Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 5 Issue 06 June 2022

Article DOI: 10.47191/jefms/v5-i6-34, Impact Factor: 6.274

Page No. 1830-1834

Commercialization and Industry Perspective in the Era of Digitalization

Dr. Lim Meng Foh

Wilmington Metropolitan University, Faculty of Business & Finance

ABSTRACT: The study focuses on the commercialization of the organizations. Malaysian organizations are facing challenges to cope with the industrial revolution. Application of IoT, big data analytics, artificial intelligence is positively impacting on the industrial development. The study focuses on the improvement of the digitalized technology in the Malaysian organizations for developing the performance of the operational management. The research methodology focuses on the secondary qualitative research method, which improve the quality of research and help n gathering relevant information.

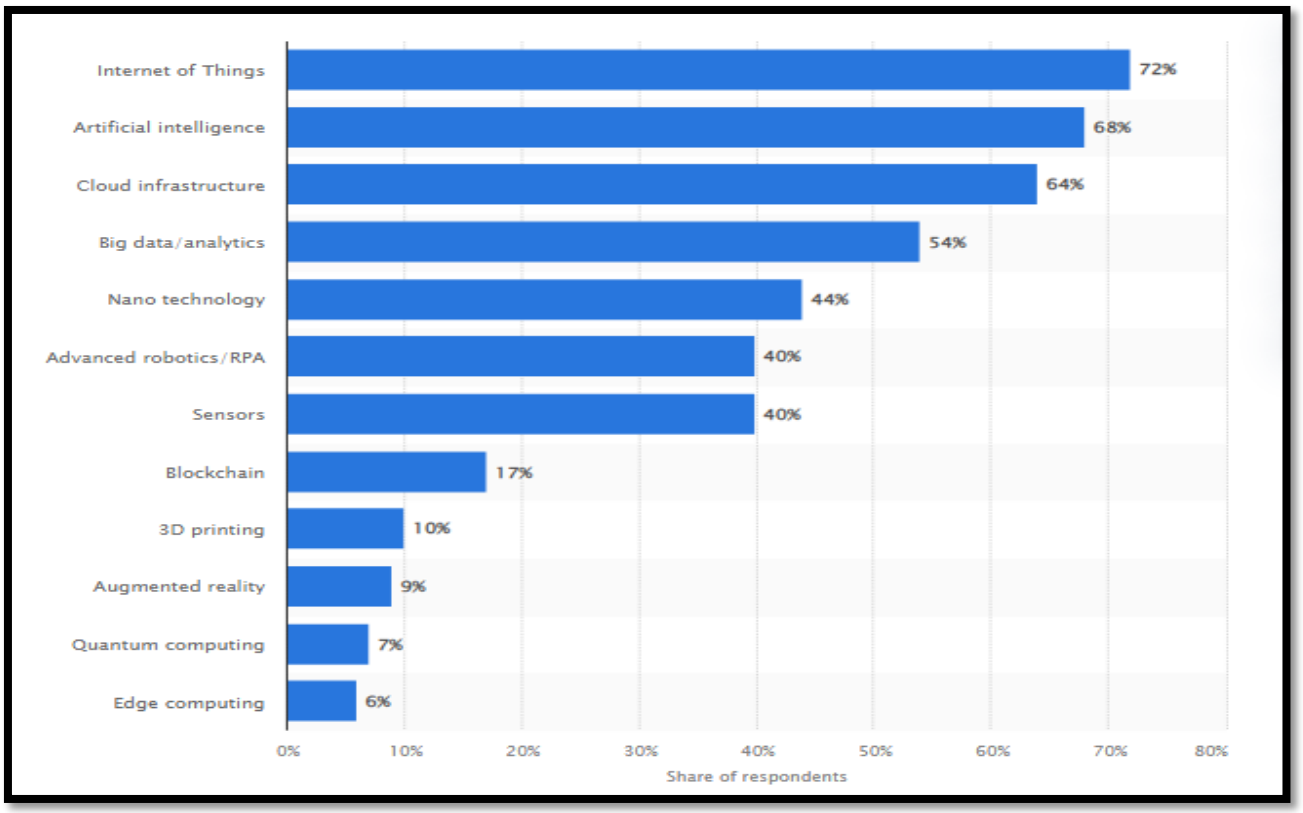
KEYWORDS: New era of Digitalization, Commercialization, Industry revolution, Digital operation management.

