Does organizational learning capability allow improving business sustainability? A quantitative analysis in the manufacturing SME context

Yusmazida Mohd Yusoff¹, Muhamad Khalil Omar¹, Maliza Delima Kamarul Zaman¹

¹Faculty of Business and Management, Universiti Teknologi MARA, 42300 Bandar Puncak Alam, Selangor, Malaysia

Abstract. Many organisations is force to reconfigure their business process to sustain themselves in competitive business environment. Business is sustainable is when organisation enable to balance between economic and social aspects without damaging environmental throughout their business operations. In order to achieve the desired end of sustainability, organisation need to keep themselves updates and learn about business environment in which they operate. The objective of this study is to examine the relationship between organizational learning capability and business sustainability. 168 managers of manufacturing SMEs participated in this study and data were analysed using Smart PLS 3.0 approach. The findings showed that organizational learning capability have significantly positive relationship with business sustainability.

1. Introduction

The present economic activity has contributed towards a rather serious environmental crises, such as intolerable climate change, scarcity of clean water and food, diminishing fuel, as well as unstable and slump in economy across nations [1] where an estimated 60% of the ecosystem worldwide have been reported to experience degradation [2]. This environmental destruction seems to affect our ability in sustaining prosperity and achieving social equity [2]. It is, therefore, essential for organisations to understand the pressing environmental issues in order to minimise the impacts of economic activity by placing more focus on sustainability solutions in their business processes [3]. Generally, business sustainability is the organisation that pursue economic and social development without damaging the environment [4].

Behind this reason, the organisations need to find the best solution to strengthen their research and development on knowledge resource by managing it wisely and effectively to meet present challenges. Senge [5] suggested that organizational learning is a key resource to enhance learning potential among individuals and groups to stay ahead and compete in the market. In similar tone, Rowley [6] highlighted that knowledge and learning are most important resources for organisation’s survival and competitiveness. All of this fact is the concept of organizational learning capability. Gomez [7] defined organizational learning capability as an organisation’s ability to process knowledge and to modify its behaviour to reflect the new cognitive situation.

The conception of this paper is novel because many prior studies have solely focused on organizational learning capability with other business outcomes such as competitive advantage, innovation and financial performance; while none has empirically explored the correlations between organizational learning capability and business sustainability. In comparison to competitive advantage,
BS brings a wider perspective where the focus is not only on economic, but also with social and environmental performance, in order to stay ahead in the business for a longer term [8].

Hence, the motivation of this study derives from the above facts that the business sustainability approach is still new and at its embryonic stage in Malaysia; a developing country. As such, this study intends to bridge the identified gap. The findings from this study can help academicians and practitioners contribute to future research.

2. Literature Review

2.1. Business Sustainability

Sustainability development term was first introduced in the report entitled the limits of the growth that was published in 1972 [9] on Environment and Development (WCED) in 1989 [10]. The report defined sustainability as the current development without ignoring the needs of the future generations [11]. The terms of sustainability and sustainability development was used interchangeably, their meaning naturally different. Lozano [12] claimed sustainability development is the process to acquire sustainability. Contrary the noted by Sartori, Latróñico and Campos [13] argue sustainability is the journey or process to achieve sustainability development. Sustainability also has been viewed as the basic term that explaining various concepts, issues, ways of thinking and practices [14] that are too complicated and its concepts stands theoretical and leading to many different research suggesting various definition depending on how it is used perceived [15]. Sustainability term is no agreement in its definition [4] with more than 70 dissimilar definitions [12] being suggested by many research fields [15-16]. Although the objective of sustainability is to secure the balance of intergenerational, its meaning remains ambiguous [17]. Meng [18] argue that sustainability term generally about to balance and sustain the well-being.

On the other hand, business sustainability is refers to organizations aims to achieve profits, improve social development without ignoring an environmental aspects [4]. Economic sustainability is view as capability to generate value and increase financial performance [19]. For social sustainability is concern with social well-being [20]. Environmental sustainability can be define as one that can protect the natural environment from damaged [20].

