

ISSUES AND CHALLENGES IN MALAYSIAN MANUFACTURING INDUSTRIES: CONCEPTUAL PAPER

KESAVAN NALLALUTHAN, REVATHI GOPAL, V.
SETHUPRAKHASH, TANG JING RUI, NORSHAFIZAH BINTI
HANAFI^P S. K. SUBRAMANIAM

^a*Faculty of Management and Economics, Universiti Pendidikan Sultan Idris,*

^b*Faculty of Languages and Communication, Universiti Pendidikan Sultan Idris,*

^c*Faculty of Technical and Vocational, Universiti Pendidikan Sultan Idris,*

^d*School of Accountancy, Universiti Utara Malaysia,*

^e*Advance Sensors & Embedded Controls System (ASECS),*

Centre for Telecommunication Research & Innovation (CeTRI),

Fakulti Kejuruteraan Elektronik dan Kejuruteraan Komputer,

Universiti Teknikal Malaysia Melaka.

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ABSTRACT

Manufacturing industries mainly converts components through chemical processes into unique products with the aid of power-driven machines. Challenges in the manufacturing industry organisation have become critical due to the advancement of technologies in this globalisation era. In Malaysia, entrepreneurial orientation, organisational characteristics, and knowledge management have impacts on manufacturing organisations. This study reports the relationship between the factors mentioned above and the manufacturing industries. Economic growth changed its contributions from the manufacturing industries sectors in the last two decades and the significance of manufacturing is manifested by its grant to the nation's gross domestic product, foreign trade and job creation. Several manufacturing industries closed their operations and shifted to other countries to reduce operating cost and earn more profits. This situation indicates not a good sign in the nation's economy. The

growth of manufacturing industries depends on the employees and also the top management or owners. Employees should always commit themselves to implement flexible manufacturing systems by technology adoption. This awareness not only essential to help them in gaining basic educational knowledge, but it will also improve their productivity performances in manufacturing industries.

Keywords: Manufacturing, Industries, Malaysia, Challenges,

INTRODUCTION

Entrepreneurial orientation has become very important in any organization because it has grown to be the central concept in the domain of entrepreneurship, an organization with a strategic orientation involves certain aspects of entrepreneurship including decision-making, working concepts, and managerial practice (Huang & Wang, 2011). In addition, the implementation of entrepreneurial orientation supports organizational growth and is the booster for the nation's economics (Zainol & Ayadurai, 2011), including in manufacturing industries. However, Covin and Slevin (2002) explain that entrepreneurial mindset is not only among business owners or among managing directors only but it also requires the entire organization's involvement, especially employees (Sahasranamam & Sud, 2016). Failing to behave with an entrepreneurial mindset will lead the organization towards losses since competitors within the lapse of time can grab opportunities. Therefore, top management or owners alone cannot make an organization perform well in its business undertakings (Day, 1994), even though the top team set strategic direction, execution of strategic priorities in the form of initiatives that result in action plans involves the entire spectrum of the manufacturing industries. The reason behind his statement is all employees, together with the managing directors or business owners must act entrepreneurially to support their business performance and its growth (Covin & Slevin, 2002; Sahasranamam & Sud, 2016). Besides that, Bosjtan and Hisrich (2001) showed that fostering the growth in

the organisation requires the active participation of employees in generating new and innovative ideas.

LITERATURE REVIEW

Manufacturing is characterized as the chemical conversion of components into unique products produced by power-driven machines in an industry or the employee's home to be marketed at wholesale or retail (DOSM, 2016). According to researchers, manufacturing industries have established the financial development of an economy in driving mechanical advancement for the nation. This is done through the investments of the manufacturing organization in the aspects of technology transfer, for example, introducing new technologies and production techniques to the employees (Normah, 2006; Yunus, Abdul Razak, Rahman, & Ghouri, 2018; Parida & Pradhan, 2016). Manufacturers that supply goods to domestic and foreign markets will enable the local population to have a wider choice of goods, services and possess goods with reasonable prices (Yunus et al., 2018; Parida & Pradhan, 2016; Star Online, 2015). This, in turn, benefits the nation in the aspect of employment whereby the unemployed would be employed in the manufacturing industries (Yunus et al., 2018; Star Online, 2015; Thangavelu, 2016).

