

Lean Principles Improving Entrepreneurial Ecosystem in Malaysian SMEs

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Abstract: Lean business ideology has been one of the ongoing prevailing research areas in operations management. Accomplishment of lean can be found in manufacturing, construction, textile, service and other industrial areas. Still, the interest revealed in lean by small and medium enterprises (SMEs) is limited. SMEs is one of the most indispensable substances that contribute extensively in building up Malaysia's economy. Albeit the SMEs is currently important towards Malaysia's economy, however does the SMEs offer a superior entrepreneurial ecosystem. Therefore, the point of this research is to explore how lean principles can improve the entrepreneurial ecosystem in Malaysian SMEs. This research will be directed subjectively by utilizing triangulation of subjective information sources containing document analysis, interview and archival record. The validity of the findings will utilize the elements of trustworthiness to ensure the data precise and dependable. The expected findings of this study may demonstrate lean principles will improve the entrepreneurial ecosystem in SMEs Malaysia. In addition, it is urged to improve or cultivate the entrepreneurial ecosystem in accordance with the National Entrepreneurial Policy (NEP) 2030 by taking a gander at the Industrial Revolution 4.0, the digital economy and the intellectual economy to create high worth ventures, in this way staying significant and satisfying future financial needs.

Keywords– Lean principles, entrepreneurial ecosystem and small medium enterprise

1. Introduction

Acknowledging SMEs is presently one of the greatest contributors of the world economic growth, SMEs have additionally begun adopting lean [1]. The vast majority of the organizations in various divisions have been actualizing lean management to improve their business performances. Nevertheless, a considerable many of them experience issues in the execution on account of different hindrances or difficulties, hence experiencing disappointments that can obstruct the lean implementation process [2],[3]. A portion of the deterrents why the objective of lean practices can't be reached because of a few reasons, for example, social, human, and geographic components [3]. Specifically, 70 percent of lean implementation experience rot and an arrival to the first method for working together [4]. Although lean

implementation to empower organizations to expand time/cost proficiency working under these lean principles affects work quality since it confines staff from communicating [5]. An investigation done by [3] had discovered 24 barriers (which are not explicit to SMEs) in lean implementation. Meanwhile, research by [1] uncovers that absence of management duty, leadership, and resources are the key hindrances to lean implementation in SMEs in India.

From the above circumstance, it has indicated that the implementation of lean is agitated issues which it spurs the author to examine further. Prior to ensuring the implementation of lean is effective, the SMEs ought to understand the way of thinking behind this lean. Subsequently, it is required for this study to investigate the implementation of lean principles in Malaysian SMEs. Appropriately, this investigation starts with reviewing past studies on the lean implementation, specifically lean principles and the issues of SMEs, followed by methodology, conclusion, and future studies.

2. Literature Review

Lean principles

Majority of the firms will in general apply lean productivity in their working environment dependent on lean principles as an instrumental in accomplishing hierarchical objectives. [6] had recognized in his research, lean principles that ordinarily utilized among academicians and practitioners and as yet being actualized in the ongoing years are lean principles by [7],[8],[9] Dennis (2007). As per [7], the presentation of five principles were shown at a philosophical level which incorporates; 1) value: value is the beginning stage for lean thinking and must be characterized by a definitive end consumers; 2) value stream: to make a value stream, need to consider each progression of the production procedure, from configuration to request to crude material to conveyance; 3) production flows: this deciphers as a mandate to abandon the traditional batch-and-queue method of thinking; 4) pull: this is conversely with pushing products through a system, which influence inert

to the consumers and encouraged unnecessary inventory build-up; and 5) perfection: this fifth rule requires endless procedure of lean, as there will consistently be exercises that are viewed as waste removal.

[8] had started fourteen lean principles in his book *The Toyota Way* that derived from the expansion of Womack and Jones and based on his encounters working at different Toyota plants. Besides, his carefully strengthened firm needs to rehearse lean principles judiciously that makes a firm lean. [10] further sums up, Liker concentrated on four fundamental principles involved, philosophy, process, people, and partner and problem solving which contain in the fourteen lean principles as shown in Table 1.

