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# SWOT ANALYSIS ON REBRANDING 3D SECTORS IN MALAYSIA WITH THE INTEREST TO ATTRACT LOCAL WORKFORCE

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<p><b>Article Info:</b></p> <p><b>Article history:</b> Received date: 21.10.2024 Revised date: 05.11.2024 Accepted date: 20.12.2024 Published date: 31.12.2024</p> <p><b>To cite this document:</b> Idris, M. S., Sabdin, P. N., Ishak, M. Z. I. M., &amp; Zakaria, J. (2024). SWOT Analysis on Rebranding 3D Sectors in Malaysia with the Interest to Attract Local Workforce. <i>International Journal of Innovation and Industrial Revolution</i>, 6 (19), 241-253.</p> <p><b>DOI:</b> 10.35631/IJIREV.619019</p> <p>This work is licensed under <a href="https://creativecommons.org/licenses/by/4.0/">CC BY 4.0</a></p> <p></p>	<p><b>Abstract:</b></p> <p>Malaysians perceived 3D (dirty, dangerous, and difficult) work sectors less appealing due to numerous hazards involved and characterised as low-paying job. Low participation of Malaysian in these sectors such as manufacturing, construction, services, agriculture, mining and quarrying have created scarcity or labour shortages. Therefore, to ease the pain of the main driver of Malaysia economic growth, Malaysia employs foreign workforce to fill in the gaps left by Malaysian itself. The objective of this study is to find strength, weakness, opportunity and threat of rebranding 3D sectors in Malaysia. This study employs qualitative systematic review, content analysis and secondary data to draw out the strength, weakness, opportunity and threat from previous work by scholars, statistics reports and news reports. The findings can assist analyst, researchers, policymakers and other respective bodies in these industries strengthening the weaknesses, grab the opportunity, mitigate the risk and explore on new fresh ideas that could help in rebranding 3D sector by increasing local participation and reduce overreliance of foreign workers.</p> <p><b>Keywords:</b> 3D Sectors Malaysia, Foreign Workforce, Local Workforce, Rebranding 3D Sectors, SWOT Analysis</p>
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## Introduction

Working in the 3D industry has always been difficult, and many individuals find it less appealing due to the numerous hazards involved. Jobs in the 3D sector might be characterized as low-paying, hazardous, challenging, and dirty labour jobs (Ahmad et al., 2018). The 3D (dirty, dangerous, and difficult) industries which include manufacturing, construction, services, agriculture, mining, and quarrying were the main driver of Malaysia's economic growth until 2022 and offered a large number of employment opportunities to the country's workforce. However, Malaysians find 3D enterprises less appealing and avoid them (Zulkiflee et al., 2022). According to Saleh (2008), local Malaysian would rather be in unemployed status rather than working in construction industry. Ganesan (2024) reported that there is an increase of 30% applications from Malaysian seeking jobs in Singapore. With low interest in working in home country, home country had to open the border to foreign workforce. Isa et al., (2021) claimed that, according to the Department of Statistics Malaysia (DOSM), foreign labour accounts for around 15% of the overall workforce. The manufacturing industry employs the most migrant workers and the rest are as per summarize in Table 1.

**Table 1**  
**Percentage Distribution of Foreign Workforce by Sectors**

Sector	Percentage
Manufacturing	35.60%
Construction	19.80%
Farming	14.70%
Services	13.60%
Agriculture	9.10%
Domestic servant	7.20%

