

## Digital procurement practices in SMES: comparative cases of advanced and emerging economies

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### Abstract

About 99 percent of American firms are small and medium-sized enterprises (SMEs) and more than 88 percent of people are employed in SMEs. However, most SMEs are not using supplier interactions in digital platforms which is a flexible IT infrastructure (software, hardware, and network) and a well-developed information management capability. Organizations can use digital procurement platforms to foster managerial improvisation and can leverage, depending on the type of unexpected event. If we look at the emerging economy, the percentage of SMEs of total business is almost the same as advanced economies, but their digitalization is much less than the advanced economy. It is obvious that digital procurement is now one of the most significant prerequisites to tackle the supply chain crisis that leads to gaining competitive advantages in the financial and non-financial perspective of a business. It is also true that lacking the proper understanding of digital transformation and organizational capabilities, many small and medium enterprises are facing enormous hardships to sustain. This study aims to examine the challenges and opportunities of SMEs with digital procurement. Based on the literature review, we present a research model of digital transformation which defines key variables. We also use case study instruments to target SMEs in different sectors in advanced (USA) and emerging economies (Bangladesh) for empirical investigation.

**Keywords:** Digital Transformation; Digital Procurement; Digital ecosystem; SMEs; Emerging Economies; Advanced Economies

### 1. Introduction

Procurement is a business process that is primarily based on the exchange of contractual records and information relating to suppliers' goods, purchase costs, discounts, raw materials attributes, transportation of products, and other variables [1]. The conventional procurement process has been shifted to a system that accumulates information and fixes action points related to purchasing products, and consequently, leads to individual communication among sellers and buyers [2]. In response to that, there are multidimensional digital tools and technologies are used to process the required information to facilitate an organization's procurement activities [3].

Digital procurement is the combination of virtual connectivity-based information and communication technology to facilitate the procurement department of a company to help in operational activities and strategic work [4]. To boost organizational successes and gain competitive advantages, businesses are now increasingly using digital platforms in their procurement department [5]. This digitalization can also assist SMEs' business operations by minimizing costs and

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effective actions in every step of procurement in all economies, emerging or advanced economies. Moreover, digitalization will reduce the scope of committing fraud or managing earnings in firms because of the efficient exchange and processing of operations-related data that has financial implications. Some findings from previous studies show that the presence of free cash flows, as an indicator of operational effectiveness, increases the likelihood of accomplishing earnings management [6]; or if there is more scope to manipulate the operational process or the information at the disposal of the employees, they tend to commit frauds [7]. Therefore, digitalization in the procurement process has benefits in different contexts.

A major underlying theme in digitalization is the objective to gain information about changes in the environment of the organization, including markets, customer behavior, and competitive landscape [8] by engaging in continuous assessment of data, cross-organizational capability development, and enhancing the flexibility in every task of businesses. As consequence, it can be stated that Digital procurement capabilities have a substantial influence in leveraging technological resources in its supply chain management operations. To enable digital procurement, SMEs require some important financial and nonfinancial resources, for example, investing more money to acquire and practice technological equipment and software, adequate and skilled manpower that is one of the key elements of SMEs, establishing digital ecosystems. On the other hand, a more improved digitalized system will also attract more investors, including foreign and institutional investors, as they will feel more confident to depend on the firms' operations. So, a better impression in the capital market will raise the firm performance for such business firms [9]. Companies might also disclose more about their adoption of digitalization in their procurement process. More disclosures also create a positive impression for the firms in the market [10].

It is obvious that Small and Medium Enterprises (SMEs) are very crucial not only in the business world but also in the economy and employment of a country. The SMEs businesses operations' patterns may differ based on the economic conditions of a country as the advancement of technology is mostly correlated to the process of invention and innovation of an economy [11], and the technical innovation as a critical parameter in economic growth [12], although there are some common technological challenges faced by SMEs in both advanced and emerging economies [13]. Therefore, it is time to present the challenges and opportunities that are faced by SMEs in the two different economies, and in this study, we are presenting four cases of SMEs to scrutinize the following research questions:

- What are the challenges and opportunities are facing SMEs businesses in regard to digital procurement activities?
- What are the differences between advanced and emerging economies' SMEs from the digital procurement point of view?

The remaining part of the study is organized as follows: Section 2 presents the literature review; Section 3 outlines the research methodology and states the theory based on which the study is established. Section 4 discusses all four case studies with the comparisons of advanced and emerging economies. Lastly, Section 5 presents a conclusion with some limitations of the study.