Challenges in a manufacturing industry organization have become extreme due to globalization and development quality, prerequisites for their customers. Therefore, makers must expand their profitability with a specific end goal to survive and succeed. For example, organizations can develop the efficiency of manufacturing operations and meet the changing needs of their employees and customers. Besides, manufacturing organizations must not just prove to be the best in class in their manufacturing process but also adopt excellent manufacturing practices that will improve the interest for more customized products (Parida & Pradhan, 2016; Thangavelu, 2016 Yunus et al., 2018).

In Malaysia, manufacturing industries are expanding to enhance their execution level (Normah, 2006). To attain the excursion level, producers must be adaptable, versatile, responsive, and innovative (Parida & Pradhan, 2016; Thangavelu, 2016) in expanding their manufacturing industries. It is essential to recognize the ongoing manufacturing status of Malaysian manufacturing organizations. This is because the organizations will be able to distinguish and coordinate their attention in the areas that require change. The organizations will prove to be more mindful of manufacturing that will build on their execution and intensity. With best manufacturing practices, the manufacturer will enhance its business execution and extend its organizational resources, giving work opportunities, and expand to grow the manufacturing industries (Zainol & Ayadurai, 2011). This adds to Malaysia's economic development (Government of Malaysia, 2006).

In a line with Malaysian Eleventh Plan (11MP), 2016 – 2020, (Government of Malaysia, 2016) is the latest five-year plan before Malaysia's dream to achieve high-income status by 2020. In 1991, Vision 2020 is made to envision Malaysia as a developed country along with all dimensions (e.g. economically, politically, socially, spiritually, psychologically, and culturally). However, the 11MP revisits the Government's promise to envision growth that encourages building a better Malaysia for all Malaysian. The private sector's contributions are high for the country towards economic achievements. Private investment is expected to grow at 4.9 percent per year, with an estimated average annual expenditure of RM291 billion in current prices (Government of Malaysia, 2016).

Besides, the previous two Industrial Master Plans which has laid the basic contributions to the rapid improvement of the industrial development in Malaysia. The Third Industrial Master Plan (IMP3), 2006-2020, is projected to improve industrial elements to a higher level of attractiveness globally. However, the nation's mission continues to struggle through global competitions over the next five years is a serious effort to improve nation status as a developed country. Hence,

the targeted industries can improve their competitiveness through successful plans and policies that are organized and listed in the Third Industrial Plan. Therefore, to become competitive worldwide, manufacturing organizations will need to focus on improvement activities. Total productivity factor able improves through efficient management, utilization of human capital and resources, relocations and carry out activities of high potential which involving in research and development, and be integrated with the regional and worldwide production, distribution, marketing, and supply networks (Normah, 2006; Thangavelu, 2016). However, the Malaysian manufacturing sector expects to contribute 28.5 percent to the Gross Domestic Product (GDP) in 2020 (DOSM, 2015). In the year 2015, the industrial production index performances increased when compared with the previous year by 2.7 percent. The increase in December 2015 was supported by the growth in the manufacturing index of 4.0 percent. However, the sales value of the manufacturing sector in December 2015 has decreased by 1.2 percent (RM0.7 billion) recording RM55.6 billion as compared to RM56.3 billion reported a year before (Figure 1). Meanwhile, every month, the sales value increased by 0.2 percent (RM0.1 billion) compared with the preceding month. However, the sales value in November 2015 remained unchanged. The sales value in December 2015 is reduced by 3.1 percent every month.

