealed that the mediated effect of managing IT through IT and business strategy are better than its direct effect on firm performance. This is the best part of the highlight from this study: understanding this mechanism will greatly encourage managers and practitioners to shape their strategic planning and policies. As a result, managers can be eager to utilize IT strategies and business strategies to consolidate or integrate inter-departmental strategies such as a product-centric, market-centric, and quality-oriented strategic alignment. Third, a firm that invests in IT application for a specific function (e.g., customer relationship management and manufacturing processes) can enjoy sophisticated IT capability and better leverage from their IT competence by implementing particular IT and business strategies. This is an important highlight for managers and executives who allocate and deploy IT resources. Fourth, to galvanize the management talent in managing IT and strategy formulation, systemized effort and practices must be done. In this case, firms should focus on building knowledge sharing portals, business and IT knowledge management systems, and groupware to assist the managers.

6.3 Limitations and future research avenue

This study also has some limitations in guide future research. First, an argument may arise from this study that it is difficult to attain the universal generalization since the data collection is done among Chinese firms; limits exist across the border. The researchers suggest that this research could be expanded beyond the geographical limit and replicate this study in other country's contexts, including the emergent concept like IT governance practices and corporate level strategic planning in managing IT, which also play a significant role in managing IT. Second, this study has a small sample size (194 IT and business managers' responses) from Chinese companies. This research design is not pairwise and paired survey in which IT managers evaluate the business department and business managers evaluate the IT department so the match responses in each organization will contribute more to this research knowledge base. Hence, it would be useful and consider to future research that the cross-validated responses from multiple respondents (top management, senior executives, departmental managers, etc.) and a larger sample will better reveal the statistical power (Mao *et al.*, 2016). Third, today firms are compelled to adopt and implement new systems for their competitive position and survival. In this fashion, trends such as agile organization, business process re-engineering, cloud-based applications and virtual operations are becoming more popular and prominently impact firm business and

IT strategies. Furthermore, for firm performance, the longitudinal research design with secondary data for the key antecedent factors add more value to future research. The concern of the above aspects would add more value to the future research. Fourth, this study omitted factors such as political, economic, regulatory, cultural, industry, and environmental factors, which may also effect a firm's strategy formulation and business operation. The inclusion of these factors in the actual research might offer more insights researchers are strongly encouraged theoretical and empirical research that covers these potentials.

7. Conclusion

Despite the research in the effect of IT on firm performance, the mediating role of IT strategy and business strategy rests unexplored. Hence, this study examines how MIT effects on firm performance through the mediating role of IT strategy and business strategy. Drawing on the resource-based view and contingency theory as the theoretical basis the hypotheses are developed for variables in the proposed model. A primary survey data of 194 senior IT and business managers from China analyzed by using structural equation modeling and hierarchical regression analysis. The findings show a positive and significant relationship in the proposed model. Further, both IT strategy and business strategy partially mediate the effect of managing IT on firm performance. This study's conceptualizations and empirical finding fill the gap that had been ignored in the literature. The finding highlights that the managing IT does not merely adequate for better firm performance instead, the integration of IT strategy and business strategy can enrich the superior firm performance. The theoretical and practical implications are also drawn from this study that can be applicable for other emerging economies across the globe.

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