Note: Source from Isa et al., 2021

Several factors influencing local workers participation in 3D sector such as harsh environment (Abdul-Rahman et al., 2012; Wong et al., 2023), poor health and welfare provisions (Wong et al., 2023), low wages (Narayanan and Lai., 2014), perceived lack of career growth (Najib et al., 2020), social stigma (Zulkiflee et al., 2022), monopolized by foreign worker and mismatch in educational and industry needs (Mohd Fateh et al., 2022). Hence, low participation of local workers in this sector have created scarcity or labour shortage on this specific working sector. Based on Department of Statistics Malaysia, as reported by TheStar (2022), there are currently 2.1 million foreign workers. Additionally, Amnesty International (2010) stated that according to Malaysian immigration authorities, around 2.2 million undocumented foreign worker which made up to nearly 33% of Malaysia's labour force. The influx of foreign workers in Malaysia introduced crimes that is related to these foreign labours such as exploitation, illegal migration, and undocumented workers. Immigration Director-General Datuk Ruslin mentioned that, 11,903 operations were conducted between January and August 16 of this year, and 29,030 criminals—including the 900 employers—were apprehended for violating the Immigration Act and the Passport Act (Yusry, 2024). Presence of foreign workers give rise of crime gives a bad image to the host country. Foreign workers are brought in due to lack of Malaysian youth participation in 3D industries (Zulkiflee et al., 2022). To successfully reduce the crime related to foreign workers, these 3D industries – construction, plantation and cleaning services (Ahmad et al., 2018) needs rebranding to attract and acquire local talents to join the workforce. This will progressively and indirectly reduce the demand for foreign workers. This paper attempts

to examine how can rebranding 3D sectors in Malaysia can lead to attract local workforce and at the same time reduce overreliance towards foreign workers.

### Literature Review

Foreign worker inflows into Malaysia are not a recent issue. Prior to Malaysia's independence, there was an influx of labours seeking better living conditions and job possibilities (Isa et al., 2021). Abidin et al., (2024) mentioned that the cost of hiring foreign labours are lower compared to hiring locals therefore increasing of numbers of foreign labours in the country. Additionally, Isa et al., (2021) claimed that foreign labour is readily available and eager to work. They are eager to work long hours, even during peak hours and public holidays. Most Malaysian employers view this situation positively. High dependency towards foreign labours has negative impacts such as increasing of criminal crimes, increment of social problems, existence of illegal workers and low local unemployment rate as expressed by Jamalulil et al., (2022). The surge of migrant labour has increased the number of imported malaria cases. Leprosy cases were low in Malaysia, although migrant labours contributed significantly (Mohd Putera et al., 2023). This aligned with earlier study by Marhani (2012), employing foreign workers might lead to the development of diseases like malaria and cholera.

Review of the literature found that young Malaysians were not very involved in these fields. Achim (2017) states that due to misunderstandings and a lack of knowledge about the fields, Malaysians were hesitant to work in 3D sectors. According to the survey's findings, youth of the host country knew only a little about these fields, were not particularly aware of them, and did not view a job in the 3D industries as their ideal location to work (Zulkiflee et al., 2022). Employers are now forced to look for foreign workers as a backup plan to address the shortages due to Malaysian workers' poor participation, particularly in 3D industries. Ibrahim (2014) discussed that the main factor distracting local workforce to participate in the 3D sector, especially in construction is due to monopolization of foreign labour. Due to that the abundance of foreign worker may have perceived local workforce to think that the sector belongs to the foreign workers. This perception instils in minds of Malaysian due to our long dependent on foreign workforce to strengthening our economic development. Low-skilled immigrant labours with limited education are involved, leading locals to believe that such employment is not suitable for them (Mahmood et al., 2021). According to Isa et al., (2012) the country experienced a labour deficit in essential industries like construction, manufacturing, and services since the 1980s. Apart from that, Abideen (2019) stated that one of the contributing that drove local workforce away is wages and benefits offered from this sector. Instead of increasing wages and improving working conditions to attract local workers during labour shortages, employers opted to hire foreign workers (Narayanan & Lai, 2005). The Malaysian government and employers must urgently modify their approach to worker recruitment (Zulkiflee et al., 2022). Another interesting point is due to level of education among Malaysian. Over the years, Malaysian educational standards have been steadily rising, helping the present generation to learn at greater levels (Mohd Fateh et al., 2022). Graduates will only consider positions that align with their qualifications, making them picky and exacting in their job decision; Malaysians will choose to search for more lucrative positions where they have received education (Dom et al., 2012). Additionally, Kumar (2016) reported that Malaysians avoid 3D jobs due to negative perception towards the sector. Because physical labour and agriculture are not seen as highly regarded job choices by society, Malaysians often avoid employment in these fields. The literatures had pointed out on the factors Malaysians were not

very drawn into these industries. Therefore, this study will take a look into how rebranding 3D sectors help to increase the interest of Malaysian to participate in the sectors.