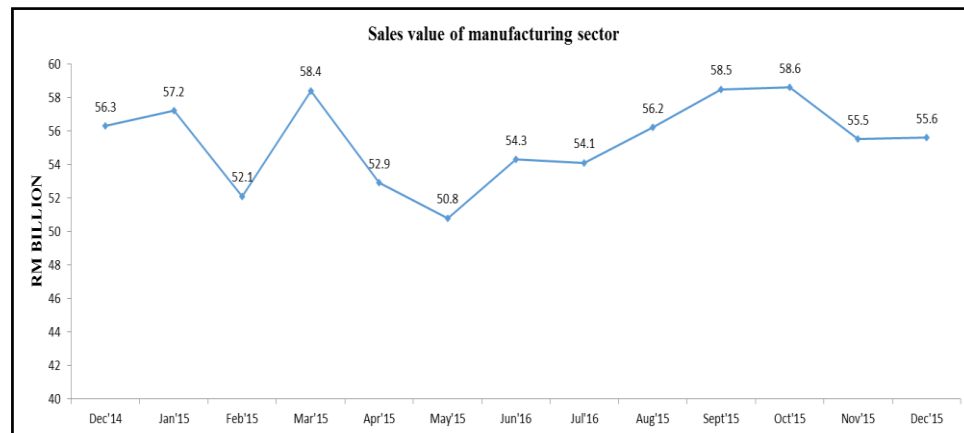


Figure 1 Sales value of the manufacturing sector (DOSM, 2015)

According to DOSM (2015), every year the decrease in sales value in December 2015 was due to the decline of 42 out of 138 industries surveyed. Table 1 that follows shows the five industries that recorded a decrease in sales of value every year.

Table 1 *Sales value of the manufacturing industries (DOSM, 2015)*

Industries	Sales Value		Decrease	
	Dec'14	Dec'15	RM (Million)	%
Manufacture of refined petroleum products	12448.1	7403.7	5044.4	40.5
Manufacture of passenger cars	2201.3	1947.6	253.7	11.5
Manufacture of rubber gloves	943.9	705.7	238.2	25.2
Production of raw material (iron & stainless steel)	1872.7	1711.6	161.1	8.6
Manufacture of communication equipment	912.2	819.1	93.1	10.2

Source: Department of Statistics, Malaysia

According to DOSM (2015), the total employees used in the manufacturing sector in December 2015 were 1,027,044 people, a decrease of 0.4 percent, or 4,182 people as compared to 1,031,226 people in December 2014. Meanwhile, monthly, the number of employees is decreased by 0.2 percent as compared to 1,028,791 employees in the preceding month. However, every year, salaries, and wages paid in December 2015 is increased by 7.2 percent (RM220.0 million) as reported in the corresponding month, a year before that. Meanwhile, when compared every month, the total amount paid in December 2015 is increased by 7.0 percent (RM213.5 million) to register RM3, 260.7 million. In addition, the typical salaries and wages paid per employee are upgraded by 7.7 percent in December 2015 as compared to the same month in 2014 (DOSM, 2015). Meanwhile, typical salaries and wages paid per employee registered is RM3, 175 in December 2015, which is an increase of 7.2 percent compared to the previous month. However, the productivity value per employee in December 2015 is decreased by 0.8 percent as compared with the

similar month of the previous year. Meanwhile, productivity in December 2015 is increased by 0.3 percent every month, registering RM54, 145. During the period from January to December 2015, the sales value of the manufacturing sector increased by 1.2 percent, registering RM664.3 billion. However, total employees involved during this time declined by 0.4 percent, registering 1,027,044 people, and productivity is increased by 1.6 percent, recording RM646, 791, as in Table 2.

Table 2 Sales value, number of employees and salaries & wages, January-December (DOSM, 2015)

Monthly Manufacturing Statistics	January - December		
	2014	2015	% Change
Sales Value (RM million)	656453	664283	1.2
Number of Employees	1031226	1027044	-0.4
Salaries & Wages (RM million)	34337.6	36320.6	5.8
Productivity (RM)	838576	646791	1.6

Source: Department of Statistics, Malaysia (DOSM, 2015)

To achieve Vision 2020 and as a support for IMP3, the Federal of Malaysian Manufacturer (FMM) plans to speed up more manufacturing activities and share technical knowledge by providing skilled employees (NST Business Time, 2015). Along with their activities, some evidence for economic growth and projects that provided the employment is Nestlé's new food manufacturing plant in Shah (Harian, 2015) join Malaysia's principal hub, which brought in more investors from other countries in the region for further development. Despite global economic challenges, Sin Kwang Plastics Industries Sdn Bhd (SKP) expanded its production by increasing the floor space, controlled by the rising demands of its clients. This

expansion is a state where it explains the country's structural economic fundamental and sustainable ecosystems. Along with the capacity expansion, Top Glove Corporation Bhd, the world's largest rubber glove maker by volume, has set aside RM200 million to increase its production capacity this year and may spend even more to gain arrival. However, due to unemployment measurements and manufacturing industries' productivities, there may be an increment or otherwise owing to some manufacturing industries closing or moving to different nations. The real reason is due to an organization needing to minimize to get more benefits and profits. Therefore, employees must make their organizations to support the manufacturing sector so that it would contribute to unemployment and nation productivity improvements (Alazzaz & Whyte, 2015).

