Social media adoption and business performance: The mediating role of organizational learning capability (OLC)

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Abstract

Purpose – The purpose of this paper is to explore the mediating effect of learning capacity in the relationship between the social media usage by the construction of small and medium-sized enterprises (SMEs) and their business performance in Nigeria.

Design/methodology/approach – A quantitative survey technique was used to collect data from the owner / manager of construction SMEs in Nigeria. The Partial Least Square Structural Equation Modeling (PLS-SEM) was used in the assessment of the measurement model and structural model to assess the validity and reliability of the measures and to evaluate the hypotheses proposed in the conceptual model.

Findings – Empirical findings indicated a significant positive relationship between learning capacity and performance of SMEs. Similarly, the use of social media is significantly and positively associated to the business performance of SMEs. It has also been shown that learning capacity is a mediator of the relationship between social media and SME performance.

Research limitations/implications – The data for the study is all from a single industry, and a related line of business, so it could be more interesting to include more companies across sectors or industries. The finding contributes to the ongoing debate on the effect of social media on business performance. It also defined the need for the owner / manager of SMEs to understand and appreciate the effect of social media through the organization's learning potential to gain a sustainable competitive advantage.

Practical implications – There are a number of theoretical and practical implications for academics and practitioners who are interested in further studies of organizational social media. The research presents a quantitative study on the effect of social media adoption on the organizational performance of the construction industry. This study confirms the mediating role of learning capability in the relationship between the use of social media and performance of SMEs operating in the construction industry.

Originality/value – This study empirically examined the relationship between social media adoption and the SMEs learning capability and business performance by evaluating a hypothesised conceptual framework to establish the relationships.

Keywords: Business performance, Construction industry, Nigeria, OLC, Social media, SMEs

1. Introduction

The competitive nature of the construction industry means the organisations must outperform rival businesses in order to stay in business and enjoy a sustainable competitive advantage. However, the intense rivalry has eroded the efficiency of many construction SMEs in emerging economies as they strive to extend their business operations within the market in which they operate (Salisu and Abu Bakar, 2020). As such, many organisations, above all their market competitiveness, are profoundly interested in finding more successful ways to improve their business performance (Keung and Shen, 2017). To this end, companies need to acquire appropriate market information and develop means of managing the turbulent construction industry business environment (Oyewobi *et al*. 2020a). Mefuna and Abe (2015) argued in support of this view that one of the difficulties faced by small businesses in developing countries is access to information that is vital to their companies in a timely way. Salisu and Abu Bakar (2020) corroborated Mefuna and Abe (2015) by arguing that the ability of small and medium-sized enterprises to keep track with shifts in the world technological business environment has been inhibited by several factors, ranging from either a lack of attention to the acquisition of new technologies, to lack of technological and communication skills, to inadequate choice of technology to improve their businesses.

In order to access and leverage on the market information to enhance competition, Parveen (2014) noted that new communication technologies, such as social media, could be implemented by enabling organizations to participate in timely and direct end-user engagement at minimal cost. This underscored the conclusion of Bughin and Chui (2013), who argued that social media has been adopted by a number of businesses as a marketing innovation tool to access the information needed to maintain business and improve their sustainability; the use of social media in organizations has since moved from exploration to widespread adoption (Pillet and Carillo 2016). The usage of social media for social networking may therefore play an important role in the survival and growth of small businesses, with little financial resources in many of them (Corredoira and McDermott, 2018; González-Masip *et al*., 2019). In fact, Park *et al*. (2018) stresses that small businesses must develop and use their personal and business relationships in order to remain competitively important. Social media platforms are therefore important for improving competitiveness (Aswani *et al*. 2017) and for gaining value to the business as they instantly generate publicly accessible real-time information: via most sites, such as Facebook, that have more than a billion users (Piskorski 2014). Social media marketing can be introduced without any external assistance for businesses that are already connected to the Internet. Social networking can also be introduced by construction SMEs due to their low cost and minimal technical requirements (Ferrer *et al*., 2013). According to Veldeman et al. (2015), businesses are more likely to embrace social media than manufacturing companies because they value social media's usefulness more highly. Hur *et al*. (2017) emphasised that prominence and extensive usage of social media promotes learning process and information sharing.

Although, organisation's innovative ideas for doing business in order to achieve sustainable competitiveness have long been acknowledged as one of the main factors contributing to national economic development, as reported by Ozorhon (2013). However, the ability and capability of construction SMEs to achieve competitiveness through innovation is seen as vital to improving

the efficiency of both specific organisations and the construction sector as a whole (Barret and Sexton, 1998). To achieve this sustained competitive advantage, one of the management concepts is organizational learning which is one of the greatest development philosophies in the business world to enhance competitiveness (Pham and Hoang, 2019). De Geus (1988) concluded that the potential of an organization to communicate better than its rivals could be the only competitive edge. Rajapathirana and Hui (2018) emphasized that the capacity to innovate is considered to be the essential resource required by organisations to provide and maintain a sustainable competitive advantage and to execute the entire strategy of the organization. This supports the findings of Soo et al. (2004), who emphasized the value of learning capacity in improving overall business performance. Earlier research has also shown that organizational learning capacity is important because it has a positive effect on the organization's performance (Huili et al., 2014; Pham, 2016). In the same vein, recent research (Zainol and Wan Daud, 2011; Mahmood and Hanafi, 2013) found that learning ability has a positive effect on organizational outcomes. Meanwhile, Pham and Hoang (2019) regarded organizational learning as a fundamental source of competitive advantage that aids organizations in making strategic decisions. Furthermore, Parveen et al. (2016) claimed that using social media enhances an organization's learning capabilities.

Despite a large amount of research on this innovative approach to doing business in all industries, there has been little research in the construction sector. Although there is a consensus that business networks may contribute to improving business performance, it is uncertain how small business owners used the social medial to improve the growth of their businesses. The primary aim of this study is to explore the association between organizations learning capacity and business performance and, in turn, to assess the mediator function of learning capacity in the relationship between social media adoption and how it relates to better performance.