At present, the literature has repeatedly highlighted the operational impact of organizations on the environment in becoming an important performance indicator [20-21] thus making the organization to be environmental responsible [17]. Many organizations have begun implementing strategies to increase economic performance, image of company without damaging the environment, which in return, can enhance their competitive advantage at local or global platform [8].

2.2. Organizational Learning Capability

In order to understanding organizational learning capability, it is important to understand the meaning of organizational learning. Organizational learning has been implemented as a study field among researchers and one of the catchwords of the 1990s [2]. This concept suggesting the need to maximize the knowledge use in order to organisation perform affectively [23]. Numerous definitions of organizational learning have existed in the literature previously, as this topic has been great interest among academicians. However, a clear definition of organizational learning has not been found [24]. Most scholars view organizational learning as a process or activities that evolves over time and combines it with the knowledge acquisition of their members properly to make decisions and performance improvement.

Argyris and Schon [25] describe organizational learning as “the detection and correction of error.” They explain organizational learning as a error investigation process by all organizational members. A study by Boff and Antonello [26] stated that organizational learning can be defined as “a field toward to the study of cognitive and social processes of knowledge in organizations that are imbricated in organizational and work practices”. In this point of view, knowledge is seen as content while learning is the process or activities where knowledge is [23].
With regard to above definitions, organizational learning helps organisations to create, acquire, transfer, integrate knowledge and experience and continuously learning. The ability of organizational learning depends on the organizational and management elements that facilitate the process of organizational learning [27]. According to Chiva, Alegre and Lapiedra [28] the ability of organizational learning is described as all the practice of organisation and management that facilitate the learning process. Having similar opinion with [28], Mbengue and Sané [29] expand on this by referring organizational learning is the set of management practices or set of mechanisms that improve the ability of an organisation to sustain and enhance performance. All these concept referring to the organisation learning capability.

Dibella, Nevis and Gould [30] defines organizational learning capability as the managerial elements that facilitate the process of organizational learning or allowing the organisation to learn. Goh and Richards [31] explains that organizational learning capability acts as a facilitators of organizational learning process, understood as the organizational’s resources, as skills that act as a approach in promoting competitiveness, and allows the organisation to learn. Goh [32] asserts that organizational learning capability is the organizational’s ability to apply appropriate and accurate management practices, the procedures, the structures which improve, facilitate and motivate learning. He believed that, this practice will contribute to strengthen learning capability in the organisation.

Gomez et al. [7] explains that for an organisation to improve, it must have capability to process knowledge within organisation. He also argues that organizational learning capability is one that skill in creating, acquiring, transferring and integrating knowledge. Once this has occurred, the organisation need to change its behaviour as a result of new knowledge received to the organisation. Organizational learning capability according to Ngui and Songan [33] sees as the organisation’s ability to build, integrate and support effective organizational learning.

For Hsu and Fang [34], suggest the definition of organizational learning capability as the ability of organisation to absorb and transform new knowledge and using it into new product development with high competitive advantage and production speed. Another definition by Allameh, Abbasi and Shokrani [35] has also focused organizational learning capability is the managerial and organizational factors which contributes to improve organizational learning process in organisation. After reviewing the various definitions of organizational learning capability, it views as a process for acquiring, sharing, distributing, and using knowledge [36].

As for conclusion, the organisation require management mechanism that support the creation of organizational learning. These mechanisms include internalisation and externalisation, socialisation and management practices that support the learning climate [29]. These practices plays a vital role in organizational learning capability, which can be describes as the set of management practices that facilitate the process of learning within organisations in aiming to increase organizational’s performance [29].

Gomez et al. [7] analyzed factors that act as facilitators of organizational learning. They stated that organizational learning capability is complex and thus developed a scale of four dimensions: managerial commitment, systems perspective, openness and experimentation and lastly knowledge transfer and integration dimensions.

2.3. Organizational Learning Capability and Business Sustainability

Salim and Sulaiman [37] noted that in order to cope with the competitive business environment, organisations required to learn new knowledge and skills, as a result, improve organisation’s performance. In addition, effective strategies and behaviour of organizational learning enable organisation to enhance its strategic capability to sustain its competitiveness and improve performance [38]. Besides that, organizational learning capability have positive relationship with organizational innovativeness by enhancing knowledge and creativity of the employees [27].

