

# Qualitative Approach in Exploring Factors for Business Performance (BP) among Small Middle Enterprises (SMEs) from Information Technology Sector (ITS) in Guangzhou City of China

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**Abstract.** Purpose – This study explores the factors of each variables' relationship [Top Management Support (TOP) and Competitive Pressure (CP), Electronic Commerce Adoption (ECA) and DV: Business Performance (BP)] by the collection of qualitative method based on the research framework that after it is tested followed by hypothesis question. Design/methodology/approach – The collection of qualitative method in semi-interview of 12 respondents with multiple background from Human Resource Management Department (HRMD) can be utilized, exploring the factors of each variables' relationship by use of MAXQA2022. Findings – The presentation of qualitative approach from selected 12 respondents by semi-interview also can find out the factors of each variables' relationship. Research limitations/implications – The qualitative method for exploring and tested each variables' relationship in Key Successful Factors (KSFs) for implementing Electronic Commerce Adoption (ECA). The research background and research data are limited to Small Middle-sizes Enterprises (SMEs) and employees from Information Technology sectors in Guangzhou City of China. Originality/value – By studying the relationship and factors between IVs (TOP and CP), MV: ECA, and DV: BP, this paper will help to better understand how TOP and CP affect BP, and how ECA mediate the relationship between IVs: (TOP and CP) and DV: BP. With the increasing market competition and rising labor costs in China, improving and utilizing ECA for enterprises may be an important means to cope with future competition.

**Keywords:** Top Management Support (TOP); Electronic Commerce Adoption (ECA); Business Performance (BP).

## 1. Introduction

In the 21st century, there is a growing trend among individuals and businesses to adopt contemporary digital technologies, such as the Internet of Things (IoT), block-chain, cloud computing, machine learning (ML), artificial intelligence (AI), Electronic Commerce (EC), and various internet-based services. These technologies are sought after due to their potential to streamline and facilitate various activities (L. Zhang, 2023).

By leveraging these technologies, companies in the Information Technology Sector (ITS) of Guangzhou city, China, can potentially achieve notable benefits. These advantages include improved operational efficiency, increased sales and revenue, and enhanced customer/supplier relationships. Additionally, incorporating such technologies can bolster the competitive position of these companies in the global markets, even when competing against larger organizations (Gao et al., 2023).

Amidst intense market competition, organizations are striving to enhance their Business Performance (BP) through the strategic integration of cutting-edge technologies with their marketing approaches (Šaković Jovanović, Vujadinović, Mitreva, Fragassa, & Vujović, 2020). In the present landscape, numerous industries heavily rely on online platforms to showcase their products or advertisements, which effectively expands their customer base (Agrawal, Gans, & Goldfarb, 2019).

To keep up with the evolving market demands, many prominent companies have adopted Artificial Intelligence (AI) in their e-commerce operations, aiming to optimize their overall performance (C. Zhang, Bengio, Hardt, Recht, & Vinyals, 2021). Additionally, C. Zhang et al. (2021) elaborate that a

significant number of businesses are projected to adopt AI of Electronic Commerce (EC) by 2030, further reinforcing the prevalence and importance of this technology in various industries.

Small and Medium-sized Enterprises (SMEs) within the Information Technology Sector (ITS) of Guangzhou, China, play a crucial role in supporting the domestic economy, particularly in developing countries (Y. S. Chen, Liu, & Song, 2023). However, many SMEs in developing nations show hesitancy in adopting e-commerce technology and capitalizing on its advantages, largely due to a lack of awareness about its potential benefits (Abed, 2020).

In contrast, Small and Medium-sized Enterprises (SMEs) in China make significant contributions, accounting for over 70% of the country's GDP (Y. S. Chen et al., 2023). This notable contribution can be attributed to the increased awareness and recognition of the benefits associated with e-commerce strategies in the country, leading to a higher adoption rate of e-commerce technology compared to other developing nations in the region (Y. S. Chen et al., 2023).

Moreover, the pervasive use of digital technology has had a profound effect on Business Performance (BP), emerging as a critical factor for maintaining a competitive edge in the market. Consequently, it becomes essential to investigate the influence of Electronic Commerce Adoption (ECA) on the Business Performance (BP) of Small and Medium-sized Enterprises (SMEs) within the Information Technology Sector (ITS) of Guangzhou, China. In this regard, the study aims to address the following objectives:

- (1) Exploring factors making IVs: [ Top Management Support (TOP) and Competitive Pressure (CP) ] impact on DV: Business Performance (BP).
- (2) Exploring factors making MV: Electronic Commerce Adoption (ECA) mediate the relationship between IVs: [ Top Management Support (TOP) and Competitive Pressure (CP) ] and Business Performance (BP).