Table 1

Lean Principles

Lean principles

1. Concerns in decision making by management for the long-term philosophy and financial goals as a short-term.
2. Yield a process flow continuously as the intention to bring problems to the surface.
3. Apply pull systems to evade overproduction.
4. Leveling of the workload.
5. Form a culture of stopping to find a solution in order to obtain good quality.
6. Standardized tasks and processes should be standardized.
7. Apply visual controls to elude any concealed.
8. Rely on the trusted and fully tested technology that facilitates people and process.
9. A good leader should comprehensively understand the task, live the philosophy, and demonstrate it to others.
10. Grow outstanding people and teams intensely to align the company's philosophy.
11. Give full respect to the protracted network of partners and suppliers by puzzling them and assisting them to improve.
12. Need to understand the situation thoroughly.
13. Decision has to be made unhurriedly by consensus with the consideration of all options; implement decisions swiftly and final principle.
14. Develop a learning organization through continuous improvement and unremitting reflection.

Source: [8]

Likewise, [9] further elaborated in his book, *Lean Production Simplified* about lean production based on 'house of production' and represents different parts of the house. Henceforth, [9] highlights on lean at the shop-floor level which comprises of six principles; 1) the roof of the house: to meet customer desire based on production decision, 2) bottom of the house represents continuous improvement by underlines on process stability and standardization, 3) on the left side of pillars: JIT requires produce a product at the right time, right place and the right amount, 4) on the right side of pillar: *jidoka* means

stop production, 5) heart of the house: encourage employees to involve in decision making and 6) final principle: strengthens on the utilization of labour rather than machine.

Therefore, from the above principles, it was found the similarities between these respected authors are to meet customer expectations, standardization and create continuous production system flow without any interruptions [6]. However, the remainder principles are permitted to be applied diligently and not restricted to use certain principles by other firms. Furthermore, it is important for the organization to have a good understanding in implementing lean principles into their workplace as to align with their firms' goal.

Entrepreneurial Ecosystem

There are numerous scholars defines entrepreneurial ecosystem as the combination of several elements, generally through network of entrepreneur, producing interaction and shared value that support entrepreneurial activity [11]. This definition in line with [12] by highlighting three dimensions in entrepreneurial ecosystem which are individual who form it whether interaction in formal and informal network, entrepreneurial culture and physical infrastructure. Entrepreneurial eco-system refer to the process of the exploring the chances in variety of platform in order to generating new products and services. In addition, entrepreneurship ecosystem is an interaction with various entity such as community, government, institution and other relevant stakeholders in order to facilitate entrepreneurship [13].

[11] also stated that the entrepreneurial ecosystem encourages the failure entrepreneur to "high-growth start-ups", which make the entrepreneurs successful which implement important elements such as innovation, productivity and growth. [14] claims, numerous entrepreneurs should make decisions dependent on what they think will lead them to achievement, or possibly not lead their business to disappointment. Furthermore, entrepreneurs should ensure the operation includes norms, policies encourage and safeguard entrepreneurs in order to make their development of the whole entrepreneurship ecosystem running effectively [13].

The entrepreneurial ecosystem in Malaysia has shown continuous improvement over the years. This is reflected in the nation's ranking in various global indices of entrepreneurship such as the Global Entrepreneurship Index (GEI), Global Competitiveness Report (GCR), Global Innovation Index (GII) and Doing Business [15] According to the GII 2018 report, Malaysia is the second developing country to be in the top 50 behind China, ahead of other developed countries such as Greece, Lithuania and Poland [15].

However, given the detailed study of Malaysia's position at the sub-index level, it is clear that there are significant gaps in the Malaysian entrepreneurial ecosystem especially in relation to knowledge creation, knowledge workers, product innovation and technology absorption. These gaps are also closely linked to the legal and regulatory environment that may hinder the growth and development of entrepreneurship in Malaysia [14].