2. Literature review and research hypotheses

Social media and businesses performance

According to Andzulis et al. (2012), social media is a technological component of a company's communication, transaction, and relationship-building functions that leverages its customer and prospect network to promote value co-creation. According to Chikandiwa et al. (2013), social media platforms provide a modern way for companies to improve their competitive position by new, interactive means, making social media widely recognized as a business tool in the twenty-first century. From a business standpoint, the role of social media has become critical, despite the fact that it is replacing traditional modes of marketing that involve a one-way direction of information sharing (Park and Oh, 2012). Social media marketing allows companies to recognize brand awareness, share information or expertise, establish customer relationships, introduce low-cost deals, and communicate with consumers in an effective manner (Bolotaeva and Cata, 2011; Kaplan and Haenlein , 2010). Indeed, social media has a positive effect on consumer engagement, new customer acquisition, sales, stakeholder involvement, and customer relationships, according to Dewivedi et al. (2021). Furthermore, Ryan and Jones (2009) reported that social media provides consumers with the ability to engage in the distribution of knowledge through social media

networks. According to Zhang et al. (2017), social networking allows consumers to share and produce income without the need for a physical presence. Indeed, social media has been used as an effective medium for achieving business objectives and improving business efficiency (Rapp et al., 2013). As a result, researchers such as Pentina et al. (2013) and Nisar and Whitehead (2016) contended that using social media helps many companies increase their level of visibility and marketplace presence.

Following Parveen et al. (2016), this present study conceived social media as a construct with three different dimensions: social media for marketing, social media for customer relations and services, and social media for information accessibility. These three dimensions of social media are consistent with previous studies (Moen et al., 2008; Papastathopoulou &Avlonitis, 2009). Thus, the study hypothesized that:

H1a. There is positive link between latent variables that enables social media adoption: social media for marketing, social media for customer relations and services, and social media for information accessibility

Organizational performance is an evaluation of the efficacy of the company in achieving its particular goals and objectives (Oyewobi *et al*., 2020a). Siamagka *et al.* (2015) pointed out that the use of social media by businesses creates a vast network of opportunities between firms, customers and suppliers. This allows companies to benefit from social networking for a sustained competitiveness and to perform optimally in their business (Naudé *et al.*, 2014). A number of studies have indicated that social media has a positive effect on the business success of organizations. For example, Piskorski (2014) indicated that the successful implementation of a social media strategy would be able to increase the profitability of a company by enhancing contact between people and making it free to conduct array of corporate functions. In related study, a few researchers (Rodriguez *et al*., 2012; Paniagua and Sapena, 2014; Parveen *et al*., 2014; Ainin *et al*., 2015) reported that corporate social media adoption has shown a positive relationship between social media adoption and organizational performance.

Hakala and Kohtamäki (2011) and Paniagua and Sapena (2014) viewed social media as a means of enhancing business processes and performance. To this inference, the Wong (2012) and Kwok and Yu (2013) studies have shown that the implementation of Facebook has had a significant positive influence on market growth of SMEs. In addition, Hassan *et al*. (2015) argued that social media may have a substantial effect on the buying decisions of potential customers. The findings of Rodriguez *et al*. (2015) underscored previous studies by arguing that the use of media platforms has a positive influence on customer-oriented practices which, in turn, enhance sales efficiency.

Ainin *et al.* (2015) Research that found that Facebook's deployment does have a significant positive impact on the financial and the non-financial performance of SMEs is line with previous innovation adoption studies that found that technological innovation has a positive effect on business performance. In a similar findings, Garcia-Morales et al. (2018) contended that social media innovations drive technical knowledge competencies to increase organizational performance both directly and indirectly by exploiting firm-wide processes of innovation capability. Despite the large number of studies that recorded positive links between social media

and business results, some studies, such as Hitt *et al.* (2009) and Kumar (2019), argued that social networking can wastefulness of vital resources on counterproductive behaviours and thus affect the profitability of the company. In this context, the study therefore contends that:

H1b. SMEs' social media adoption has a positive effect on their business performance

OLC and Social media

According to Goh (2003), organizational learning capacity (OLC) is described as an organization's ability to implement sound management processes, structures, procedures, and policies that facilitate and encourage learning. Furthermore, Alegre and Chiva (2008) define learning capacity as the abilities that enable the use and transmission of organizational information. However according Ferreira et al. (2020), OLC is critical to the company's innovation. As a result, the company generates learning ability by putting in place factors that facilitate the organization's learning process or enable learning within the organization. Some researchers (Chen et al., 2016) have demonstrated a correlation between organizational learning capacity, innovation, and organizational performance, and that the benefits of these latent variables are evident to firm competitiveness. According to Milbratz et al. (2020), the introduction of new concepts necessitates a culture of knowledge acquisition and dissemination that is dependent on the driver of technology and communication channel. Ferreira *et al*. (2020) argued that learning is an important factor in an enterprise because it facilitates the development and development of sustainable performance. Indeed, this will serve as a way of establishing and improving a wide variety of organizational resources, such as the use of social media, which would continue to enable companies to enhance their efficiency rather than rely on particular forms of expertise (Goh, 2003; Ferreira *et al*. 2020). According to Baark *et al.* (2011), this suggests that the company's learning capacity facilitates the development of technical skills that can boost both business efficiency and resource allocation skills. This gives support to Alegre and Chiva (2008) who suggested that organizational learning is among the factors that precipitate innovations. Organizational learning allows organizations to develop, transmit and incorporate skills and experience as well as to gain knowledge continuously (Gomes and Wojahn, 2017).

The OLC is explained in this paper by considering the importance of the interactions between actors who may be individuals or groups and artefacts, such as values, processes that concentrate on experimentation and risk-taking; and interactions between actors which includes the interaction with the external environment, dialog and participative decision (Alegre et al., 2008). Experimentation as an OLC factor involves trying out new ideas, becoming interested about how things are done, or making improvements to work processes (Alegre et al., 2008). This often includes the search for new solutions to problems relying on the potential use of various approaches and procedures. However, the importance of creating environments that encourage risk-taking and error-taking in a manner that encourages organizational learning is a key requirement for improving organizational performance through learning. This is due to the fact that interactions and connections with the environment are very critical, because the organization is trying to develop at about the same time as the evolving environment (Oyewobi et al., 2016). In the same way, Chiva et al. (2007) sees the environment as the primary driver of organizational learning. While Oswick et al. (2000) regarded dialogue as essential to organizational learning, it

allows individuals to understand the concealed meanings of words. Organizations adopt participative measures by motivating employees to align their thought with the organization's strategic direction in order to benefit from the motivational results of enhanced employee engagement, work satisfaction and organizational commitment (Oyewobi, 2014).

H2a. There is positive link between latent variables that enables OLC of an organisation: experimentation, risk taking, interaction with external environment, dialogue, and participative decision making

Technological advancement is moving faster than any other moment in human history. This has led to the creation of social media that has enabled organizations to operate much more effectively. Sigala (2012) described social media as an Internet-based capability and resource, an important "enabling technology" that produces growth opportunities and interdependence with other business resources. Trainor *et al*. (2014) stated that social media present an opportunity to organisations to leverage on the advantages of IT infrastructure and their communication strengths. In the context of this paper, social media is conceived as the enabling technology required by the firm as part of a wide range of knowledge, strategies, systems and resources accessible for the development, delivery and use of services and products by end customer. (Salisu and Abu Bakar, 2020).