A study by Noruzy et al. [39] on 106 manufacturing organisation in Iran to examine the relationship between leadership, organizational learning, knowledge management, organizational innovation and organizational performance. The study find that organizational learning and knowledge
management would enhance organizational performance through innovation. Additionally, the results showed that organizational learning has positive impact on knowledge management.

Gomes and Wojahn [40] used the framework proposed by Chiva on 92 enterprises in the textile industry. The findings concluded that organizational learning capability contribute to organizational performance of small and medium-sized enterprises. Khawar Hussain et al [41] study explores the relationship between organizational learning capability and organizational performance using Onag (2014) scale. The findings of the study demonstrated that there is a positive association between organizational learning capability and organisation performance. They also noted that the organizational learning capability become an attention subject area that contribute to survival and sustainability.

Garba Muddaha’s [42] research examines to the influence of learning capability on marketing innovation at construct and dimensional levels. The 225 respondents were owners or managers of SMEs in Katsina State, Nigeria. The research show that learning capability positively related to marketing innovation of the organisation. According to Nattrass and Altomare [43] that study on sustainability focus organizational learning (SFOL) noted that organizational learning is an important features towards sustainability.

In sum, there is a large and growing of research has examined the effect of organizational learning capability with various business outcomes such as performance, innovation and competitiveness. However, very few study done in exploring the relationship between organizational learning capability and business sustainability. Therefore, this study fill the research gap by. The authors assumed that the role of organizational learning capability is an important enabler to establish a wider perspective of performance including three aspects of business sustainability namely economic, social and environmental.

Hypothesis 1: There is significant relationship between organizational learning capability and economic sustainability.
Hypothesis 2: There is significant relationship between organizational learning capability and social sustainability (SS).
Hypothesis 3: There is significant relationship between organizational learning capability and environmental sustainability (SS).

3. Methodology
We collected data from SMEs manufacturing organisations in Malaysia. The list taken from Federation of Malaysian Manufacturers (FMM) 2017 as sampling frame. This study was used questionnaire-based survey for data collection.

3.1. Sampling
Probability and convenience sampling was used in this study. The first phase of data collection was within two-month duration using hardcopy approach. 400 SMEs manufacturers in the FMM directory were selected for postal mailing of questionnaires and distributed among top managers of manufacturing SMEs in Malaysia. The questionnaires together with return envelopes were sent out via post to the SME manufacturers. Each return envelope was coded with a number. Only 36 questionnaires were returned back. The second phase of data collection using email survey. The respondents given a clear instruction of objectives of this study and confirm the name and designation of the respondents before mailing the questionnaires to them to increase the response rate validation. Another 440 questionnaires survey was distributed and the respondents were asked to return the complete questionnaires within two weeks. For those who were unable to complete within questionnaire within the given time, we send two email reminders and last reminder using phone call. Within two months period, we received 140 questionnaires. The total is 176 respondents. However, 8 set of questionnaires have incomplete filled and thus were exclude from final analysis. A total of 168 usable questionnaires were included for further analysis with a effective respond rate of 21.08%.
3.2. Measurement
A questionnaire consisting of four sections were designed for the purpose of this study. As depicted in Table 3.1. Section A contained 17 items that related to the organizational learning capability. The respondents required to rate their existence of organizational learning capability within organisations. Four dimensions, namely, managerial commitments (5 items), system perspective (3 items), openness and experimentation (5 items) and knowledge transfer and integration (4 items) were used to measure organizational learning capability in organisations. Items in organizational learning capability were adapted and adopted from previous study by Gomez et al. [7]. The reliability value from the mentioned past studies were all above 0.7.

Managerial commitment intends to measure the management’s commitment in developing and facilitating support towards organizational learning to promote personal efficacy and learning.

System perspective were utilised to measure the mental models, vision and common identity of the employees in the organisation.

Openness and experimentation were used to measure the degree of accepting new ideas and views from both within or outside of the organisation.

Knowledge transfer and integration intends to measure the degree where certain ability or skills is transfer from source to a user mainly through conversation, interaction and integration.