Consequently, the ideal entrepreneurial ecosystem is a system capable of supporting all types of entrepreneurial activities in producing successful entrepreneurs. According to the NEP 2030 report, there are seven (7) key elements in the ecosystem that need to be developed to strengthen the entrepreneurial community.

1. Market
The ability to penetrate the market through promotional activities and expansion of global network networks.
2. Policies
The key components that guide the direction and direction of entrepreneurship in the country are through the establishment of implementing and research institutions, mechanisms of regulation and regulation of laws and laws.
3. Financing Access
To structured and focused financing for entrepreneurial activities at various levels of business through a variety of conventional, alternative and collaborative financing methods.
4. Support
Strong support for entrepreneurship in the areas of physical and digital infrastructure as well as professional advocacy services such as legal, accounting and technical expertise.
5. Culture
An entrepreneurial mindset that instills a sense of creativity, takes risks and opportunities, is not afraid of failure and is far-fetched.
6. Skills and Talent
Provide skilled and knowledgeable entrepreneurs through a structured and recognized entrepreneurship education and training system.
7. Technology and Innovation
The process of entrepreneurial plays a significant role in constructing strategic plan and innovation [16]. Implementing the elements of innovation by creating value added products and services through research and development activities while taking into account the challenges of disruptive and emerging technologies.

Issues and challenges in SMEs

Having characterized the entrepreneurship, it prompts the end that entrepreneurs are a person who faces the challenge in exploring the opportunities [14]. As highlighted by [11], a few crucial issues arise in the entrepreneurial ecosystems. Firstly, the evolution of entrepreneurial ecosystems whether entrepreneurs develop identically or similarly in different places and at different

times. Secondly, in the context of technology-based firms, whether entrepreneurs provide a broad-based system ecosystem or focused on a narrow industry. In this regard, [17] suggested that it is important entrepreneurial ecosystems to be vibrant and focus on the cultures, institutions and network in different places and emerging over time.

Recently, women have tended to own business and be successful in the entrepreneurial ecosystem. Nevertheless, issues emerge whether women entrepreneurs are similarly supportive than men entrepreneurs in the entrepreneurial ecosystems. [18] revealed that women face obstacles and have higher debts than equity capital due to the limited ventures investing in their business. Women should have specific sub-ecosystems such as specific industries, technology, and interest areas which focus on women entrepreneurs. Hence, women entrepreneur development activities will run efficiently and serve women entrepreneurs across phases of evolution.

In addition, labor issues also come to light in the entrepreneurial ecosystem which refer to the lack of entrepreneurial skills and expertise among entrepreneurs. Therefore, the role of the educational institution is important in producing quality graduates in the entrepreneurial ecosystem context by organizing additional entrepreneurship training to boost the economy by providing skilled manpower in the future [19].

Another important issue in the entrepreneurship ecosystem is finance which focuses on the monetary factors such as loans, debt, investments and projects the use for entrepreneurial activities [13]. However, issues arise in SMEs which refer to the financing gap due to the mismatch between the demand and supply of institutional funds for SMEs. In Malaysia, there is abundant finance for SMEs, however the bank stated that lending to the SMEs is low because of lack of qualified demand [20].

According to [21], the theoretical argument for finance gap is information asymmetry in SMEs which arise due to the imperfect market conditions, poor in the bookkeeping records, lack of transparency in their business and the absence of credible collateral in the operation of SMEs.

As a result, financing applications by SMEs are rejected by the Bank because they believe the SME market segment is 'high risk' and not able to provide insufficient profit margins compared to other large firms. Similarly, [22] argued that SMEs are not financially enough to participate in the formal financial sector especially the market interest rates. Hence, to overcome their problems need the government interventions or donor-funded credit subsidies to their company to sustain.

Despite the above issues, the emerging entrepreneurial ecosystem in the SMEs very little to understand. Thus, in an effort to bridge the gaps, the researchers' attempts to examine the effectiveness of lean principles in improving entrepreneurial ecosystems in Malaysian SMEs. This is

due to the discussion on lean principles and entrepreneurial ecosystems are still deficiency and yet relatively under researched.