Gomes and Wojahn (2017) further argued that the absence of organizational routine on the part of small businesses has increased the efforts of organizational learning on innovation. However, the introduction of social media enhances the awareness of customer desires, the behaviour of competitors and technology; thus, adherence to the standards for organizational learning will lead the firm to benefit from technologies such as social media (Calantone *et al*., 2002). Since social media provides the benefit of SMEs businesses introducing products into new markets, and this can lead to improvement initiatives, as well as to increased sales of products produced by the company (Golovko and Valentini, 2011). The use of social media as an enabling technology allows individuals to gain established information and communicate this information within the organisation to improve competitive advantage. This is reinforced by Hsu and Fang (2009) who argued that institutional learning has effective influence on company innovation initiatives. It is on this note that study formulated the hypothesis that:

H2b. Social media adoption is positively related to SMEs learning capability

OLC and business performance

Prieto and Revilla (2006a) argued that, despite the potential for OLC to increase organizational performance, previous research had failed to reach a consensus on the existence of a relationship between learning capability and business performance. Prieto and Revilla (2006a and 2006b), on the other hand, indicated that improved market performance constitutes learning. While Senge (1990) indicates that superior performance over time is dependent on higher learning. This is emphasized by Uğurlu and Kurt (2016), studies have shown that organizational learning is critical for businesses and that it represents a modern approach to management that could address many

of the problems that many businesses face. However, a few studies, including Baker and Sinkula (1999) and (Keskin, 2006; Ussahawanitchakit, 2008), have found a positive relationship between an organization's ability to learn and firm performance, arguing that knowledge orientation has a direct impact on organizational performance. Similarly, Bontis et al. (2002) contend that organizational learning is positively linked to business success, despite the fact that their research focuses on three stages of learning: person, community, and organizational. In comparison, Prieto and Revilla (2006b) discovered a positive relationship between nonfinancial efficiency, financial performance, and learning capacity. More recent research (such as Moon and Lee, 2015; Visser, 2016; Peris-Ortiz et al., 2018) have shown that learning skills have a positive effect on organizational financial and business outcomes.

However, Salisu and Abu Bakar (2020) reported a positive relationship between technical capacity, learning capability and SME performance. These literature evidence therefore corroborated Teece *et al*. (1997) argued that organizations with enhanced learning capabilities are better positioned to organize and integrate their conventional resources and skills in a number of ways, bringing economic advantages to their customers and, more importantly, to stakeholders than their competitors.

Bontis *et al.* (2002) argued that organizational learning influences performance in a number of ways: it could be by incorporating information flows and resources that enhance organizational processes and procedures; it can have a positive impact on individual and organizational performance with a more extreme impact on the individual (Wang and Ellinger, 2011) or by fostering a feeling of loyalty in the employees that encourages them to continue learning (Jain and Moreno, 2015). Organizations that embrace more active forms of organizational learning potential are also more open to creativity and more likely to identify opportunities (Spicer and Sadler-Smith, 2006; Kakapour *et al.,* 2016). They make businesses more competitive to survive the turbulent business environment, in order to produce better outcomes on new service growth and business efficiency (Marsick, 2009; Tajedini, 2009). Calisir *et al*. (2013) underpinned previous studies by stating that organizational learning capabilities stimulate interest in new concepts that demonstrate the efficacy and effectiveness of creative ideas. In fact, Akgun *et al*. (2007) and Panayides (2007) studies found that organizational learning has an indirect positive relationship with business performance while Pham (2016) and Pham and Hoang 2019) in a similar study reported that OLC and business performance are positively related. It is therefore hypothesised that:

H3a: There is positive link between latent variables that supports Organizational performance: Impact on Cost Reduction, Improved Customer Relations & Service, and Enhanced Information Accessibility

H3b. Learning capability has positive effects on organizational performance of SMEs

Mediating role of learning capability

Fang *et al*. (2011) stressed the significance of organizational learning ability for the adoption of new ideas by organizations. This is underpinned by López *et al*. (2005) who argued that

organizational learning helps the business in developing innovations that enhances skills and have positively influence performance. Gomes and Wojahn (2017) reported that the evidence in the literature suggests that OLC positively relate to organisation's performance and its mediating functions. It was concluded that creative organizations should encourage organizational learning in order to optimize the success effect of innovative initiatives.

Therefore, hypothesising learning capability as mediator in the relationship between social media and performance is consistent with the study of Hsu and Fang (2009) and Salisu and Abu Bakar (2020). While the study on the mediating effect of organizational learning capacity has continued to develop exponentially among business researchers, only a few studies investigate the mediating effect of learning capacity on organizational efficiency. For instance, Hsu and Fang (2009) investigated the role of organizational learning capacity as a mediating factor between innovativeness and product development efficiency, and their findings indicated that OLC improved new product development output. Similarly, Salisu and Abu Bakar (2020) reported that the mediation influence of learning ability transformed a negative relationship between relationship capacity and SMEs' success into a significant positive relationship. Migdadi (2021), on the other hand, argued that organizational learning capability has an indirect effect on performance. However, learning capacity has failed to mediate the relationship between technological competence and small business performance (Salisu and Abu Bakar, 2020).

Despite the inconsistency in the findings of previous research, according to Goh, Elliott and Quon (2012), the concept of learning capacity has shown the importance of a number of effective ways for efficient organizational learning and resourceful performance. This is due to the effect of learning capacity as a strategic market survival ability in the ever changing and competitive construction business environment (Santos-Vijande *et al*., 2012; Oyewobi *et al.,* 2020b). In support of the above, Ahmad *et al*. (2018) argued that the learning ability of companies is capable of promoting versatility, which strengthens the firm's resilience in improving the organizational ability of firms. Salisu and Abu Bakar (2020) argued that learning capacity enables companies, in particular SMEs, to acquire and disseminate knowledge relevant to emerging markets in order to improve business profitability. Jimenez-Jimenez and Cegarra-Navarro (2007) studies have found that learning organization has a positive impact on performance; it is also a mediator for the firm's business orientation and performance relation. Hypothesis is thus formulated as follows:

H4: Learning capability mediates the relationship between social media adoption and SMEs performance

The conceptual model presented in this paper is founded on the hypotheses proposed as shown in Figure I. The model was developed to explore the relationships between social media adoption, OLC and business performance and examines the mediating effect of learning capability in the relationship between social medial and business performance.