Numerous scholars had conducted empirical studies regarding employees in the manufacturing industries (e.g. Kuratko et al., 1993; Zahra, 1991; Zahra & Covin, 1995; Antoncic & Hisrich, 2003; Ireland et al., 2009; Alazzaz & Whyte, 2015; Thangavelu, 2016; Baskaran, 2017; Ram et al., 2017). According to them, some important factors that assist in manufacturing growth are entrepreneurial orientation, knowledge management enabler, organizational orientations, and learning orientation. Among these, entrepreneurial orientation has grown to become a much-debatable topic in management and entrepreneurship literature for years (Zainol & Ayadurai, 2011). According to Felix (2015a), entrepreneurship has contributed to the country's economic progress. Entrepreneurship creates innovation, diversity, increases competitiveness, delivers new ideas, improves employment opportunities, provides social changes, contributes to economic growth in manufacturing, and enhances economics (Stanley, 2014). Several scholars have revealed that entrepreneurship not only supports but an essential factor to economic development (Baumol, Litan, & Schramm, 2007). A recent study at the organization level states that adoption of entrepreneurial orientation in Kenya through manufacturing organization provides a positive influence for their

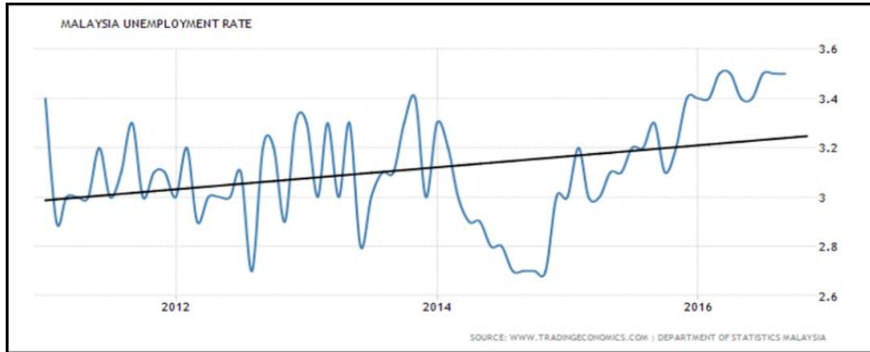
organizations' performances by supporting their innovativeness (Otieno, Bwisa, & Kihoro, 2012).

Besides, research about entrepreneurial orientation conducted among women entrepreneurs in SMEs in Malaysia (Mahmood & Hanafi, 2013) and Malay entrepreneurs in Malaysia (Alam, Rohani, Kamaruddin, & Nor, 2015) show positive results in issues like unemployment and this, in turn, upgrades the standard of living of the employees. Some researches about entrepreneurial orientation among employees have been conducted (Baskaran, 2017; Ram, Nallaluthan, & Hanafi, 2017). Their results show that employees play an essential role in entrepreneurial orientation. Therefore, entrepreneurial orientation is found to be the top criteria not only at the organization level but among employees (Baskaran, 2017; Ram et al., 2017; Mahmood & Hanafi, 2013; Arshad, Rasli, Arshad, & Zain, 2014; James, Wolff, Pett, & Kirk, 2015; Stewart, Gary, & Hudson, 2016). It is proven that entrepreneurial orientation is identified as an essential element that supports the organization and employees' performances. However, in Malaysia, entrepreneurial orientation, organizational characteristics, and knowledge management have impacts on manufacturing organizations. This review article reports about the relationship between the above-mentioned factors and manufacturing industries.

ISSUES AND CHALLENGES

In the last two decades, economic growth changed its contributions from the manufacturing industries sectors. According to the DOSM 2016, the unemployment rate in Malaysia is 3.5 percent in March and 3.4 percent in April 2016. The highest rate was in June 2010, whereby an overall of 509,500 was unemployed. The table that follows explains details about the last five years of the unemployment rate in Malaysia.