## **2. Literature**

### **2.1. The Relationship between Top Management (TOP) and Business Performance (BP)**

Greenhalgh and Rogers (2010) explained that the most important key role can be performed and operated by Top Management (TM) should be satisfaction in using or introducing a particular advanced technique proactively. All related studies, including Venkatraman, Henderson, and Oldach (1993), Powell and Dent-Micallef (1997), Srinivasan, Lilien, and Rangaswamy (2002), Wu, Mahajan, and Balasubramanian (2003) indicate that companies would be preferred to catch up with and capture the efficient and effective consequences in the adoption of new technology after idealistic leadership of articulating the demand for the process of being more innovation can be provided or supported from Top Management within the companies, here also can be viewed or described as Top Management Support (TOM).

Haugh and Robson (2005), additionally, indicated that the probability of result in the process with different speed of introducing, adopting and implementing a advanced technology could be enhanced by more commitment to the acceptance in a new technology adoption from Top Management (TM). In this case, Top Management Support (TOM) can be able to enhance or force the Business Performance in a long term by the reduction in the gap between customers and Top Management Support (TOM) through introducing and performing the technology such as electronic marketing in the companies (Ščeuļovs & Gaile-Sarkane, 2011).

## **2.2. The Mediating Role E-Commerce Adoption (ECA) in the Relationship between Top Management Support (TOP) and Business Performance (BP)**

### **2.2.1. The relationship between Top Management Support (TOP) and E-Commerce Adoption (ECA).**

Claycomb, Iyer, and Germain (2005) & Alsaad, Mohamad, and Ismail (2017) all stated that Top Management Support (TOP) regard to their attitude that introducing and implementing B2B Electronic Commerce in a company could be viewed as the most important element in efficiency for attracting a new technology, which also can be viewed as a commitment to adoption of a new technology for a company. Additionally, Duan, Deng, and Corbitt (2012) & Liang, Saraf, Hu, and Xue (2007) emphasized that when an advanced technology has to be introduced and performed into a company successfully, managers who from Top Management of a company have to be faced two types inevitable conditional issues for introducing and implementing the new technology such as B2B Electronic Commerce. The evaluation of opportunities in strategic business, initially, should be performed and assessed by managers who from Top Management (TM) with accurately and sustainably method. Secondly, business activities and process must be melted with innovation based on the perspective of long-term way by Top Management (TM).

### **2.2.2. The Relationship between E-Commerce Adoption (ECA) and Business Performance (BP)**

Fonseka, Jaharadak, and Raman (2022) compared with previous researchers' studies such as Abebe (2014) and Hawusiwa, Wardani, and Ningtyas (2015) on the topic of the effect of Electronic Commerce (EC) on Business Performance (BP) to indicated that for effective and efficient Business Performance (BP), companies are suggested to be forced to introducing and implementing Electronic Commerce(EC), as variable also called Electronic Commerce Adoption (ECA). This means that satisfied profitable Business Performance (BP) can be impacted in a significant positive by Electronic Commerce Adoption (ECA) in companies. Furthermore, Ningtyas and Wibowo (2015) also indicated that there is a stronger positive relationship between Electronic Commerce (EC) and Business Performance (BP). Also additionally, Taleghani, Gilaninia, and Mousavian (2011) emphasized that the purpose of the quantity of marketing in companies should be the main mission that all members from the companies are desired to catch up with, in this case, the question how the company improve and force the marketing also should be problem and the answer or strategy of the company have to introducing and implementing a new technology such as Electronic Commerce (EC) in the company for seeking satisfied profit by enhancing the quantity of marketing.

## **2.3. The Relationship between Competitive Pressure (CP) and Business Performance (BP)**

Purnama and Subroto (2016) on the topic of the definition in Business Performance (BP) stated that a planned goal for obtaining better consequences in multiple fields in production, the level of financial investment, the quality of product and services, the efficient logistic for delivering product and services, the volume in selling product and services and profitable capability within a company should be assessed and tested in different level, including higher level or low level.