[Figure I about here]

Research methodology

This research is quantitative, exploratory and causal in approach, taking into account the main objective of the study to obtain information from respondents using a structured questionnaire survey method. The data collected is cross-sectional. Three main constructs are involved in the study: the adoption of social media, learning capacity and organizational performance. According to Gomes and Wojahn (2017), the use of constructs played a significant role in the development of a data collection instrument, as is evident from the approach used in this paper. The exogenous variable explored in this study was the business's adoption of social media, and the endogenous variable was the learning capacity and business performance of the organisation. The measurement scales used for this study were all adapted from previous studies (Parveen *et al*., 2016; Gomes and Wojahn, 2017; Ahmad *et al.,* 2018). This attempt is made in tandem with Prajogo and Sohal (2004) who recognized that the development of new buildings or measurement scales is a challenging task and that, whenever practicable, a pre-tested construct should be used from existing empirical studies to assess the reliability and validity of the measures.

In spite of the fact that the measurement scales were adapted, there was a need for the questionnaire development process to check the psychometric properties of the scale items before the main survey was carried out in order to assess the face and the validity of the items amongst academic colleagues (Ahmad *et al.*, 2018). There was general agreement among colleagues that the questionnaire was clear and easy to understand, so there was no need for adjustments until it was administered. The observed latent variables employed in the study and the indicators are given in Table 1. The organizational learning capacity construct consists of the following dimensions: experimentation was assessed with two indicators; interaction with the external environment (three indicators), risk-taking (two indicators); participatory decision-making (three indicators) and dialogue (four indicators). They are based on the five-point Likert-type scale and are measured on several items, with responses ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The variables used to assess the adoption of social media in the questionnaire survey were adapted from the studies of Parveen *et al*. (2015; 2016) and Ahmad *et al*. (2017; 2018). The organizational performance construct was assessed in three dimensions: impact on cost reduction (three indicators), improved customer relations and service (three indicators) and enhanced information. The assertions were built by means of a Likert scale of 5points, (1 "strongly disagree" and 5 "strongly agree").

Data collection procedures

The sample included in this study was selected at random from construction materials merchants in the Dei-Dei Regional Building Materials Market in Abuja-Nigeria. Developing countries, such as Nigeria, have large SMEs accounting for 96 per cent of all companies. The primary respondents targeted were owners-managers or CEOs, since they were perceived likely to be the most informed about their business's environment and performance (Ahmad *et al.,* 2018). The market is one of the largest building materials markets in the central and northern regions of Nigeria. Most of the organizations sampled have begun to have social media presence for more than 5 years, most prominently on Facebook, Twitter, WhatsApp, YouTube and LinkedIn. They were visible on their complimentary cards and also on the sign-posted addresses of their business premises. The survey questionnaires were administered directly to 113 top management of construction materials

vendors operating in the study area. A total of 79 responses were received. The survey response of 79 was considered to be good enough for the data analysis approach thus adopted, considered to be suggestive and acceptable for exploratory study.

Analyses and results

PLS Method

Partial least square structural equation modeling (PLS-SEM) was used to evaluate the hypotheses formulated in this paper. This is due to the fact that the PLS-SEM technique is capable of analysing empirical data with inadequate supporting theories and insufficient information (Hsu and Fang, 2009). However, compared to the LISREL (Linear Structural Relations) model, PLS is less rigid in variable normality and unpredictability and needs a small number of samples than other SEM techniques when evaluating path coefficients (Chin, 1998). In addition, PLS needs fewer model measures than the covariance-based approach since it does not require normality of the data (Chin, 1998). PLS is therefore considered to be more suitable for the exploratory objectives outlined in this current study (Hair *et al*., 2013). When a construct combines a lot of analogous measurement items in regression analysis, multicollinearity is often a concern. PLS, on the other hand, struggles with errors of measurement, so multicollinearity is not a problem (Hsu and Fang, 2009).

Measurement model

PLS – SEM was used to perform a confirmatory assessment of the data collected in order to assess their reliability and validity. This demonstrates the convergence of validity, the reliability of the items and their internal consistency. Table II and Figure II show the item loadings, the reliability measures, the composite reliability, the average variance extracted and the value of alpha value. The appropriate threshold for Cronbach's alpha for exploratory studies of this nature is 0.6 (Hair *et al*., 2017) and this analysis shows values higher than 0.6. According to Chin (2010), Table II showed values above the appropriate threshold for both composite reliability (CR) and average extracted variance (AVE) of 0.7 and 0.5, indicating internal accuracy, reliability and also offering the requisite rationale for converging validity. As a result, the discriminant validity (Table III) of the model was checked using the Fornell and Larcker (1981) test, which allows the AVE square roots to be higher than other latent correlation coefficients for each observed variable. Thus, the findings in Table III demonstrated that all latent variables meet the Fornell – Larcker requirement for discriminant validity (Fornell and Larcker, 1981). The results of the evaluation of the measurement model presented in Table III therefore revealed that the measurement model was acceptable.

[Table II, III and Figure II about here]

Structural model

The parameters for evaluating the significant relationship hypothesized in the study include path coefficients, path relevance, R square for endogenous constructs, and predictive power (Q^2). The structural model has therefore been assessed to ensure that it satisfies the above requirements satisfactorily. The R-square was calculated by the estimate of the total variance in each endogenous latent construct, which explains the predictive power of the model (Sarstedt *et al.,* 2014).

Assessment of a structural model using R^2 is consistent with the aim of optimizing the endogenous variance of PLS variables described. Chin (1998) proposed that R^2 values of 0.67, 0.33 and 0.19 are large, medium, and small, respectively, and higher R^2 correlates to a higher potential for prediction. The coefficient R^2, for the two endogenous latent variables, was 0.349 for learning capability and 0.565 for performance of SMEs, as shown in Table IV and Figure III.

The evaluation of predictive relevance of the Stone-Geisser Q^2 model is also used to evaluate predictive relevance (Sarstedt *et al*., 2014) using the SmartPLS blindfolding technique. If $Q2 > 0$, the model is assumed to have predictive validity (Rigdon, 2014; Sarstedt *et al*., 2014). Both Q^2 values for Learning Capacity (0.221) and SME Performance (0.400) were more than 0, which indicates that the model had adequate predictive relevance.