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## 2. Literature review

### 2.1 Digitalization in procurement and its practices in SMEs

Procurement activities are now not applied in simple and straightforward processes. It has so many factors that are performed with many complex procedures. For example, duration and deadline, manpower capability associated with the selection of suppliers' numbers to contact when searching for them, the process of relevant decisions' making, communication and dealings strategy with the suppliers, business risks, probable services after purchasing the products that have impacts on future relationships between buyers and sellers [14]. Moreover, the changes in technology concern for reshaping all relevant processes in business activities, incorporating new businesses, changing relationships between buyers and suppliers, products' using experience, customers' quantities, and impacts of technological complexities [15].

Many diversified new technologies, such as data analysis, digital communication, connected objects, intelligent systems, and user experience through digital technology, are now applicable in all sectors, even in traditional industries [16]. As one of the diverse applications of digitalization in business, digitalization in procurement is a data-driven approach to derive solutions to supply management-related complexities [17]. To get the diverse application actions, the following factors are the key reasons: 1) continuous assessments are key roles of analytics and finding out criticism of available business data as most cases raw data are not completed and unbiased [18]. 2) digital processes are not ready all the time

to contribute to business performance; for example, the extensive collaborative nature of big data needs cross-organizational capability development [19], the digitalization of business activities is not just dealing with technical challenges; but the main objectives of this are to minimize attitudinal obstacles for going ahead of the flexibility and coping with the technological environment [20].

Therefore, this is the vital task of the higher management of an organization to accustom digital maturity in daily organizational activities, enhance this in the strategic level of the business, and to provide technological applications in supply chain operations [21].

Although human resources are the fundamental priority in small and medium enterprises (SMEs) for influencing digitalization [22] other resources are also needed to progress digitalization among the organizations can be categorized as tangible technological resources and intangible organizational practices.

In addition to the above categories, predictive analytics needs the IoT, the clouds, and the big data as a resource for the data-based decision-making and management of activities [23].

The organizational procurement process with digitalization has numerous competitive advantages and opportunities for the organization as data can be processed effectively and user-friendly. This digitalization not only contributes positively to supply chain management but also impacts procurement processes as procurement is a part of the supply chain, and the positive impacts are also correlated to the strategic, tactical, and operational process of the overall supply chain [24]. The role of digital platforms is analysis critically all the procurement activities of management which definitely gains in the performance of the organization. The digital platforms are facilitating 1) technological applications to collect data from real business operations, 2) connectivity to share data from applications to their users, 3) storing data by using of cloud platform that helps application development, and 4) layering the services for exchanging to its users [25].

The present technological developments remove many clerical and official administrative work and automate information processes, leading to optimization and efficiency of the work [26]. Although SMEs have substantial contributions to a country's economy and SMEs are considered as the fundamental to the economic growth of national economies [27], SMEs are still struggling with their digital platform due to the following reasons: 1) investments in digitalization in SMEs are generally extemporary basis and in optimistic nature, even they do not implement any standardized digital strategy, 2) Financial barriers are another cause as for digitalization substantial amount of money is required for this, and entrepreneurs are feeling the risk of losing money [28] and 3) skills related to digitalization, as well as a poorly structured strategy, can also constitute a missed opportunity for digital transformation [29].