### **Problem Statement**

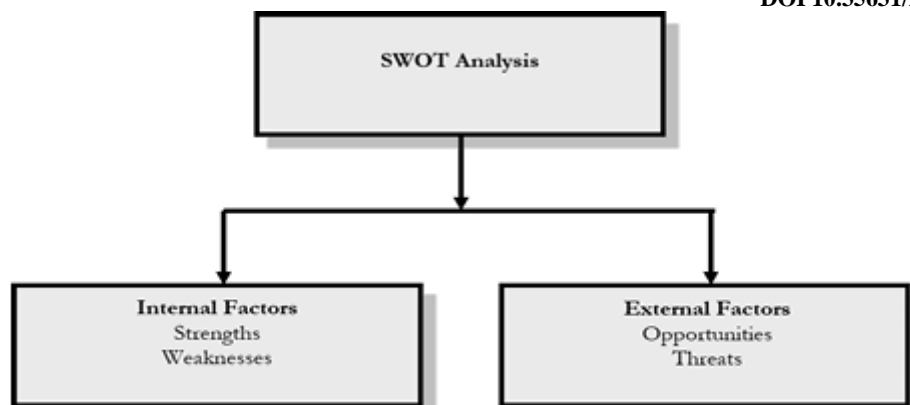
The low participation of local workers in this area has resulted in a scarcity or manpower shortage in 3D sector. Despite their significant contribution to Malaysia's economy, these industries are frequently seen negatively, resulting in a reliance on foreign labour. According to a 2016's research, roughly 600,000 Malaysians were working in Singapore's 3D sectors, where pay, when converted to Ringgit Malaysia (RM), exceeded those of certain highly qualified workers in Malaysia. This salary difference, compounded by the RM's devaluation, has most certainly fuelled Malaysian workers' migration abroad in search of higher wages (Chia, 2024). Therefore, the gaps are then filled with foreign workforce. This overreliance has resulted in labour market imbalances, making Malaysia's workforce vulnerable and diminishing opportunities for skill development and innovation in the 3D industry. The influx of foreign workers in Malaysia also introduced crimes that is related to these foreign labours such as exploitation, illegal migration, and undocumented workers. Amnesty International (2010) said that Malaysian immigration authorities estimated that there were approximately 2.2 million unauthorized foreign workers, accounting for nearly 33% of Malaysia's labour force.

### **Methodology**

This study employs qualitative method by systematic review, content analysis and secondary data on previous work by scholars through search engine such as Google Scholars, news reports, statistic reports and relevant websites. Throughout the review, SWOT (Strength, Weakness, Opportunity and Threat) components on the rebranding of 3D sectors in Malaysia will be outlined in the analysis and finding. SWOT analysis is the tool that analysts most frequently use to kick-start the strategy planning process (Warren, 2022). By having the SWOT analysed, policymakers can strategize on how to incorporate the data to move the chess pieces forward. This study will assess into how rebranding 3D sectors attract local workforce which potentially reduce the overreliance on foreign workforce.

### **Analysis and Findings**

SWOT Analysis also known as the SWOT Matrix, which has gained popularity as a tool for differentiating and building a niche within a larger market. Beyond the commercial sector, SWOT Analysis can be used at the individual level to examine a person's status in comparison to their competitors (Teoli, 2019). It is a strategic framework and a valuable technique to discover the two dimensions; which is internal and external factor as shown in Figure 1. According to Gurel (2017), strength is an internal characteristic that give an advantage over others, weakness is an internal issue that put the organization at a disadvantage compared to others, threat is an external element that the organization could use to its benefit and threat is an external element that may cause problems for the organization.