In addition, the study examines the main effects of the explanatory variables using Cohen's f^2 (Cohen, 1988) as shown in Table V. The impact size is calculated as a change in R - squared compared to the amount of variance unknown to the endogenous latent construct. According to Cohen (1988), f^2 values of 0.35, 0.15 and 0.02 are considered large, medium and small, respectively. From the model, 0.40 is the f^2 effect size for the predictive relevance of social media to results. The 0.40 suggests that the usage of social media has a major impact (R^2). On the other hand, the 0.15 is the scale of the f^2 effect on the predictive importance of learning capability to performance. The 0.15 indicates that learning has a medium effect that produces R^2 for output. According to Hair et al. (2013), the Q2 value of 0.02, 0.15 and 0.35 suggests small, medium and high predictive significance, respectively. From the model, 0.21 is the size of the q2 effect on the predictive importance of social media to results. The 0.21 suggests that social media have a medium impact in giving the predictive significance (Q^2). On the other hand, the 0.15 is the scale of the f^2 effect on the predictive importance of learning capability to performance. The 0.15 indicates that the ability to learn has little effect on the development of predictive significance for results. Summary of Results – Path Coefficients, f^2 and q^2 are shown in Table V.

The study calculated Goodness of Fit (GoF) following Tenenhaus *et al*. (2005) while analysing the overall reliability of the research model. However, in their research, Henseler and Sarstedt (2012) contested the usefulness of the GoF both theoretically and practically, and the investigation found that the GoF did not justify a goodness-of - fit criterion for the PLS-SEM, and it was suggested that researchers should not use this procedure to find the overall accuracy of the research model. Since the research model does not have any formative indicators that make it difficult to use GoF, the research therefore examines the overall performance of the model built using GoF and calculates it as follows:

$$GOF = \sqrt{\overline{communality} \times \overline{R^2}} = \sqrt{0}.6768\ X\ 0.3048\ = \mathbf{0.45}$$

Predicated on the rule of the thumb, 0.1 is regarded to be a small GoF value (low Goodness of Fit), 0.25 as a medium value, and 0.36 as a large value (strong Goodness of Fit). The GoF of this current study shows that the model developed has a high Goodness of Fit value of 0.45.

[Table III, IV, V, VI and Figure III about here]

Mediating effect of learning capability

The mediating effects of learning capability on the relationship between social media and performance have been measured by defining the overall effects. The research adopted the method used by Oyewobi *et al.* (2020a) in the estimation of the overall results.

Total effect = Direct effect + Indirect effect = 0.32 + 0.591*0.517 =0.6256

The direct impact of social media and learning capability on organizational performance is 0.32 and was important at the 99 per cent level of confidence. The variance accounted for (VAF) was calculated using the formula given by Sarstedt *et al*. (2014). The estimated result of the VAF values is approximately 0.49 for learning capability. Accordingly, similar to Hair Jr. et al. (2014) rule of thumb; if VAF is > 80 per cent, it connotes full mediation if it is within 20 per cent-80 per cent-partial mediation and there is no mediation if it is < 20 per cent. As a result, the study concluded that learning capacity partly mediates the link between social media and organization performance. This result supports Hypothesis 4, which indicates that learning ability act as a mediator between social media and SME performance association. Thus, Salisu and Abu Bakar (2020) concluded that learning capacity can be seen as a strategic orientation that allows SMEs learn, integrate and convert external knowledge and information from competitive partners to enhance the competitiveness and performance of organisations.

Hypotheses test and discussion of results

Table VI shows the results of the structural equations modeling analysis. The path model was satisfactorily tested using PLS. The results support the postulated research hypotheses. The measurement model results in Table VII indicate that there is positive, and significant relationship between Social media adoption and its latent variables: SM for Customer relations and service (β_1= 0.81, t = 11.358, p = 0.00), SM for Information accessibility (β_2= 0.85, t = 19.368, p = 0.00), and SM for Marketing (β_3 = 0.77, t = 7.246, p = 0.00). Social media as a quick mean of gaining access to information was the one that showed highest factor loading. This affirms the assertion of Parveen *et al*. (2016) that social media enables organisation to access the information about their potential customers, their tastes, and their wants easily from their conversations on social platforms. The significance of the latent variables underlies the significant relationships between social media adoption and organisational performance. This supports Hypothesis 1a. To test *H1b*, as shown in Table V social media is positively related to the performance of SMEs businesses (β=0.32; t=8.1173; p=0.000). This lends credence to Hypothesis 1b, which suggests that there is a positive connection between social media and organizational performance. The result confirmed Kamboj et al.'s (2017) conclusion that the use of social media could have a positive impact on the financial and marketing performance of firms. Also, a number of researchers (Rodriguez et al., 2012; Paniagua and Sapena, 2014; Parveen et al., 2014; Ainin et al., 2015) have found that corporate social media adoption has a positive relationship with business performance. In addition, the findings presented here are comparable to earlier findings from technology adoption research (Scupola and Nicolajsen, 2013; Ahmad et al., 2018) which found that technology adoption had a positive impact on different performance measures. The results are consistent with the findings of

Parveen *et al*. (2016) which argued that social media use in organizations has a positive impact on performance in terms of reducing marketing and customer service costs, improving customer relationships and improving information accessibility.

The measurement model results (Table VII) indicate that there is an important, positive, and significant relationship between OLC and its five dimensions: experimentation (β_1= 0.73, t =8.235, p = 0.00), risk taking (β_2= 0.81, t = 10.072, p = 0.00), interaction with the environment (β_3= 0.85, t = 27.715, p = 0.00), dialogue (β_4= 0.84, t = 25.215, p = 0.00), and participative decision making (β_5 = 0.78, t = 10.047, p = 0.00). Interaction with the environment was the latent variables with highest influence on the ability of organization to learn. This finding corroborated Alegre and Chiva (2008) who asserted that environment is the prime mover of organizational learning because it allows organisation to maintain advantageous fit within their business environments. High (or low) levels of the five suggested facilitating mechanisms for organizational learning reveal a high (or low) level of OLC. This supports *H2a*. Direct structural relationships have been identified in Table VI and Figure III, suggesting that there is a substantial positive relationship between social media adoption and learning capacity (β=−0.591; t=6.345; p=0.000). The findings are consistent with the results of Parveen et al. (2016) where the positive effect of social media use on entrepreneurial orientation (learning capability) has been recorded. The findings are illustrated by Baxter (2015) and Parveen et al. (2016), who argued that social media networks are key potentials in their ability to provide the organization with the necessary support for the concept of organizational learning that, in turn, leads to improved performance. This corroborates the findings of Ferreira et al. (2020) and Chen et al. (2016) which argued that there is a correlation between organizational learning capacity, technology adoption and organizational performance.