## **2.2 Dynamic capabilities and digital procurement**

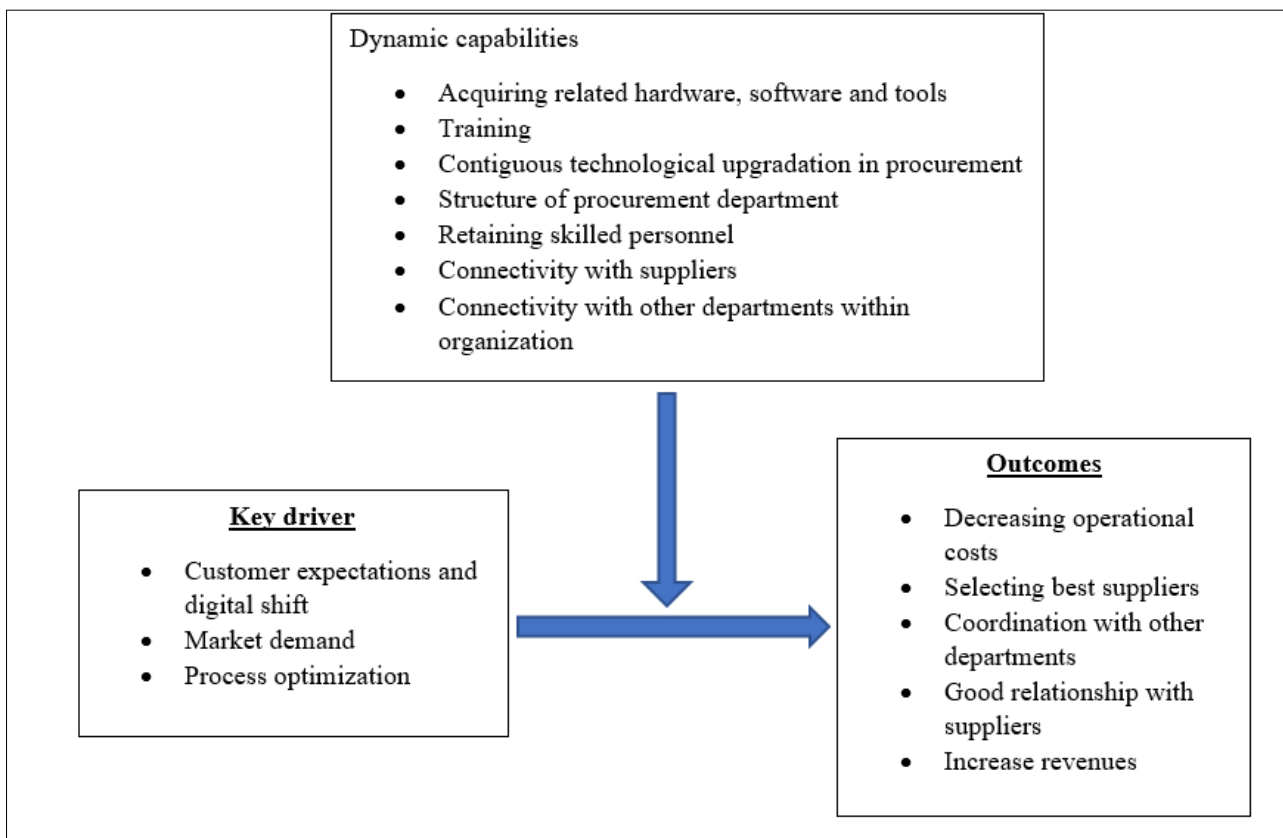
We evaluate the present situation of four organizations based on Dynamic capability theory. Dynamic capabilities are the ability to organize, build and link resources coming from internal and external sources that help to cope easily with continuous business flexibility [30]. Firms' capabilities and economies of scale increase when their resources are utilized through digitalization even though the resource could be limited [31]. The capabilities facilitate business in intelligence and acquiring different opportunities along with changing market conditions [32]. Dynamic capabilities work with present business resources as well as create scope to generate new required resources and competence [33], meaning that it involves a wide range of activities [2]. Therefore, DCs directly involved to create new knowledge, products, and systems that are positively correlated with firm performance [34] and reshaping operational capabilities that ease efficiency [35]. In other words, it can be said that DCs are working as superior and significant performance influencer that adopts changing environment effortlessly [36]. Overall, DCs promotes business to gain competitive advantages.

Dynamic capabilities are the combinations of three types of activities towards strategic business changes, i.e., organizational and managerial processes, positions, and paths. Firstly, organizational and managerial processes are the way things are done in the firms, or what might be referred to as their routines or patterns of current practice and learning. Secondly, positions refer to its current specific endowments of technology, intellectual property, complementary assets, customer base, and external relations with suppliers and complementors. Finally, paths refer to the strategic alternatives available to the firm, and the presence or absence of increasing returns and attendant path dependencies. These three parts of dynamic capabilities stated by are mentioned below at a glance:

Dynamic capabilities stated by Teece, Pisano and Shuen, 1997	Processes	Positions	Paths
	<ul style="list-style-type: none"> <li>• Coordination and integration</li> <li>• Learning</li> <li>• Reconfiguration and transformation</li> </ul>	<ul style="list-style-type: none"> <li>• Technological assets</li> <li>• Complementary assets</li> <li>• Financial assets</li> <li>• Reputational assets</li> <li>• Structural assets</li> <li>• Institutional assets</li> <li>• Market assets</li> </ul>	<ul style="list-style-type: none"> <li>• Path dependency</li> <li>• Technological opportunities</li> </ul>

**Figure 1** Dynamic capabilities

The following conceptual framework shows the key drivers of digital procurement, dynamic capabilities of digital procurement and its outcomes:



**Figure 2** Key drivers and outcomes

### 2.3 Key drivers:

The first components of the conceptual framework are key drivers of digital procurement, indicating that what are the underlying factors to establishing a technologically enabled procurement department of an organization. The identified drivers can be classified into three categories.

- Firstly, Diversified customers' attitudes and expectations are considered an important factor for digital identification [37]; thus, the changes are shifting organizational activities towards digitalization [38].