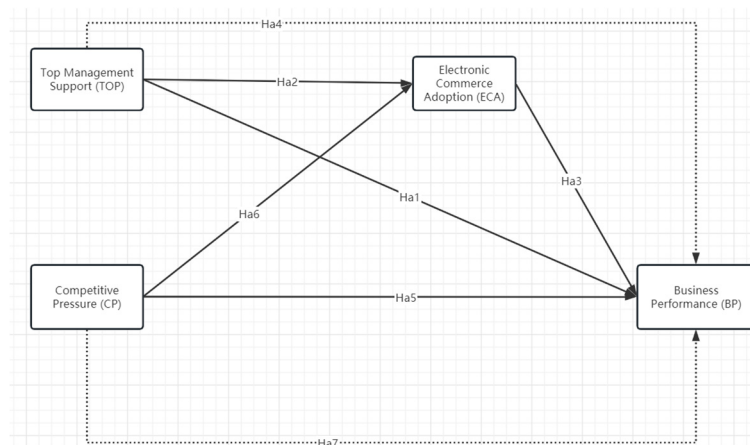
As previous scholars in the research of factors that impact on Business Performance (BP) to be known, Competitive Pressure (CP) should be described by Tyler et al. (2020) to impact on Business Performance (BP) initially. Soewarno, Tjahjadi, and Permatanadia (2020), additionally, expressed that Innovation Capability (IC) can be a factor to effect on Business Performance (BP). Furthermore, Zetterberg, Santosa, Ng, Karlsson, and Eriksson (2021) indicated that Social Capital (SC) can be viewed another factor to influence on Business Performance (BP). Moreover, Strategies within a company also mentioned by Rehman, Elrehail, Nair, Bhatti, and Taamneh (2023) can be viewed as a factor to impact on Business Performance (BP). Oyewo (2022), also additionally, pointed that Strategy Management Accounting (SMA) can be viewed a factor to impact on Business Performance (BP). Y. Chen et al. (2022), furthermore, pointed out that Budgetary Goal Characteristics (BGC) can be viewed as another factor to impact on Business Performance (BP). Hong et al. (2023), by

conclusion, indicated that Business Performance (BP) should be assessed in multiple dimensional and be needed to be developed by companies such as a Balanced Scorecard (BS).

#### 2.4. The Mediating Role of E-Commerce Adoption (ECA) in the Relationship between Competitive Pressure (CP) and Business Performance (BP)

Ahmad, Abu Bakar, Faziharudean, and Mohamad Zaki (2015) , Gono, Harindranath, and Özcan (2016) & Soewarno et al. (2020) indicated that the adoption of technology by Small and Medium-sized Enterprises (SMEs) is significantly influenced by competitive pressure. The implementation of B2B e-commerce is particularly affected when Small and Medium-sized Enterprises (SMEs) recognize its potential to enhance their competitiveness and attain a competitive advantage.

Andonov, Dimitrov, and Totev (2021) and Dahbi and Benmoussa (2019) both indicated that manufacturing companies cannot be obtained more beneficial results compared with companies from servicing industry by introducing and utilizing E-Commerce (EC). Additionally, Small Middle Enterprises (SMEs) from different backgrounds of industry also can be enhanced and forced to be improved in their Business Performance (BP) positively and significantly by introducing and employing Electronic Commerce (EC). Business Performance (BP) within a company, furthermore, can be improved and developed by excellent performance in management, marketing strategy and financial planning. Small Middle Enterprises (SMEs) in perspective field of the performance of business activities can be impacted and affected by the action and strategy in profitability, productivity and marketing.



**Figure 1.** Research Framework

### 3. Research Design

The previous study has been completed to explore the relationship between variable, specifically in different relationship between IVs [Top Management Support (TOP), Competitive Pressure (CP) ] and DV [ Business Performance (BP)]; Moreover, this study also would to explore the mediating role of E-Commerce Adoption (ECA) in the relationship between IVs [Top Management Support (TOP) and Competitive Pressure (CP)] and DV[ Business Performance (BP) ]. In this case, the method can utilize quantitative method for testing and identifying the level of relationship between variables, and the data collection can be performed by distributing questionnaires with primary data. However, for exploring deep factors impacting on each other variables within the research framework, qualitative method would be preferred to utilized into this study and the related data collection can be employed by semi - interview question.

#### 3.1. The Qualitative Method in Sampling

For the qualitative study, a non-probability sampling procedure was employed, specifically utilizing stratified purposive sampling. This approach involved selecting 12 participants from various

companies within the Information Technology Sector (ITS) in Guangzhou city, China. The participants were chosen purposefully based on specific criteria and characteristics relevant to the study. Notably, they were required to have previously taken part in the quantitative study. To collect qualitative data from the chosen participants, a semi-structured interview guide was utilized. This guide provided a flexible framework for conducting interviews, allowing the interviewer to explore relevant topics in-depth while maintaining consistency across interviews. Through this method, valuable insights and perspectives were gained to complement the quantitative findings of the earlier study.