3. Methodology

The present research aims to investigate lean principles in improving the entrepreneurial ecosystem in Malaysian SMEs. To achieve the objective of study, a qualitative method (subjectivism) is employed in this study that is able to answer the research questions. The subjective nature of reality and the interpretive description of the phenomenon are considered as appropriate methods to employ. To understand the nature of qualitative, a case study by [23] will be used to conduct this research. This study expected to conduct the research design that involved several activities by 1) doing case study protocol, 2) method of the data collection, 3) identifying the unit of analysis and sampling method, 4) qualitative data analysis and 5) validity and reliability.

The Case Study Protocol

A case study protocol is a major way of increasing the reliability of case study research and is intended to guide the researcher in carrying out the data collection from a single case [23]. The four sections of the protocol are elucidated further, as follows:

a) Overview of the case study

This section will cover the background information about the case study. It started by articulating the objectives of this case study. In this case, the researcher will answer why and how by looking at the research questions of this study; 1. To investigate the challenges of the entrepreneurial ecosystem in Malaysian SMEs. 2. To examine the implementation of lean principles in Malaysian SMEs.

b) Data collection procedures,

Data will be collected from people and institutions in their everyday circumstances. Thus, the researcher will be collecting data from prominent individuals who have a vast experience working at SMEs. Data collection of case study involves an entirely different situation. To interview main informants, the interviewees' availability and schedule should be catered by the researcher. The nature of the interview is much more semi-structured, and the informants (interviewee) not inevitably cooperate in sticking to the interviewer's questions.

To proceed with the data collection, protocol needs to focus on the major tasks in collecting data which comprises: a) Gaining access to key organizations (Lean Unit) or interviewees (informants that participated in SMEs). b) An adequacy of resources while doing fieldwork – find information related to research topics. c) Developing a procedure by asking for assistance and guidance from colleagues or co-workers. d) A schedule of data collection activities need to be cleared and the researcher is projected to fulfill the activities within the indicated time frame. e) Considering unnecessary events, the researcher should count if any changes happened in the context of interview schedule, mood, motivation, energy while doing fieldwork.

c) Protocol questions

This section focuses on instruments or questions that the researcher will be used during the interview. The questions should be in line with the research objectives.

d) Outline for case study report

This section will comprise a data collection report in order to lead the research discussion.

To ensure the data is profoundly validated and reliable, one of the standards that should be considered is the component of trustworthiness in qualitative research that was delivered by [24]. Components of trustworthiness include four criteria; credibility (internal validity), transferability (external validity/generalizability), dependability (reliability), and confirmability (objectivity). This research adopted the above criteria from [25],[24] to ensure the congruent and rigorous nature of this research.

4. Conclusion

Several implications have been made for this study. First, it is hoped the adaptation of lean principles could be a stepping stone to all Malaysian SMEs especially the society of B40's group to escape from poverty. Indeed, with the introduction of 7 elements of the entrepreneurial ecosystem in NEP 2030, it will assure more equitable distribution of income will improve quality of life of Malaysians, thus bringing social benefits to society.

Second is, the utilization of lean principles could be more cost-effective because they avoid lengthy implementations of unproven strategies and investments in the entrepreneurial ecosystem. Based on NEP 2030, it is encouraged to transform the entrepreneurial ecosystem in line with the Industrial Revolution 4.0, the digital economy and the intellectual economy to produce high value industries, thus remaining relevant and meeting future economic demands.

Third, the application lean principles can help Malaysia to improve the entrepreneurial ecosystem in an efficient way. In parallel with NEP 2030 is aimed at empowering the entrepreneurs group by inculcating a culture of entrepreneurship. Moreover, with this policy, it is hoped to encourage entrepreneurs to become job creators and to guide them on the sectors that they can venture in.

In future studies, an increasing number of studies should be directed using lean practices or techniques that can be adopted in Malaysian SMEs. Furthermore, this study can be conducted quantitatively by using a large sample of SMEs.

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