**Figure 1: Two Dimension of SWOT Analysis (Gurel, 2017)**

Our findings on the SWOT analysis of rebranding 3D sectors in Malaysia have been summarized per Table 2 below.

**Table 2**  
**SWOT Analysis**

Area	Key Points	Sources
Strength	Offering Competitive Package	Mahmood et al., (2021), Kicheva (2017), Kamaruddin et al., (2016), Queiri & Dwaikat (2016), Van Eck (2016),
	Vocational Training and Skills Development	Chear et al., (2024), Shaari et al., (2024), Kumarage et al., (2023), Mohamad Isa & Hassan (2018), Rahim (2016)
	Government Policy	Bernama (2024), Shaari et al., (2024), Chern (2023), Kumar & Zainuddin (2018), TheStar (2024)
Weakness	Lack of Government Support	Chia (2024), Yusof et al., (2024), Kuzdikbay & Nadeem (2022), Ibrahim et al., (2021)
	Slow in Technology Adoption	Nik Fatma Arisya et al., (2019), Bickel (2024), McKinsey Global Institute (2015)
Opportunity	Integration of Advance Technologies	Saad et al., (2024), Alaloul et al., (2019), Yap et al., (2024), Wei (2024)
	Growing and Expansion of the Sector	Dehdasht et al., (2021), Bernama (2021), Mahmood et al., (2021)
Threat	Cost	El Jazzer et al., (2020), Newman et al., (2021), Wei (2024)
	Local Talent Outflow	Ghani & Jauhar (2015), Cheong et al., (2018)



## Discussion

This article had explored SWOT components on rebranding 3D sector in Malaysia.

### *Strength*

Many believes that revising remuneration package and offering a competitive benefit in 3D sectors is one of the key strengths that can attract local workforce and providing them the job satisfaction in the landscape of Dirty, Dangerous and Difficult. If the pay is in line with the amount of effort and sweat put in, this industry will remain viable (Kamaruddin et al., 2016). Hazim (2024), reported that in Budget 2025 speech, Prime Minister and Finance Minister Datuk Seri Anwar Ibrahim declared that the nation's minimum salary would increase from RM1,500 to RM1,700 per month, with effect from February 1st of next year. This action is aligned with the strategy to increase the local workforce in the 3D sector. Another key strength is the vocational training and skills development. Surveyed by Mohamad Isa & Hassan, 2018 recorded that 44% respondents agrees that there should be a short-term training programme and education to teach inexperienced local workforce regarding 3D jobs practices. 21% responded that upskilling programme by the government. This is aligned with Malaysia's National TVET Policy 2030 (Daim & Hakim, 2024) and Skim Latihan 1 Malaysia Programme that can increase local workforce capital values and skillsets further decrease the needs to hire foreign workers. Additionally, government of the host country should be able to control the size of the foreign workers by imposing policy that restricted the involvement of foreign workers in the industries. As reported by Chern (2023) reported that former Human Resource Minister Sivakumar Varatharaju said that government is strategizing to address the excess population of foreign workers. The Ministry of Investment, Trade and Industry (MITI) declared that the suspension of 80:20 ratio requirement for manufacturing sector, where only 20% of the workforce filled in by foreign workers will be continued until Multi-Tiered Levy Mechanism (MLTM) is fully deployed and effective (Bernama, 2024). MLTM serves as an incentive for employers to reduce reliance on foreign workers and promote the hiring of local workers, aligning with government policy (Kumar & Zainuddin, 2018)