The measurement model results in Table VII indicate that there is an important, positive, and significant relationship between Organisational performance and its latent variables: Impact on Cost Reduction (β_1= 0.89, t = 24.427, p = 0.00), Improved Customer Relations and Service (β_2= 0.77, t = 8.677, p = 0.00), and Enhanced Information Accessibility (β_3 = 0.90, t = 30.452, p = 0.00). This supports Hypothesis 3a. Enhanced information accessibility is the latent variable with the highest loading on organisation performance and this finding is similar to Parveen et al. (2016) result that suggested that organisation performed better when they have easier access to information about customers and competitors. Table VI offers clear evidence of a positive and significant relationship between OLC and organizational performance (β =−0.517; t=5.3872; p=0.000), thus supporting Hypothesis 3b. This indicates that organizational performance is a function of the OLC. High levels of OLC can promote high levels of organizational performance. On the other hand, high levels of OLC would also be linked with increased levels of experimentation, risk-taking, interaction with the external world, dialog and participative decision. This research has shown a strong positive relationship between organizational learning and business performance, which is inconsistent with the indirect association developed in the research carried out by Akgun et al (2007). This corroborated the argument put forward in this study that OLC enhances performance, which is also consistent with the findings of Alegre and Chiva (2008) and Goh et al (2012). This finding of the current study is consistent with the conclusion put forward by Colton et al. (2010) that learning capacity has a significant positive impact on the performance of organizations. The result is consistent with Jiménez-Jiménez and Sanz-Valle (2011) and Alegre

and Chiva (2013) that OLC has a positive effect on creative outcomes. Jain and Moreno (2015) research findings are also consistent with those of Jiménez-Jiménez and Sanz-Valle (2011) who indicated a positive relationship between learning-oriented firms and improved organizational performance. Pham (2016) found that organizational learning and company success are positively interlinked.

However, this study conceptualizes learning capability as mediator between social media adoption and SMEs business performance and this aligns with the earlier studies (such as Wang *et al.,* 2006; Hailekiros and Renyong, 2016). The results revealed that learning capabilities is a mediator in the relationship between social media and business performance of SMEs. In fact, this is apparent from report of a survey of 451 firms by Jimenez-Jimenez and Cegarra-Navarro (2007) that indicated organizational learning positively influence performance of businesses and also serves as a mediating variable in the relationship between business orientation and performance. The findings also support Tajvidi and Karami's (2021) findings that marketing capabilities, specifically branding and creativity, positively and significantly mediate the relationship between social media usage and firm performance. On the contrary to Salisu and Abu Bakar (2020) assertion, the results of this study indicate that experimentation, risk-taking, dialogues, external interactions and participatory decision-making by SMEs require significant investment in research and development, extensive training and the use of advanced technologies such as social media for problem-solving processes to improve performance. The results are underscored by Baxter (2015) and Parveen *et al*. (2016), who argued that social media platforms are key potentials in their ability to provide the organization with the necessary support for the idea of organizational learning that, in turn, contributes to improved efficiency. Kalmuk and Acar (2015) analyzed the mediating effects of learning ability on the relationship between innovation and the performance of the business and concluded that the positive influence of innovation on the performance of the company could be further enhanced as a result of the mediating role of the learning capacity of the organization in promoting and encouraging learning systems and procedures with appropriateness. The findings presented in this current paper aligns to Irbo and Mohammed (2020) who posited that that social media increase the capabilities and performances of a business to a large extent. The findings are also consistent with the findings of Sun et al. (2020), who found that learning capacity partially mediates the effect of resources and capabilities on innovation performance. However, in a similar study conducted by Salisu and Abu Bakar (2020), it was reported that learning capability is not mediator in the association between organisation's capability to adopt technology and SMEs performance.

Conclusion

This research, like previous studies, took a further step towards evaluating the relationship between social media adoption, OLC and performance, as well as exploring the mediating roles of OLC in the relationship between social media and performance. As such, the results discussed here have significant implications in the area of organizational learning and business management. Firstly, this research provides empirical evidence that companies can use social media to boost their business competitive edge through OLC, which in turn can contribute to improved organizational efficiency. While empirical tests on organizational learning are still an imperative task for

academics and practitioners, but there is evidence in the literature of such relationships between constructs, this study therefore uses a new inclusive conceptual model to establish the association. Second, the research contributes to the literature by advancing the viewpoint that technological adoption and organizational performance are a product of the OLC. This finding is significant for academics and practitioners alike. Practitioners should take into account the latent variables considered for all the constructs in this study when evaluating the implementation of new technology to enhance business performance.

The results of this study also have implications for both academics and SMEs businesses owners. While the idea that social media use affects organisational performance has gained popularity among managers, the manner in which organizational learning mediates the interaction remains sketchy. The present research indicates that organizational learning encourages creative thinking. A company that hopes to enhance market efficiency through social media or through technological adoption should also enhance its organizational learning processes. This is due to the importance of organizational learning within organizations in achieving optimal business results. Managers should understand the important components of corporate learning capabilities so as to make effective use of them in order to accomplish their company objectives. This assumption is indeed particularly important for SMEs businesses and for those business enterprises in highly turbulent environments, such as the construction sector.

The findings of this study have some drawbacks that may require further analysis. First, this study focuses on the construction materials vendors in Abuja, Nigeria. The findings of the analysis require further research that might analyze various samples in other sectors or locations. This will provide a basis for generalizability. Next, this study uses the construction materials vendor as a study population, suggesting that the strategic use of social media by businesses would have beneficial effects on their corporate strategy. The hypothetical relationship established in this study may necessitate future study in other contexts. Third, this study uses adapted subjective indicators from previous research undertaken in the developed world, some of which may be country-specific. However, the subjective data used to quantify the performance of organizations using social media have been carried out on Likert scales that are generally consistent with the studies previously mentioned, the study believes that subjective assessments which vary from objective data and should be examined in decision to effectively-examine the research hypothesis with a financial performance measure. Fourthly, this study verified assumptions with a survey questionnaire that provided only panel data for the period; the researcher did not conduct longitudinal studies to observe improvements in performance with consistent use of social media by the sampled organization over a long period of time. Additional researches should also conduct a longitudinal study to assess the effects of social media on business outcomes. Finally, research is intended to examine other mediators, such as the environment in the relationship between social media and business performance, in order to enhance our understanding of how the business environment affects business performance should be conducted. This research did not directly take into consideration either the process of learning or the different learning skills necessary for each type of innovative ideas. Limitations discussed in this section appear to be frequently observed in exploratory research. Some of the problems were about relatively small sample size and the use of purposive sampling technique. However, notwithstanding these limitations, this study improved

past findings by offering new and useful insights into how organisation learning could improve the innovation of small businesses in order to achieve competitive advantage.