CHAPTER 1: INTRODUCTION

Introduction and background

Commercialization is a process of launching new products and services to the market through effective business strategies. Firms focus on the manufacturing, operations and marketing department to achieve success in commercialization (Low et al. 2020). Commercialization enables the businesses to provide better facilities to the customers and earn more revenue through effective marketing strategy. On the other hand, **digitization** is a process of gaining commercial advantage through leveraging digital technologies and digitized information to the customers (Lee et al. 2020). Digitization benefits the businesses to collect data and information regarding the consumer behaviour and using the data for marketing campaigns.

Figure 1: Using of digital technology in the Era of industry 4.0



(Source: Statista, 2022)

From the above figure, it can be depicted that the usage of artificial intelligence, internet of things, cloud computing, data analytics, nanotechnology, block chain technology is increasing in the last few years. Therefore, the businesses are using the digital platforms for better performance and analysing the industry trends. Internet of things contributes maximum in the era of industry 4.0 (Gerekos et al. 2019). Therefore, there is huge scope for the Malaysian businesses to use the internet of things appropriately and gaining advantage in the competitive market.

Research aim and objectives

The aim of the research is "to evaluate the role of commercialization and industry perspective in the era of digitalization".

The objectives are:

- To evaluate the role of digital operations management in the era of digitization
- To analyse the impact of digitization in the industry evolution
- To identify potential challenges affecting businesses to adopt new technology
- To recommend suitable strategies to the organisations to improve operational performance through digitization

Research questions

- What is commercialization and industrialization?
- What is the relationship between commercialization and industrialization
- Why digitization is necessary for improving operational activities of businesses
- What is the effective strategy for sustainability of the businesses in the era of digitization

Research rationale

Digitalisation is significantly correlated with the digitalisation by which business is going to be more commercialised. On the other hand, after the fourth **industrial revolution** the **commercialisation** became more evolving that gave a positive impact on citizen's lifestyles. Digitalisation influences business communication patterns, workflows, transportation channels and manufacturing processes (Kopp et al. 2019). The digitalisation helps Malysian businesses to introduce advanced technology by which they directly communicate with their target customers. The digitalisation helps businesses to understand customer's needs and demands by which they structure their business operations in Malaysia. On the other hand, **digital operation management** defines the thread of the business actions by which business can provide proper support to the management practices of the end-to-end employee and customers' experience (Gkerekos et al. 2019).

This gives significant influence to the business lifestyle. The digital operations management helps the organisation to provide different opportunities like marketing strategies, product design and others to expand in more new markets. Commercialisation and digitalisation is the structured framework which gives opportunities to exploit digital advantages especially in Malaysia. The digitalisation is correlated with the advanced technologies like cloud computing, big data, sensors and 3D printing by which businesses can observe the unforeseen possibilities (Szalavetz, 2022). These innovations lead to the new structure of business cooperation between organisations to make relationships with employees and customers.

For this reason, the digital advanced technologies help the business to achieve ultimate success in order to optimise the resources utilisation process. By using the commercialisation in the digitalisation era the business can reduce manufacturing cost by enhancing employees' productivity and work efficiency (Gkerekos et al. 2019). However, businesses face some serious issues going to be commercialised during the digitalisation era because of a **lack of trained employees, change management strategies, IT skills, digital transformation strategies and other issues**. To understand the digitisation and commercialisation issues the research sheds light on the importance of digital operation management and challenges.

CHAPTER 2: METHODOLOGY

The research has followed a **secondary qualitative research method** by which the research addresses the proposed objectives. The advantages of the secondary data collection method helps research to save time and money and also get detailed access to the wide population's information (Snyder, 2019). On the other hand, the research collects data from the secondary sources by which research in depth analyses the research issues. The secondary data analyse also helps the research to connect the research issues with the existing findings. Similarly, the secondary data collection method helps the research to compare data with different populations. Conversely, the research structure themes to analyse the secondary data sources.