Items in Section A were measured on a 5 point Likert scale where $1 = \text{strongly disagree}$ and $5 = \text{strongly agree}$.

Subsequently, Section B was designed to measure the business sustainability. Respondents were requested to rate organisation’s performance based integration of economic (6 items), social (6 items) and environmental (10 items) aspects. Measures for this dimensions were adopted from Chow and Chen [46] and using 7 point Likert scale where $1 = \text{strongly disagree}$ and $7 = \text{strongly agree}$.

Finally in Section C contained 10 items, regarding to respondents and organisations’ profiles. This section is self-developed.

| Table 3.1. Summary of key constructs, sources of questions and the number of items |
|--------------------------------|----------------|--------|-------------------|
| Variable                      | Dimension           | No of Items | Source                  |
|--------------------------------|----------------|--------|-------------------|
| Organizational Learning Capability (OLC) | Managerial Commitment | 5      | Gomez et al., 2005 |
| Learning                      | System Perspective | 3      |                    |
| Capability                    | Openness and Experimentation | 5      |                    |
|                               | Knowledge Transfer and Integration | 4      |                    |
| Business                      | Economic           | 6      | Chow and Chen, 2012 |
| Sustainability                | Social             | 6      |                    |
| (BS)                          | Environmental      | 10     |                    |

4. Analysis

4.1. Demographic Profile
SMEs in manufacturing sector can be categorised into three categories namely micro (have less than 5 employees), small (have between 5 to 74 employees) and medium scale (have between 75 to 200 employees). In total, 168 respondents participated in this study. Majority of the organisations have between 150-200 employees. Only 7 organisations having 5 employees. The sample was well distributed in term of years operating. More details on demographic profile of the manufacturing SMEs organisations in Table 4.1.
Table 4.1. Demographic Profile of Respondents

| Characteristics          | Frequency (N=168) | Percentage (%) |
|--------------------------|-------------------|----------------|
| Permanent Employees      |                   |                |
| Less than 5              | 7                 | 4.2            |
| 5-50                     | 23                | 13.7           |
| 51-150                   | 51                | 30.4           |
| More than 150 - 200      | 87                | 51.8           |
| Number of years          |                   |                |
| Less than 5 years        | 17                | 10.1           |
| 5 - 10 years             | 17                | 10.1           |
| 11 - 15 years            | 37                | 22.0           |
| 16 - 20 years            | 45                | 26.8           |
| More than 20 years       | 52                | 31.0           |

4.2. Measurement Model

The convergent validity and discriminant validity have been used in measuring the model. The AVE values of all constructs exceeded 0.5. Four items in the measurements tested in the questionnaires were delete to ensure the AVE value above 0.5. One item was delete from organizational learning capability (OLC2) and three items from social sustainability (SS1, SS4, SS6). Next, the table also postulates the CR values, where the internal consistency of measurement is display. CR values of all constructs had been above 0.8, which exceeded 0.7 and higher. Hence, convergent validity is achieved.

Table 4.2. Measurement Model

| Constructs                | Items | Loadings | AVE   | CR    |
|---------------------------|-------|----------|-------|-------|
| Organizational Learning Capability | OLC1  | 0.715    | 0.510 | 0.943 |
|                           | OLC3  | 0.652    |       |       |
|                           | OLC4  | 0.712    |       |       |
|                           | OLC5  | 0.611    |       |       |
|                           | OLC6  | 0.727    |       |       |
|                           | OLC7  | 0.765    |       |       |
|                           | OLC8  | 0.737    |       |       |
|                           | OLC9  | 0.770    |       |       |
|                           | OLC10 | 0.740    |       |       |
|                           | OLC11 | 0.731    |       |       |
|                           | OLC12 | 0.704    |       |       |
|                           | OLC13 | 0.843    |       |       |
|                           | OLC14 | 0.760    |       |       |
|                           | OLC15 | 0.685    |       |       |
|                           | OLC16 | 0.684    |       |       |
|                           | OLC17 | 0.546    |       |       |
| Economic Sustainability (ES) | ES1   | 0.660    | 0.516 | 0.864 |
|                           | ES2   | 0.837    |       |       |
|                           | ES3   | 0.668    |       |       |
|                           | ES4   | 0.654    |       |       |
|                           | ES5   | 0.743    |       |       |
|                           | ES6   | 0.730    |       |       |
| Social Sustainability (SS) | SS2   | 0.902    | 0.774 | 0.911 |
|                           | SS3   | 0.876    |       |       |
|                           | SS5   | 0.861    |       |       |
Environmental Sustainability (ENS)