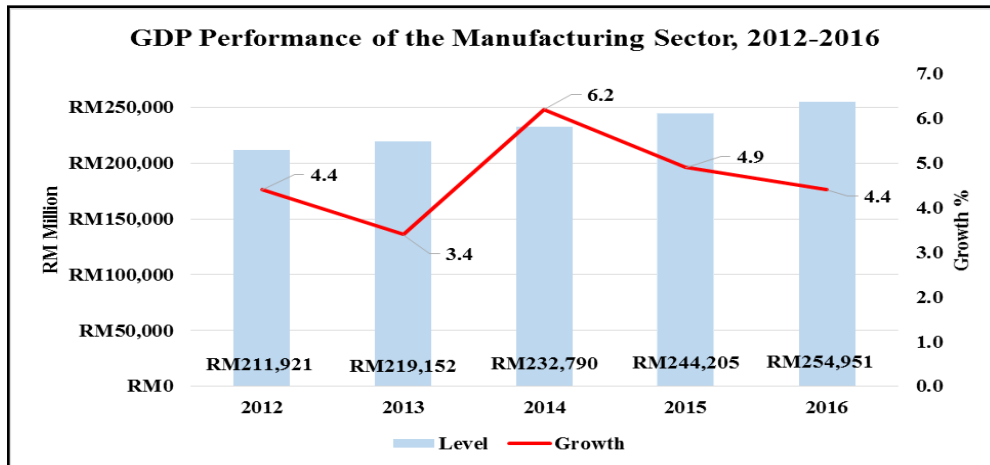
Table 3 *Unemployment rate in Malaysia*



Source: <http://www.tradingeconomics.com>

The national unemployment rate comprises all sectors such as manufacturing, service, agricultural, banking, and others that contribute to national economies. However, for the nation's GDP, foreign trade, and job creation, most of the contributions are from the manufacturing sector. In the year 2016, manufacturing sector contributions were RM254.95 billion which was one of the largest segments of the nation's economy. In 2015, the sector's GDP growth slipped to 4.4 percent in 2016 compared to 4.9 percent. The table that follows presents the last five years of manufacturing GDP contribution to Malaysian economics.

Table 4 GDP Performance of the Manufacturing Sector, 2012-2016



Source: Department of Statistics, Malaysia

The rationale behind this phenomenon is manufacturing industries close their operations and shift to other nations to minimize operating costs and earn more profits. For example, five hundred workers from JVC Sdn Bhd laid off as part of the Japanese company at Shah Alam, moved its operations by shutting down its plant (The Rakyat Post, 2015). In addition, another similar manufacturer Panasonic closed its services at Shah Alam and reallocated in China (Free Malaysia Today, 2013). Besides, another company that was a leading hard disk drive maker HGST closed its service in Penang and moved to Singapore. Issues in the manufacturing sector caused STR Holding to close its facility in Malaysia with effect from 2nd August (Market Watch, 2015). Another United States-based Amphenol Corp top management moved their facilities to China, leaving its 150 employees jobless (The Star Online, 2015).

Further, hard disk drive makers Seagate and Western Digital quit their production after 28 years of operations in Bayan Lepas, Penang and 3000 employees lost their jobs (NST Online, 2016). Besides, British American Tobacco shut down their plant that affected 230 employees (The Star Online, 2016). Due to these manufacturing organizations closing their operations, this contributed to the unemployment rate. According to Malaysian Human Resources; 75,819 employees lost their jobs in 2015 until September 2016 (Utusan Online, 2016). The manufacturing sector's productivity was increased by 1.4 percent to RM106, 647 from RM105, 138 in 2016 when compared with the previous year. The higher contributions from chemical, electric, and electronic products encouraged stronger performances of export-oriented sub-sectors. Pure petroleum's productivity was top at RM3.3 million which was supported by chemical products. Besides, that other segments which contribute to productivity standards were food products, beverages, and electric and electronic. However, the smallest productivity at RM27, 246 were recorded by the textile segment. The electric and electronic sector extended to be an important role in the manufacturing sector with a contribution towards benefit, employment, investments, and exports.