At the initial stage, the research selected some keywords like **"digitalisation", "commercialisation", "digital operation management", and "industrial; revolution"**. The research at the initial stage selects 15 research papers and after reviewing the papers, the research selects six papers to analyse research data. After that, the research summed up the findings from the six research papers and after that the research structure themes. Next stage, the research reviews the themes and link with the research objectives. The research findings are kept under the themes based on theme objectives. The research finalise three main themes which are -

Theme 1: Importance of digital operational management in industry revolution
Theme 2: Challenges facing by the firms in the era of digitalization
Theme 3: Strategies followed by the organisations to adopt new technology and gaining competitive advantage

CHAPTER 3: FINDINGS

Name of authors	Findings	Keywords	Themes
Manesh et al. 2020	Operation management is essential for the businesses and the organisations are embracing digital technologies for better organisational performance. For instance, healthcare organisations use digital platforms to get in touch with patients. It helps the patients in contacting the healthcare professionals and resolve queries. On the other hand, the education industry is changing due to the incorporation of digitised technology. Interconnectedness of the machines helps in sharing data with customers and improving work performance. Digital operational management helps in the knowledge management process. Integration of new and innovative technology benefits the organisations in improving business operations and providing better service to the customers. For instance, the organisations are using the intelligent process automation to manage the workforce and gain advantage in the operation. This tactic helps the organisations improve organisational productivity and help the businesses to achieve long term goals. Digital operation management has a positive impact on the resource allocation which is essential for the firms to tackle difficult situations. In addition to that, the organisations identify the gap and improve the organisational performance to fill the gap and satisfy the customers.	Industry 4.0, Internet of things. Digital transformation	**Importance of digital operational management in industry revolution**
Genkin et al. 2020	International firms are using digital technologies for managing personnel and improving efficiency. There are six factors that need to be considered for digital transformation which includes people, experiences, innovation, culture and change. Focusing on the factors is beneficial for managing the employees and improving their productivity level. Implication of AI is beneficial for tracking employee's performance and promoting the employees position effectively. The internet of things is used by the organisations for providing instant and easy service to the customers. For instance, automation technology can provide 24*7 customer support which is beneficial for achieving positive feedback from the customers. By following these tactics the organisations reduce unnecessary cost and earth maximum profit. On the other hand, using digital technology negatively impacts the customer's privacy. For instance, the hackers can hack the system and track private information of the customers, which is a negative factor for reputation of the businesses.	Artificial intelligence, digitization, operational activities	

Koh et al. 2020	The study focuses on the technological disruption due to the incorporation of industrial revolution and digitization. Lack of proper IT skills of the employees creates issues in the organisational process. In addition to that, lack of change management strategies affecting the organisations to achieve long term goals. Complexity in the software and technology negatively impacts on the organisation's performance and it induces customer satisfaction related issues. Malaysian organisations have a lack of efficient employees which is another problem to compete with the multinational companies. The international organisations from the European countries follow big data to evaluate the consumer behaviour and improve the customer's experience. Therefore it is a barrier for the organisations to compete with such organisations. The poor infrastructure is another challenge for the Malaysian companies, which is a barrier for gaining advantage in the marketing campaigns. The organisations fail to implement the data analytics tools for better evaluation of the market trend and implementing better strategy.	Technological disruption, robotics, intelligent manufacturing, big data.	**challenges facing by the firms in the era of digitalization**
Kopp et al. 2019	Malaysian organizations are facing to adopt the socio-technical activities, which are necessary for the industrial development. In addition to that, budget is another serious issue for the business to develop the infrastructure. The organizations fail t collect fund and applying the fund in digital transformation. It affects the organizations to improve the service quality and achieving positive feedback from the consumers. I this case, the organizations from developed countries gain advantage of funding. Apart from that using old data and cyber threat de-motivates the small and medium sized businesses to improve their performance. Most of the organizations do not follow the international data protection act, which induce various legal complexities. Legal complexity negatively impacts on the organization's brand reputation. The speed and connection is another reason of poor service for the organizations and it affects in organization's sustainability in the digitalized era.	Digital transformation, socio-technical perspective, Industry 4.0, digitalization	
Jayakrishnan et al. 2019	Malaysian organizations embracing the big data analytics for better performance in future and gaining advantage in the global market. For instance, Malaysian transport industry is using the automation technology for giving instant feedback to the customers and providing better service through tracking the transports. Big data analytics is a tool for the organizations to identify and mitigating problems and improving organizational performance.	Information system, Industry revolution 4.0, big data analytics	**Strategies followed by the organisations to adopt new technology and gaining competitive advantage.**
Szalavetz, 2022	Most of the organizations using internet of things to fulfil the industry gap and achieving long term goals. The organizations focus collect data and information from various sources and use such for better performance in the global market. The manufacturing industry using the automated technology for better performance in the production and reducing the cost. Interlinking the operational management with the internet of things help the businesses in achieving long term goals.	Data analytics, digitization in the manufacturing	