- Moreover, the market is changing a lot day by day as it is more competitive compared to its previous time; therefore, for the existence of an organization in the unpredictable changes in the market, technological development is now another prerequisite [39].
- In addition, process development by the utilization of technology ensures organizational efficient internal control systems that boost up perceived benefits and error deductions [40].

#### **2.4 Outcomes of digital procurement**

Digital procurement can be helpful to costs minimization by searching for efficient suppliers, and internal connectivity within the organization that is ultimately responsible for net profit and future business growth of the organization.

#### **2.5 Dynamic capabilities in digital procurement**

Digital procurement requires skilled personnel, technological tools, and capabilities, skilled and continuous the technology, ecosystems, financial support, and connectivity with all related parties in the procurement department, those are the components of the process, position, and paths of dynamic capabilities of digital procurement, and the components lead to competitive advantages in procurement activities as well as helping for the smooth supply chain management.

Previously, there were many separate case studies in digital procurement either in emerging economies or advanced economies, but there are no case studies in this field that includes the comparisons between the two economies' digital procurement practices in SMEs. Therefore, in this study, we explore digital procurement practices in SMEs in both economies with comparisons by using the dynamic capabilities model, stating how the model's three parts can cope in SMEs' digital procurement perspective.

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### **3. Methodology**

The employing of case studies is one of the most appropriate approaches for researchers [41] as case studies involve the opportunity to explore a practical situation in its own ways by which complicated relationships and related meanings of different scenarios can be scrutinized [42]. In other words, case studies are elaborated inquiries of one or more organizations or a group of units within organizations combined with relevant and required data by which researchers provide and analyze different situations and processes.

Our research consists of four cases of SMEs from which two organizations are selected from the USA as advanced economy business organizations and the remaining two are selected from Bangladesh as emerging economy' organizations. The main reason for selecting the two countries is that there are many factors that differ due to the economic conditions of countries i.e., infrastructure, digitalization, numbers of internet users, economic growth, technological development, and government support. As mentioned earlier, we focus on the digitalization of procurement in these four SMEs organizations in both economies and later on emphasize how using digital procurement can be varied in the two economies. Our interviewees are mainly based on logistics, supply chain, procurement, analytics experienced juniors, managers, or more senior designated personnel of our selected organizations so that the concepts of different people in different layers people can be observed. Because, to gather rich and empirical data collection, interviews are an extremely effective way as the important and interesting points can be stored in researchers' minds [43]. These interviews are conducted in online interviews.

Before going to conduct the interview, the questionnaire is finalized (Annexure-A) based on our research questions and queries those required to be linked directly to digital procurement, technology advancement trends, skilled people, the government supports, financial situations of the organizations, and economic conditions of the country's economy where the SMEs are running their business operations. Based on questions answers in the interview, we stream and adjust the questions, which is a common approach in qualitative research [44].

The outcomes of the conversations with the interviewees were scrutinized in accordance with [45] who suggested that the results should have contained citations of interview conversations which is considered a powerful tool to convey the messages of researchers due to the richness of research data. They also suggested that many difficult issues and concepts can be explained with simplicity by a brief literal quotation; therefore, actual responses collected from respondents can be captured accurately.

#### 4. Case study of selected firms

We have selected four SMEs, two are from emerging economies and the remaining two from advanced economies. The four companies are involved in different industries having a number of employees from 15 to more than 150. In Bangladesh, selected as an emerging economy, ABC Company Limited (ABC)\* runs in the ready-mix and concrete industry and XYZ company Limited (XYZ)\* runs its business in Apparel Accessories and Other Apparel Manufacturing industries. On the other hand, in the USA, selected as an advanced economy, PQR Concern LLC (PQR)\* and MNO Communications LLC (MNO)\* run their businesses in the ready-made garment industry and the telecommunication industry respectively. A number of employees and their net assets are presented below diagrams:

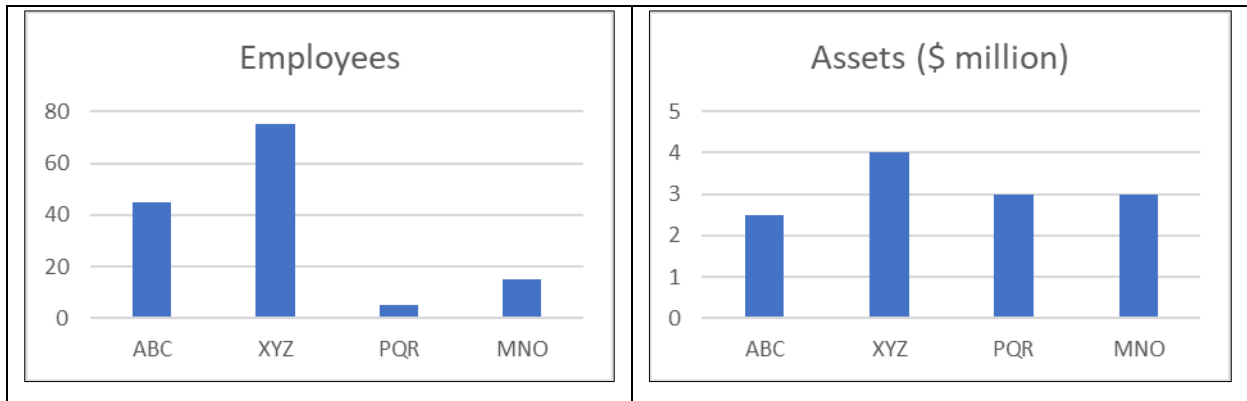


Figure 3 Number of employees and net assets

##### 4.1 Summary of the field interview

We have many questions and correspondence answers, in both countries business management, related to employees' capability, required training for them, how training gives them capable to use the digital tools, what are the government support they get, countries' overall infrastructure helpful for business development and its digitalization in its operation. In the case of a developing country, how higher management feels about the usefulness of digital procurement, and in the case of a developed country, what the merits are they are receiving from the use of digital procurement. The below table is the summary of the conversations based on the components of dynamic capabilities with their outcomes to gain key drivers in our conceptual framework:

Table 1 Internal and external dynamic capabilities

Internal and external dynamic capabilities			Organizational outcomes
Subject matters	Key points	Reasons	
Technology requirement	<ul style="list-style-type: none"> <li>- all physical and virtual IT infrastructure</li> <li>-Establishing networks with different business partners and communities and virtual technologies</li> </ul>	<ul style="list-style-type: none"> <li>-Understanding of digital trend-cultural Virtual technologies</li> <li>- Innovation, leadership and management skills</li> <li>- Providing service in digital platform</li> </ul>	<ul style="list-style-type: none"> <li>-strength organizational internal control systems</li> <li>-Confidentiality of different data in different suppliers can be ensured</li> </ul>
Employees' capability and training	-Developed country's employees are more technologically sound compared to that of an emerging country.	<ul style="list-style-type: none"> <li>-developed country's employees cope with other technology from the beginning of their lives and most importantly they prepared themselves before entering a job</li> <li>-Employees can utilize the technology for all the related</li> </ul>	-Employee's expertise will be increased day by day and the organization get benefitted in the long run

		activities associated with the procurement department	
	-developing countries' employees need more training from beginning to end to generate many analytical reports in accordance with management requirements.	- introduce digitalization, direct monitoring employees and give feedback from seniors, find out gaps derived from dealing with digital procurement and training to get expected results	-Operational productivity and smoothness in daily work can be achieved, facilitating to achieve of strategic goals in the future
Country's economic influence	-economic growth of a country	-increase people's purchase power that helps business growth	-business organizations' sales and revenues increase, meaning that their profit also increases.
	-the percentage of people using the internet/technological development	--a person newly introduced to the internet definitely copes with new technology slower than a person who used to have internet in one previous life	-people get used to dealing with digital devices which is helpful for business digitalization when they join as an employee as s/he knows
	-infrastructural development	-overall infrastructure is also positively associated with technological upgradation in all sectors of a country including the business sector.	- all related stakeholders are benefitted in either directly or indirectly from the infrastructure development, for example, qualitative raw materials purchased by digital procurement lead to creation of qualitative finished goods, ultimately increasing buyers' quality of life.
Networking with related party	-connectivity with other departments within the organization	-all departments can share their data easily with the procurement department, such as the marketing department providing its next quarter's sales quantities the to procurement department, and based on that procurement department creates its plan for purchasing raw materials. Moreover, the procurement department passes its purchase plan to the finance department for their promptly financing systems	- helpful to prepare short-term and long-term planning due to accurate forecasting - the connectivity helps to find a new supplier for purchasing new raw materials for newly launched products or existing products in case of incapability of existing suppliers
	-connecting with suppliers	- nowadays companies are exchanging their information with their customers and suppliers even in many cases they use API connectivity	- the more connection with suppliers, the more chances to have a good deal in acquiring raw materials and fixed assets in terms of prices, quality, credit terms, and longer credit periods, meaning that conversion and operational costs decrease leading to the profitability of the company.