Social media research has recently drawn a lot of interest from academics, companies and governments to practical applications and further discussions. However, there is no any known or specific studies in Nigeria examine organizational learning capacity as a mediating variable in the interaction between social media and business performance. Therefore, this research focused on this research gap with a view to filling the gap. The study examines the connection between three key constructs: social media, learning capabilities and organizational performance, with OLC conceptualized as a mediating variable, to examine whether social media has possible effects on the business performance via learning orientation of organisations.

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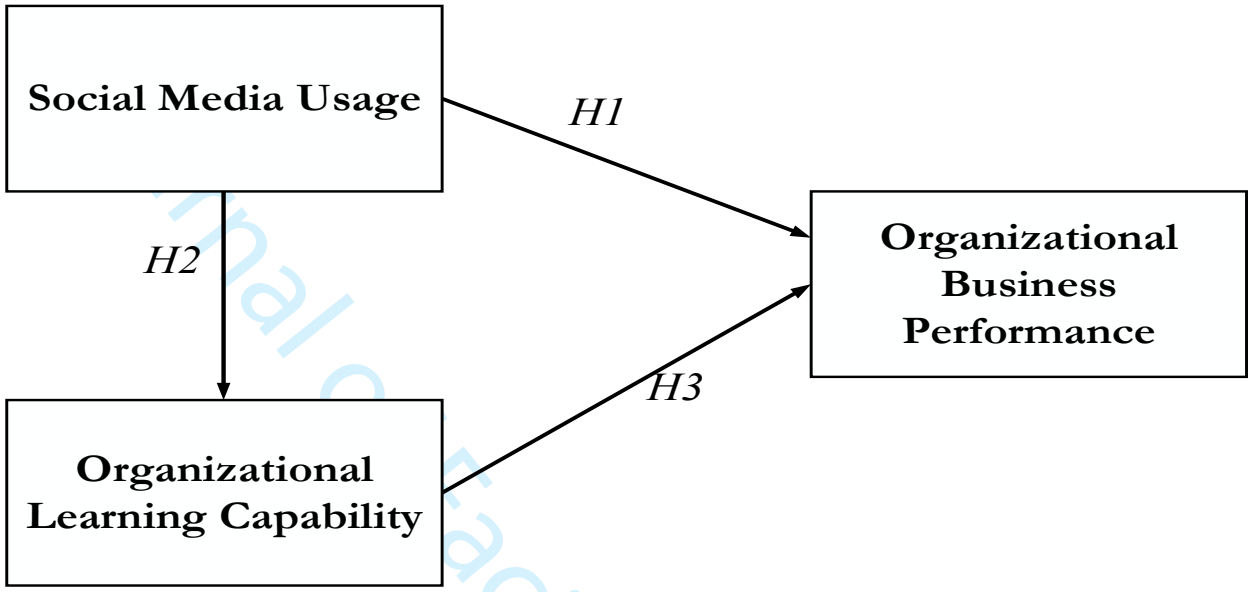