CHAPTER 4: CONCLUSIONS

From the above discussion, it can be concluded that Malaysian organisations are embracing digital technology for better organisational performance. Malaysian companies have a lack of infrastructure, which creates serious issues in implementing artificial intelligence in the operational process. Data security is major challenge for the Malaysian companies as they cannot give safeguard to the customers. Emphasizing on the digital platform helps the businesses to identify the trending consumer behaviour and planning better strategy to cope with the challenging situation. Therefore, using new technology is beneficial for improving the productivity level and better performance in future. It can be recommended that:

Funding in digital infrastructure

Malaysian businesses need to invest in the digital infrastructure so that they can improve the organizational process. Incorporation of artificial intelligence and machine learning help the businesses to improve operational activities. In addition to that digital technology is essential for evaluating the marketing strategies of competitors.

Skill development of the employees

The organizations need to up skill the employees. It helps in tackling the digital platform easily and providing better service to the customers. Training and development make the employees efficient so that they can tackle the data analytics, automation and other tools easily.

Focusing on research and development

Malysian firms need to emphasize on the research and development process, which is beneficial for incorporating new ideas and gain advantage in Industry 4.0. It enables the organizations to align the business goals with the digital transformation strategy.

REFERENCES

1) Genkin, E., Filin, S., Velikorossov, V., Kydyrova, Z. and Anufriyev, K., 2020. The fourth industrial revolution: personnel, business and state. In E3S Web of Conferences (Vol. 159, p. 04012). EDP Sciences.
2) Gerekos, C., Theotokatos, G., Bujorianu, L.M., Boulougouris, E., Vassalos, D., Carballedo, B., McCluskey, S., Coats, T. and Sloan, R., 2019. Digitalisation in the UK maritime sector: A stakeholders' pulse check. Proceedings of the Marine Industry, 4.
3) Jayakrishnan, M., Mohamad, A.K. and Abdullah, A., 2019. Enterprise architecture embrace digital technology in malaysian transportation industry. Int. J. Eng. Adv. Technol, 8(4), pp.852-859.
4) Koh, L., Orzes, G. and Jia, F.J., 2019. The fourth industrial revolution (Industry 4.0): technologies disruption on operations and supply chain management. International Journal of Operations & Production Management.
5) Kopp, R., Dhondt, S., Hirsch-Kreinsen, H., Kohlgrüber, M. and Preenen, P., 2019. Sociotechnical perspectives on digitalisation and Industry 4.0. International Journal of Technology Transfer and Commercialisation, 16(3), pp.290-309.
6) Lee, K., Romzi, P., Hanaysha, J., Alzoubi, H. and Alshurideh, M., 2022. Investigating the impact of benefits and challenges of IOT adoption on supply chain performance and organizational performance: An empirical study in Malaysia. Uncertain Supply Chain Management, 10(2), pp.537-550.
7) Low, S., Ullah, F., Shirowzhan, S., Sepasgozar, S.M. and Lin Lee, C., 2020. Smart digital marketing capabilities for sustainable property development: A case of Malaysia. Sustainability, 12(13), p.5402.
8) Manesh, M.F., Pellegrini, M.M., Marzi, G. and Dabic, M., 2020. Knowledge management in the fourth industrial revolution: Mapping the literature and scoping future avenues. IEEE Transactions on Engineering Management, 68(1), pp.289-300.
9) Snyder, H., 2019. Literature review as a research methodology: An overview and guidelines. Journal of business research, 104, pp.333-339.
10) Statista. 2022. Industry 4.0 technology impact organisations worldwide 2020 | Statista. [online] Available at: <https://www.statista.com/statistics/1200006/industry-40-technology-greatest-impact-organizations-worldwide/> [Accessed 18 June 2022].
11) Szalavetz, A., 2022. The digitalisation of manufacturing and blurring industry boundaries. CIRP Journal of Manufacturing Science and Technology, 37, pp.332-343.