#### 4.2 SMEs in emerging economies

ABC Company Limited\* and XYZ Company Limited\* located in Bangladesh are not using any digital procurement tools in their supply chain and procurement department. Therefore, lower-level employees are lacking behind about the

digitally sound procurement department, and using the tools associated with procurement is far away from their knowledge. The following speech from a junior of the procurement department that transparently discloses that they are not familiar with the digitalization:

“We are not using digital procurement, and we are collaborating with our suppliers by email or phone calls conversations or even by visiting them at their premises or they come to our office. Therefore, we are not familiar with digital procurement systems and their usefulness.”

Subsequently, we wanted to know what the problems are they face due to the manual procurement system, and the employee replied:

“There are many problems we face; among them, the major is lack of confidentiality as other employees those are not related to procurement can know about the pricing of a particular supplier. Even sometimes one supplier knows another supplier’s quotation of raw material. Therefore, our bargaining power is decreased.”

However, higher-level management and some middle-level employees know about the technology although they also need to know more with practical understanding. The management level people are not using the technology due to the lack of investment and skilled manpower, and the complexity of operating procedures. The following speech from a higher management expresses his thoughts:

“Digitalization is a blessing for business organizations. Even though we have the intention to use digital procurement, we cannot afford this as our employees are not so capable to use this, and most importantly our financial budget does not align the implementation of digital procurement.”

When we observed that no firms out of two SMEs have not any experience in digital procurement. Therefore, we look into other firms in Bangladesh to know other SME businesses’ situation in the use of digital procurement and came to know that none one is using the tools. Yet, big corporate companies in Bangladesh, especially multinational companies, have well systematic procurement department having experience with digitalization.

### **4.3 SMEs in advanced economies**

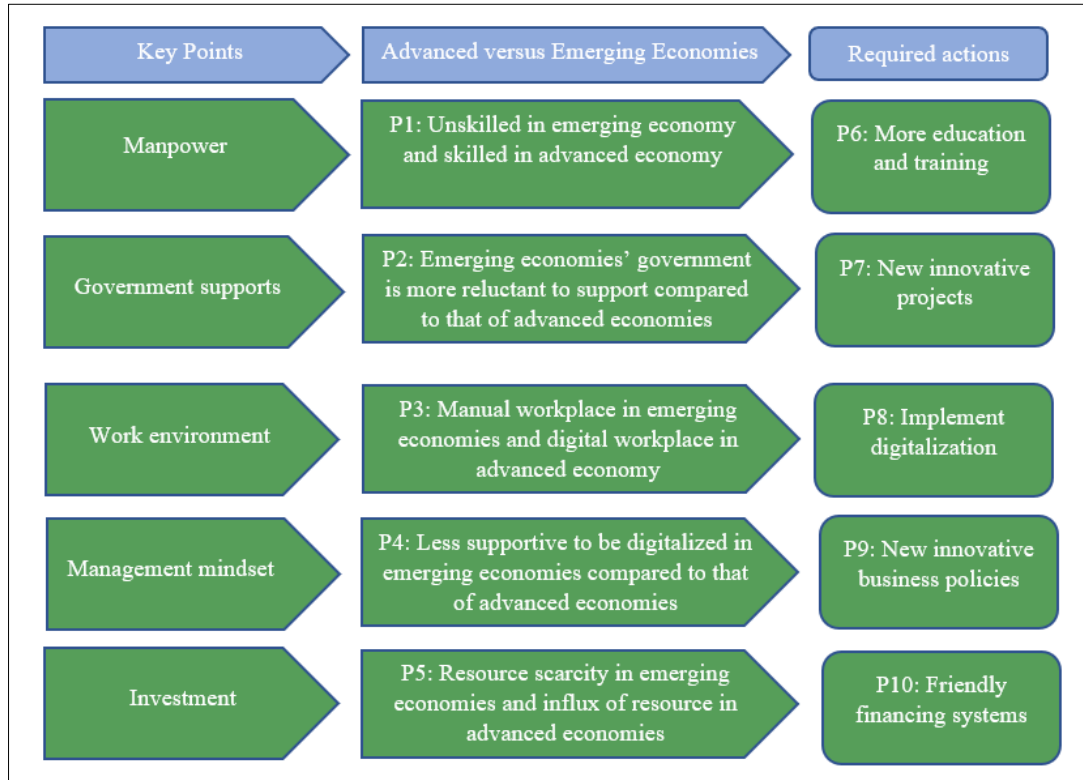
PQR Concern LLC\* and MNO Communications LLC\* located in the United States of America are selected as stated previously. PQR Concern LLC procures its products from overseas like India, Vietnam, and Bangladesh. It is using digital procurement for communication, analyzing data, and future procurement plans based on customer requirements. Therefore, seniors employees of the entity authorize the purchase in the system that helps its management to track all purchases that can be related to its correspondence sales. The comment from the procurement manager:

“Our procurement department is sophisticated as we are using many digital tools in the department that helps us to find out suppliers to procure our required goods. Besides this, our internal procedures are done by the system from creating a requisition to receiving a good where related personnel acknowledge and authorize without any manual intervention. Thus, it is not only smooth our business operation but also cost saving for us.”