#### **4. The Presentation of Qualitative Semi-interview**

This study can be collected data and information by semi-interview from 12 respondents for answering the question in exploring the factors of the effect of the relationship between variables. Such as, the relationship between Top Management Support (TMS) and Electronic Commerce Adoption (ECA), the relationship between Top Management Support (TMS) and Business Performance (BP), the relationship between Electronic Commerce Adoption (ECA) and Business Performance (BP), the relationship between Competitive Pressure (CP) and Electronic Commerce Adoption (ECA), the relationship between Competitive Pressure (CP) and Business Performance (BP).

Factors of Top Management Support (TOP) That Have a Favorable Impact on E-Commerce Adoption (ECA):

After semi - interview question on 12 selected respondents, the author of this study now can be codified the below factors that Top Management Support (TOP) impacts on Electronic Commerce Adoption (ECA). Meanwhile, different number of respondents toward on diversity factor can be made in different statistic for the factors.

- a. Alignment with Strategic Direction and Vision: When senior management supports the adoption of e-business practices, this choice will assist raise the chance of successful adoption if it is aligned with the strategic direction and vision of the organization. This factor can be mentioned and answered by eight of total respondents.
- b. Commitment of Resources: High-level support indicates that more financial, technical, and human resources may be devoted to e-commerce initiatives, which in turn increases the possibility of such projects being successful. This factor can be mentioned and answered by ten of total respondents.
- c. Organizational Culture and Change Management: The backing of top management helps develop an organizational culture that supports innovation and adapts to change in order to better handle the advent of e-commerce. Change management is a subset of organizational culture. This factor can be mentioned and answered by seven of total respondents.
- d. Encourage Execution: High-level assistance may help encourage executive-level collaboration and commitment, which is necessary to make a seamless transition to e-commerce. This factor can be mentioned and answered by eleven of total respondents.

Factors that indicate support from top management (TOP) and have a beneficial influence on business performance (BP):

After semi - interview question on 12 selected respondents, the author of this study now can be codified the below factors that Top Management Support (TOP) impacts on Business Performance (BP). Meanwhile, different number of respondents toward on diversity factor can be made in different statistic for the factors.

- a. Allocation of Resources: Having support from those in higher positions typically indicates that more resources are available for important projects, which in turn helps boost the performance of the organization. This factor can be mentioned and answered by nine of total respondents.

b. Goal setting and monitoring: Involvement from senior level staff ensures that defined business goals, as well as ongoing monitoring and feedback, are established in order to propel performance development. This factor can be mentioned and answered by ten of total respondents.

c. Alignment of Strategy: High-level engagement ensures that business operations are linked with the overall strategy, which in turn enhances the performance of the organization. This factor can be mentioned and answered by eleven of total respondents.

d. Motivation inside the organization: Members of an organization can be motivated to work harder to accomplish set business performance objectives by receiving high-level support from their leadership. This factor can be mentioned and answered by ten of total respondents.

Factors That Affect the Adoption of Electronic Commerce (ECA) The Moderating Influence of Top Management on the Relationship Between Top Management and Business Performance:

After semi - interview question on 12 selected respondents, the author of this study now can be codified the below factors that Electronic Commerce Adoption (ECA) mediate the relationship between Top Management Support (TOP) and Business Performance (BP). Meanwhile, different number of respondents toward on diversity factor can be made in different statistic for the factors.

a. Capabilities in Change Management: An efficient change management strategy helps provide a seamless adoption of e-business with the assistance of senior leadership, which in turn improves company performance. This factor can be mentioned and answered by eleven of total respondents.

b. Communication and Transparency: Adequate communication may ensure consensus among the top and other levels to support the effective adoption of e-commerce and the improvement of business performance. This is essential for the successful improvement of company performance. This factor can be mentioned and answered by ten of total respondents.

c. Decision-Making Agility: Adjustments and decision-making in the process of e-commerce adoption may respond to changes more rapidly, which supports the improvement of company performance more effectively. This factor can be mentioned and answered by ten of total respondents.