|    | ENS1 | ENS2 | ENS3 | ENS4 | ENS5 | ENS6 | ENS7 | ENS8 | ENS9 |
|----|------|------|------|------|------|------|------|------|------|
|    | 0.768 | 0.772 | 0.641 | 0.820 | 0.632 | 0.814 | 0.777 | 0.721 | 0.840 |

Note: CR = Composite Reliability; AVE = Average Variance Extracted

Next, using Fornell and Larcker [44], the discriminant validity was verified in comparing the correlations between constructs and the average variance extracted from the construct. Table 4.3 below shows that all values of the square root of average is greater indicating that the measures were discriminant.

**Table 4.3. Discriminant Validity**

|     | ES   | SS   | ENS  | OLC  |
|-----|------|------|------|------|
| ES  | 0.718|      |      |      |
| SS  | 0.511| 0.880|      |      |
| ENS | 0.555| 0.645| 0.757|      |
| OLC | 0.569| 0.605| 0.687| 0.714|

Note: The diagonals represent the square root of the AVE, while the off diagonals represent the correlations. ES = Economic Sustainability; SS = Social Sustainability, ENS = Environmental Sustainability; OLC = Organizational Learning Capability

### 4.3. Structural Model

Next, data analysis was then undertaken to test all hypotheses. The values of standard beta, standard error, and one-tailed t-value are presented in Table 4.4. Based on the finding, all hypothesis are accepted. The R² values of each construct were above the 0.26 value as suggested by Cohen [45] indicating a solid model. Table 4.4 illustrated the overall hypotheses testing of the said relationship.

**Table 4.4. Hypotheses Testing**

| Hypotheses      | Beta | Standard Error | T-Value | R² square | Decision |
|-----------------|------|----------------|---------|-----------|----------|
| H1 OLC → ES     | 0.569| 0.057          | 9.918   | 0.324     | Accepted |
| H2 OLC → SS     | 0.605| 0.051          | 11.751  | 0.366     | Accepted |
| H3 OLC) → ENS    | 0.687| 0.043          | 16.061  | 0.472     | Accepted |

### 5. Conclusion

The objective of the study is to examine the influence of organizational learning capability on business sustainability. The results show that organizational learning capability influence the business sustainability of Malaysian manufacturing SMEs. This relationship indicates that in order for business to sustain in the competitive market, organisations should give full attention on learning capability that facilitate learning in the organisation. This approach will guide the organisations to react for present and upcoming business problems faced by the organisation.
The findings provide theoretical contribution in which empirical research between both variable are scarce. This finding hopefully will guide practitioners to enhance their learning capability within organisation to achieve business sustainability.

This study however, hold some constraint by some factors. Firstly, the generalisation aspect. Since this study was conducted solely in Malaysian manufacturing SMEs as developing country. The generalization and validation are very limited and may not generalize to other countries and industries. Secondly, this study employ cross sectional data. A longitudinal studies and interview approach needed to provide fruitful insights in which the change of organizational learning capability and business sustainability components over time. Thirdly, the sample size is too small even though this study had an effective response rate of 21.03%. Larges sample sizes in required to confirm the findings.

Despite several limitation, this study can be extended in various directions. Firstly, future study should consider on other industries to investigate the influence of organizational learning capability towards business sustainability. Secondly, further research can also be done at developed countries in the same or different sector. Besides that, it would interesting to conduct a longitudinal study to examine the change of variables over time. This would provide the researchers with extra perspective and detect any changes of the organizational learning capability’s role towards achieving business sustainability. Another interesting idea for future research is to add other variables serve as independent or mediating variables to give a broader view, which factors effect most on business sustainability.

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