### **4.4 Comparison between emerging and advanced economies, and required actions:**

In our interview as the way of data collection, we also figure out what are the factors influencing digital procurement utilization in SMEs in both economies, and how these differ due to the economic conditions of the countries.





**Figure 4** Comparisons and required actions' framework

#### 4.5 Comparison between emerging and advanced economies:

##### 4.5.1 *P1: Employees of SMEs in advanced economies are more technologically sound compared to that of emerging economies*

Higher management of SMEs in emerging economies feels that lack of skilled manpower is the key point for not implementing digitalization. Traditional business activities in developing countries cannot go ahead without executing advanced technologies in a business environment, and in these countries, there are less specialized and skilled employees [46]. If the owners of emerging economies start to implement digitalization, their business will slow down at the beginning of the digitalization although they think that it will be helpful in the long run.

On the other hand, entrepreneurs of SMEs in advanced economies contemplate that they have available skilled manpower compared to those of emerging economies, and they are not facing such problems as emerging economy entrepreneurs.

##### 4.5.2 *P2: There are some intentional and unintentional reluctance from developing countries' government while those in developed countries are more supportive*

Governments of emerging economies have no support such as interest-free or low-interest credit facilities, free advising counseling, establishing vocational institutions and training to be digitalized in business operations [47]. This is because governments of the countries are required to more emphasis on the fundamental needs for the survival of their natives like food, education, and medicine. However, sometimes they have scarcities in good intentions to be digitalized. Therefore, businessmen think that it has also some impacts on procurement activities of SMEs as a part of the important operational department of a business. The following response.....

“Our government recently has the ambition to enhance digitalization, and they are progressing day by day, but still, they have some limitations due to adequate resource crisis.”

However, due to healthy economic conditions, entrepreneurs have more money to invest in their business, and it is also obvious that many banks in the USA finance SMEs with favorable terms and conditions as they have special and

dedicated banking facilities for SMEs [48]. Business personnel mentioned that there are many USA vocational training institutions those help to get skilled prospective employees for their business operations [49].

*4.5.3 P3: Digitalization in every sector is the ley moto in developed countries while developing countries are struggling to be digitalized in their major sectors*

Still in major sectors such as the banking industry, developing countries have not adequate and sophisticated digitalized systems although they have some extended levels of it [50]. Thus, it is like a dream to have a digital atmosphere in SME businesses in these countries, and almost all of the operational activities are performed manually which leads to the mindset of involved people not coping with digital thinking.

Yet, when employees of an organization in developed countries observe everything in their surroundings in digital forms from communication with others, recording, reporting and analysis, they cannot think anything manually. Definitely, this is happening in advanced economy's SMEs.

*4.5.4 P4: The unwillingness of owners of SMEs in developing countries to deal with digital platforms is another key reason for not employing digital procurement whereas the inexistence of digitalization is beyond imagination in advanced economies*

Junior staffs of SMEs think that the higher management intentions are not that much to make everything digitally, as juniors express their opinion based on experience gather from other organizations that higher management who established their business 20 or more years back, they have little intention to cope with digitalization as they are used to do everything manually. Lack of technological knowledge of the management is the fundamental reason for that as they cannot understand what are going on in the digital mechanisms, and they cannot get any confidence in it.

On the other side, higher management of SMEs in the advanced economy is reluctant to perform their business activities manually as they mentioned it is difficult to get a complete picture if the business runs its activities without digitalization such as real-time budgeting can be prepared by using digital procurement.

*4.5.5 P5: Resource scarcity hinders the advancement of SMEs in emerging economies while advanced economies are unlikely faces the issue*

More investments are required to have sound and adequate technical appliances and tools in an organization. SMEs owners in emerging economies have not enough money to invest in their organization as they are struggling to finance their money for the business's core activities; therefore, in most of the cases, they cannot afford new investments in digitalization including training their subordinates from the scratch [51]. However, investment is not such a shortage in developed countries as compared to that in emerging economies [52].