Figure I: Conceptual Model

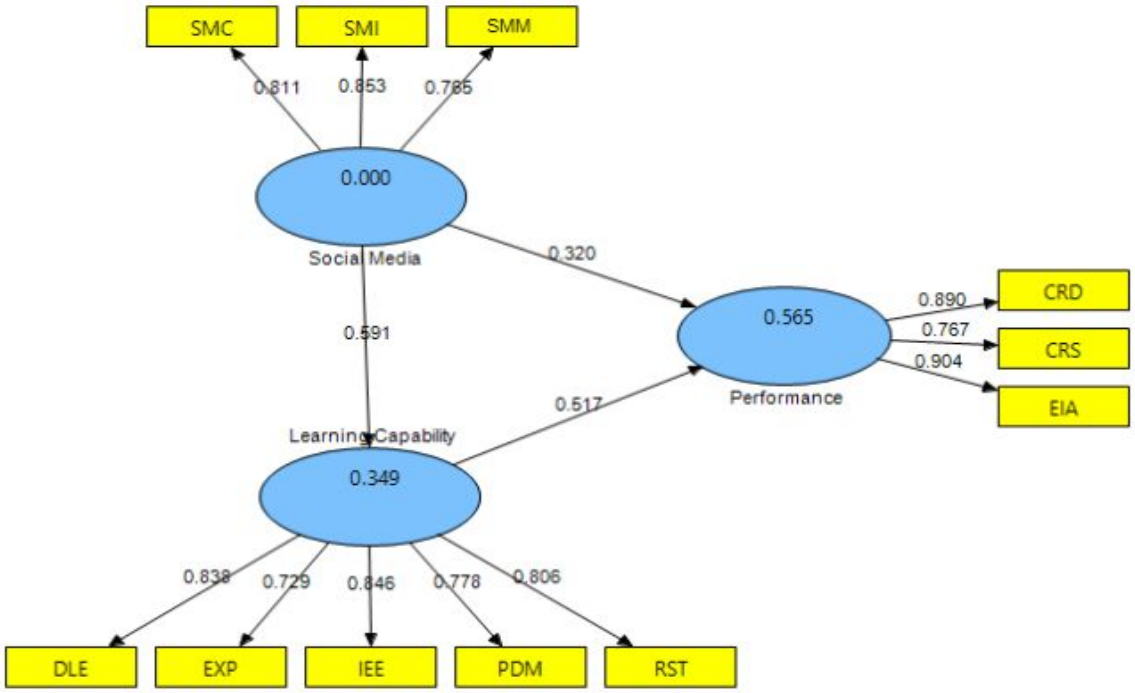

Figure II: Results of PLS algorithm

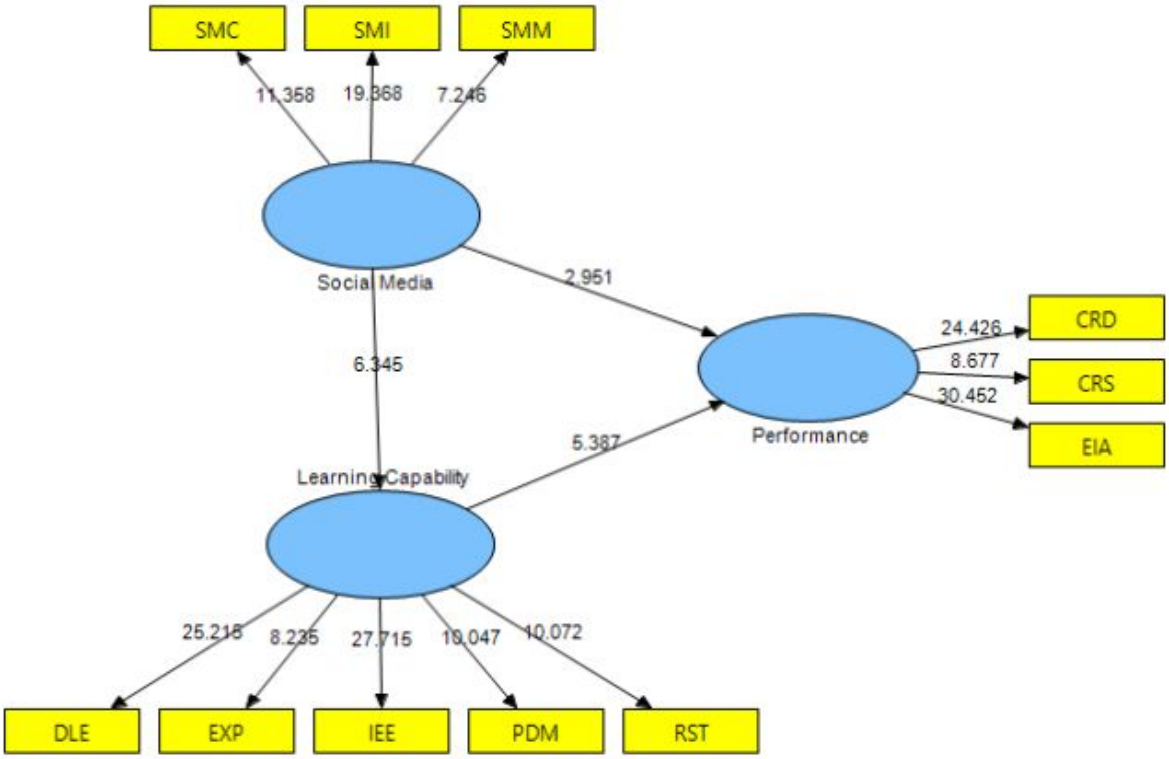

Figure III: Results of PLS bootstrapping

Table II: Results Summary for Reflective Outer Models

Latent Variable	Indicators	Loadings	Indicators Reliability	T-Stat.	Composite Reliability	AVE	Cronbach's Alpha
Learning Capability	Dialogue	0.8381	0.702	25.22	0.899	0.641	0.861
	Experimentation	0.7286	0.531	8.235			
	Interaction with the external environment	0.8462	0.716	27.72			
	Participative decision making	0.7779	0.605	10.05			
	Risk taking	0.8062	0.650	10.07			
Performance	Impact on Cost Reduction	0.8897	0.792	24.43	0.891	0.732	0.817
	Improved Customer Relations & Service	0.767	0.588	8.677			
	Enhanced Information Accessibility	0.9037	0.817	30.45			
Social Media	SM for Customer relations and service	0.8111	0.658	11.36	0.852	0.657	0.740
	SM for Information accessibility	0.8534	0.728	19.37			
	SM for Marketing	0.7654	0.586	7.246			

Table III: Fornell-Larcker Criterion Analysis for Checking Discriminant Validity

	Learning Capability	Performance	Social Media
Learning Capability	**0.8005**		
Performance	0.7060	**0.8556**	
Social Media	0.591	0.6254	**0.8107**

Table IV: R Square, Communality, and redundancy

	R Square	Communality	Redundancy	Q^2
Learning Capability	0.3493	0.6409	0.221	0.44
Performance	0.565	0.7321	0.3364	0.397
Social Media	0	0.6573	0	0.318
average	0.3048	0.6768	0.1858	

Table V: Summary of Results – Path Coefficients, f^2 and q^2

	Performance		
Construct	Path Coefficient	f^2 effect size	q2 effect size
Learning Capability	0.5169	0.15	0.08
Social Media	0.3199	0.40	0.21

Table VI: Results of the hypotheses tested

Hypotheses	Relationship	Co-efficient	T Statistics	P-values	Decision
H1	*There is a positive relationship between social medial and organisational performance*	0.3200	8.1173	0.000	Supported
H2	*There is a positive relationship between social media adoption and learning capability*	0.5910	6.3446	0.000	Supported
H3	*There is a positive relationship between learning capability and organisational performance*	0.5169	5.3872	0.000	Supported
H4	*Learning capability mediates in the relationship between social media adoption and organisational performance*				Supported

*** p<0.01 (>2.58), **p<0.05 (>1.96), p<0.10 (>1.645)

Table VII: Structural equations model

Parameter	Overall Model $R^2 = 0.565$
Conceptual model main path	
Learning Capability -> Performance	0.52 (5.387) ***
Social Media -> Learning Capability	0.59 (6.345) ***
Social Media -> Performance	0.63 (8.117) ***
Measurement model variables	
Impact on Cost Reduction <- Performance	0.89 (24.427) ***
Improved Customer Relations & Service <- Performance	0.77 (8.677) ***
Enhanced Information Accessibility <- Performance	0.90 (30.452) ***
Experimentation <- Learning Capability	0.73 (8.235) ***
Interaction with the external environment<- Learning Capability	0.85 (27.715) ***
Participative decision making <- Learning Capability	0.78 (10.047) ***
Risk taking <- Learning Capability	0.81 (10.072) ***
Dialogue<- Learning Capability	0.84 (25.215) ***
SM for Customer relations and service <- Social Media	0.81 (11.358) ***
SM for Information accessibility <- Social Media	0.85 (19.368) ***
SM for Marketing <- Social Media	0.77 (7.246) ***

*** p<0.01 (>2.58), **p<0.05 (>1.96), *p<0.10 (>1.645)
Parameter estimates are standardized with t-values shown in parentheses

Table I: Constructs used in the study

Latent Variable	Indicators	Source of measurement items
Performance	Enhanced Information Accessibility Impact on Cost Reduction Improved Customer Relations & Service	Apigian *et al*. (2005), Molla & Heeks, (2007), Parveen (2014), Parveen *et al*. (2016).
Social Media	Social Media for Customer relations and service Social Media for Information accessibility Social Media for Marketing	Papastathopoulou &Avlonitis (2009), Moen et al. (2008), Parveen (2014), Parveen et al. (2016).
Organisational Learning Capability	Risk taking Dialogue Participative decision making Experimentation Interaction with the external environment	Chiva et al. (2007); Parveen (2014), Lin, Peng, & Kao (2008); Palacios-Marque´s et al. (2016)