Factors that have a good influence on E-Commerce Adoption (ECA) that have a bearing on Competitive Pressure (CP):

After semi - interview question on 12 selected respondents, the author of this study now can be codified the below factors that Competitive Pressure (CP) impacts on Electronic Commerce Adoption (ECA). Meanwhile, different number of respondents toward on diversity factor can be made in different statistic for the factors.

a. The impetus for innovation: The challenges of competition motivate businesses to pursue innovation in order to sustain a competitive edge through the use of e-commerce in order to provide new goods, services, or business models. This factor can be mentioned and answered by ten of total respondents.

b. The Expansion of Markets: Competitive pressures push firms to extend their markets through e-commerce, drawing new customers and business prospects, which ultimately results in an increase in revenue and growth potential. This factor can be mentioned and answered by ten of total respondents.

Factors that have a beneficial influence on the relationship between business performance and competitive pressure (CP):

After semi - interview question on 12 selected respondents, the author of this study now can be codified the below factors that Competitive Pressure (CP) impacts on Business Performance (BP). Meanwhile, different number of respondents toward on diversity factor can be made in different statistic for the factors.

a. Increased operational efficacy: The pressure of competition on businesses compels them to look for ways to increase operational efficacy, lower costs, and optimize processes through the use of e-

commerce, which ultimately results in improved company performance. This factor can be mentioned and answered by ten of total respondents.

b. The drive for innovation: The pressure of competition stimulates businesses to search for creative solutions in order to create products and services that are more competitive, which in turn drives the improvement of corporate performance. This factor can be mentioned and answered by ten of total respondents.

#### 6. Factors Relating to the Adoption of Electronic Commerce (ECA) That Modify the Relationship Between Competitive Pressure (CP) and Business Performance (BP):

After semi - interview question on 12 selected respondents, the author of this study now can be codified the below factors that Electronic Commerce Adoption (ECA) mediates the relationship between Competitive Pressure (CP) and Business Performance (BP). Meanwhile, different number of respondents toward on diversity factor can be made in different statistic for the factors. This factor can be mentioned and answered by ten of total respondents.

a. Market positioning: As a result of adopting e-commerce, firms are able to modify their market positioning in order to better adapt to the competitive challenges that might, in turn, influence company performance. This factor can be mentioned and answered by ten of total respondents.

b. Capability for innovation: The adoption of e-commerce has the potential to encourage creativity and deliver novel solutions, both of which can contribute to improved corporate performance in an increasingly competitive market. This factor can be mentioned and answered by ten of total respondents.

The connection between top management support, the adoption of e-commerce, the amount of pressure from competitors, and company performance is both complicated and interactive. E-commerce adoption may be driven by support from top management, which can have a favourable influence on business performance in a number of ways, including resource commitment, strategy alignment, and others. Businesses are compelled to use e-commerce to some part by the pressure of competitive pressure in order to innovate, enhance efficiency, and ultimately effect corporate performance. The adoption of e-commerce plays a significant part in mediating top support, competitive pressure, and company success, including aspects like as change management and innovation skills.

## 5. Conclusion and Discussion

The use of Information technologies (IT) and its associated technologies for the purpose of managing information in an electronic format may provide significant benefits in terms of organizational efficiency, particularly with regards to the allocation of resources such as time and financial capital. Administrative procedures include a substantial number of operations, hence increasing the workload across several departments. Nevertheless, the use of digitization initiatives enables the reduction of burden for employees, enhances Business Performance (BP), and elevates the complexity of tasks that would otherwise be performed manually.

The findings also indicate the factors of Top Management Support (TOP) impacts on Electronic Commerce Adoption (ECA) as the conclusion in Alignment with Strategic Direction and Vision, Commitment of Resources, Organizational Culture and Change Management and Encourage Execution by the collection of qualitative method in semi-interview. Additionally, the factors of Top Management Support (TOP) impacts on Business Performance (BP) as the conclusion in Allocation of Resources, Goal setting and monitoring, Alignment of Strategy and Motivation inside the organization by the collection of qualitative method in semi-interview. On the other hand, the factors of mediator role of Electronic Commerce Adoption (ECA) in the relationship between Top Management Support (TOP) and Business Performance (BP) as the conclusion in Capabilities in Change Management, Communication and Transparency and Decision-Making Agility by the collection of qualitative method in semi-interview. Additionally, the factors of Competitive Pressure

(CP) impacts on Electronic Commerce Adoption (ECA) as conclusion in The impetus for innovation and The Expansion of Markets by the collection of qualitative method in semi-interview. Besides, the factors of Competitive Pressure (CP) impacts on Business Performance (BP) as conclusion in Increased operational efficacy and The drive for innovation by the collection of qualitative method of semi-interview. Eventually, the factors of mediating role of Electronic Commerce Adoption (ECA) in the relationship between Competitive Pressure (CP) and Business Performance (BP) as conclusion in market positioning and capability for innovation.

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