Required actions

Due to having some constraints in emerging economies to establish a digital environment with a digital procurement, some actions are required as per suggested by other researchers and involved people in SMEs as stated below:

*4.5.6 P6: Adequate vocational education and practical training are required*

Firstly, training from vocational institutions can be established to create more expertise in emerging economies even the formal education system should have some training with their theoretical knowledge [53]. For example, when students are taught about digital procurement, they can also be illustrated with some tools of procurement. Moreover, in-house training from the employer side also could be another action point to create skilled employees. The training can be for new joiners as well as for experienced employees.

*4.5.7 P7: Government can take numerous projects to build a digital nation*

Establishing new technological oriented and vocational institutions can be established to create more skilled natives. For the establishment, the government of emerging economies may hire some skilled people from technologically sound and developed countries for an interim period until gaining a standard technical knowledge of their people. In addition, tax exemption and subsidizing on technical imported items can also be implemented so that procurer can minimize their costs for the digitalization. Therefore, their training will be a standard benchmark and in the long run, the nation's people will have very few problems dealing with digitalization.

4.5.8 *P8: Hiring new skilled people with executing digital tools associated for a digital atmosphere in an SME*

To have a digital environment of an organization, efficient and adaptable human resources are a prerequisite, and businessmen can hire these people from an existing renowned organization or from abroad if they think that their country has some scarcity of such personnel. Moreover, executing different digital appliances by these skilled personnel with collaborative tools, analytics applications and artificial intelligence is helpful for the upgradation of an organization. Therefore, an integrated workplace-sensing system, connecting people externally and internally, preserving organizational confidentiality can be ensured as an organizational whole.

4.5.9 *P9: Changing management attitude with technological upgradation will help a digital organization*

Higher management can keep in touch with technological upgradation and can implement it to their internal business policy, and they can implement this as organizational ongoing learning. Because after a certain time, they can easily link up the technology adoption with corporate entrepreneurship and firm performance in terms of strengthening inter control systems and financial outcomes [54].

4.5.10 *P10: Investor friendly financing systems and investing more amount in SMEs can be an influential factor in a digital environment*

SME credits are still at a low level due to collateral, personal and financial statement-related obstacles in using bank loans, and low levels of equity, which is a key cause behind SMEs' limited technological capacity and less updated manufacturing facilities [55]. SME-friendly financing systems including favorable repayment systems with low financing rates give opportunities for SME investors to invest more and they can also get in touch with technology in their business operations [56].

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## 5. Conclusion

SMEs have a great influence on an economy as a key contributor to the growth of a local community through innovations and by employing a vast number of people who do not get employment opportunities in a big corporation. The paper examines digital procurement in small and medium enterprises (SMEs) in emerging and advanced economies in dynamic capabilities point of view and compares both economies in the SMEs context by considering different dimensions.

The findings from the responses of involved personnel and owners of SMEs in the study suggest that for digitalization in the procurement department in SMEs' business activities, different aspects of dynamic capabilities are inevitable such as related technological tools, skilled employees, connectivity different departments within and outside organization, structured procurement department those associate to positive outcomes of the organization; thus, the key drivers of the conceptual framework (customer expectations and digital shift, market demand and process optimization) can be achievable in SMEs.

All differential dimensions between emerging and advanced economies, based on interview responses and previous researchers, also suggest that SMEs in advanced economies enjoy more opportunities to be digitalized their procurement department and overall business operations compared to those of emerging economies. Therefore, all related state holders (employees, owners, government, higher management) in SMEs in emerging economies have some actions points that need to be considered.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

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## Annexure-A

The major questions asked in the interviews are mentioned below. Besides the following questions, we have asked many other related questions relevant to the interview to know more about the interviewees' thoughts.

- Is technology upgradation (in terms of micro and macro points) the part of digital procurement? If yes, why do you think this?
- What types of software and analytical tools are required to implement digital procurement?
- What types of training are required to implement or make understand digital procurement?
- Do you think that a country's economic conditions have an impact on the establishment or use of technology? If yes, how?
- From your country's point of view, could you please answer the following questions with elaborations:
  - how are people capable to use digital procurement?
  - What are human resources available to implement digital procurement in an organization?
  - What are infrastructure resources available to implement digital procurement in an organization?
  - What are the government supports required to be digitalized by a company?
  - How is your country's government supportive in this regard?
- Do you think that coordination with other departments (e.g., sales, finance) is easier for using digital procurement? If yes, could you please elaborate this?
- Is it helpful to use digital procurement for long-term planning? Please elaborate on your answer.
- How is digital procurement helpful for searching for suppliers?
- Is the use of the technology beneficial for minimizing operational costs? Please explain with logical background.
- What are the risks/problems associated with the procurement department and how can these risks/problems be minimized by the use of digital procurement?