Hence, the electric and electronic sector totaled RM63.90 billion because of the increase in new industries in 2016. The high common requirement for electric and electronic products contributed to a significant productivity rise of 9.6 percent related to 6.6 percent in the past years. Productivity improvements remain to be an important challenge for the manufacturing sector, due to policies and guidelines imposed by the government. Further, the government structured in an eleventh Malaysia plan to produce a high value-added product which able increase nation productivity (Government of Malaysia, 2016). This involves better knowledge and job-demanding activities in series with worldwide requirements, improved quality, and high technology. Therefore, employees' contribution to manufacturing industries is welcomed. This is to make sure current manufacturing industry organizations are sustained in the worldwide marketplace (Alazzaz & Whyte, 2015; Thangavelu, 2016).

The manufacturing situation does not show a good sign in the nation's economy. As employees, they should commit themselves to implement flexible manufacturing systems by technology adoption. Their involvements would gain basic educational knowledge, which supports them to improve their productivity performances in manufacturing industries. Thus, sustained growth in the long run (Yunus et al., 2018; Thangavelu, 2016) This long-run growth would participate in the economy of Malaysia. Corresponding to these issues, the survival and success of the manufacturing industries organization need a merger of organizational entrepreneurship and individual entrepreneurship (Kuratko, Hornsby, & Hayton, 2015). Entrepreneurs are risk-takers, and it is a famous quote in finance "high-risk high return". Therefore, manufacturing industries need to upgrade their organizations by implementing entrepreneurship skills among employees. This is necessary due to the present time dynamics and uncertainty in the competitive environment. Manufacturing industry organizations need to get the proper resources to construct strategies to achieve success (Avella, 1999; Ehie, & Muogboh, 2016).

CONCLUSION

Challenges in a manufacturing industry organization are increasing gradually in line with the customers need and industries are finding solutions for every challenge coming in their way. However, debates remain in the literature about the ability of manufacturing industry employees to exercise their entrepreneurial orientation and behaviors. Therefore, despite an extensive body of research on entrepreneurial orientation, some significant gaps still exist as most of the studies are conducted at the organization level instead of in a specific organization or region. Additionally, most of the reviews on entrepreneurial orientation in Malaysia focus only on the managing directors and business owners but neglect input from their employees (Sahasranamam, & Sud, 2016). According to Vesper (1984), entrepreneurial orientation should be captured by individual employees from the operation level in the organization. The manufacturing industry's environment is challenging to sustain in today's competitive world. Hence, organizations owners and the manager always need to re-structure new strategies, revise organizational objectives from time to time due to the present economic situations. The reason for these actions is to stay along with this competitive business environment and make profits for their organizations (Vesper, 1984; Ghouri, Mani, Khan, Khan, & Srivastava, 2020; Ghouri, Mani, Jiao, Venkatesh, Shi, & Kamble, 2021).

However, the growth of manufacturing industries depends on a blend of all levels of employees, not only top management or owners. Therefore, adopting entrepreneurial strategic orientation and transforming the organization towards entrepreneurial institutions has become an essential criterion among manufacturing industries, especially for employees. Therefore, fast-growing manufacturing industries need employees who always exhibit entrepreneurial characteristics in their work. Organization management should be able to recognize and support employees who act with entrepreneurial orientation. This is because entrepreneurship is regarded as an ingredient in the manufacturing organizational success (Ireland, Covin, & Kuratko, (2009). Complementing manufacturing

organizational strategies with entrepreneurial postures in the entire organization will cause a positive effect on the manufacturing industry's performances. Entrepreneurial orientation helps to manufacture industry organizations to invoke hidden capabilities and explore tacit knowledge that is crucial in facilitating entrepreneurial endeavors and transform the entity into an entrepreneurship organization (Baskaran, 2017).

Besides these, challenges in manufacturing industries contribute to the existing literature on resource-based view theory, in which employees at organizations behave with entrepreneurial orientation characteristics by using existing organizational resources to create competitive advantages and support for organization performances (Barney, 1991; Peteraf & Barney, 2003). Further, the employee can provide a wide range of entrepreneurial activities to their organization including generating and testing innovative ideas related to products, technology, and administrative organization, financial of organization-level activities, and guiding the direction and governance of an organization's growth.

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