### *Weakness*

Internally challenges were highlighted by some of the scholars in the context of rebranding 3D sector. One of it is lacking in government support. As reported by Chan (2021), no new large infrastructure projects were announced to kickstart the Malaysian construction industry's comeback. In order to revitalize and maintain the construction industry, Master Builders Association Malaysia (MBAM) urges the government to give it additional support. Government support is also crucial in ensuring many trainings institution to cover various training related to the job sectors (Zaki et al., 2012). This aligned with Kuzdikbay & Nadeem (2022) study, where they stated that the primary obstacle to Kazakhstan's implementation of Construction 4.0 is a lack of government support. This is due to the significant financial costs associated with implementation. Stakeholders must pay for expenses including annual license fees and maintenance costs in addition to spending a significant amount of money on expensive digital tool purchases and employee training. Next challenges are slow in technology adoption. Nik Fatma Arisya et al., (2019) highlights that the slow progress of technological adoption contributed by people management. People are reluctance to change (Arayici et al., 2009) and lack the sense of urgency, prioritizing and needs the change to take place (Salleh et al., 2011). Management is always a factor in delaying the process due to bureaucracy, turnover, cost and investment (Ahuja et al., 2009). Prime Minister Datuk Seri Anwar urges the plantation sector to expedite and increase the use of technology as reported by MalayMail (2024).

### ***Opportunity***

Plantation and construction are always growing and expanding as it is national economics contributor. For example, as advertised in Ministry of Transport (MOT) Malaysia, there are upcoming mega projects such as RTS Link, Penang Light Rail Transit and High-Speed Rail. The investment will surely create ample of job opportunities that can attract local workers. On top of that scholars suggest that integration of advance technologies is one of the external benefits that can be explore. Integration of advanced technologies in the sector could enhance safety planning, safety inspections and maximizing hazard identification (Yap et al., 2024). This may eliminate concern of local workforce when thy reluctant to work in this 3D fields due to poor safety environment (Mohamad Isa & Hassan, 2018). Apart from safety aspects, technology integration in construction and plantation sectors are also developing. There is a development of Bricklaying Robotic System (BRS) (Wos et al., 2021) that convert manual labour routine task to semi-auto and automatic workflows. Robots are revolutionizing workflows and setting new benchmarks for productivity, efficiency, and safety in anything from simple jobs like bricklaying to intricate high-rise building (HOWTOROBOT, 2024). In plantation sector, in order to boost supply, nine high-tech businesses under National Technology and Innovation Sandbox (NITS) provide solutions using artificial intelligence, robotics, drones, and Internet of Things to enhance harvesting, maintenance, and fertilization. Furthermore, 13,000 settlers and communities are expected to gain access to tech-driven solutions on 15 hectares of land designated for solution testing through a collaboration with FELDA. It is anticipated that this will lower farming expenses and settlers' reliance on foreign labour while increasing their average monthly income and productivity (Deloitte, 2021).

### ***Threat***

There are two threats outlined in this paper which is on the high implementation cost and local talent outflow to another countries. The high expenses of implementing new technology, the need for more skilled labour, and R&D expenditures are among the major financial barriers, claim El Jazzer et al., (2020). This suggested that when new technologies are implemented, current staff members need to receive additional training which also another form of cost. Newman et al., (2021) added that as some technologies may need constant research and refinement, adopting any kind of technology could result in significant costs for both owning and using it. Therefore, business owners or employers not keen to move from their comfort zone which also another form of threat. Hiring experts, investing in costly technologies, and offering training are the primary causes of the high implementation costs (Wei, 2024). Another external risk is the talent outflow from Malaysia to the other part of the world. Social status syndrome is affecting today's social climbers. Ghani & Jauhar (2015) articulates that people are constantly in a race against the clock to become wealthier. As a result, the allure of money captivates a lot of people. People are drawn to better income offers overseas especially when they can work in Singapore, earning in Singapore Dollar but reside in Johor and spend in Malaysian Ringgit.

### **Conclusions and Recommendations**

This research intended to analyse the strength, weakness, opportunity and threat in rebranding 3D sector in Malaysia for the interest in increasing local workforce participation have been achieved. Based on the studies executed by reviewing past literatures, there were ample internal positives, challenges, external benefits and risks outlined. Strengths are in terms of offering competitive package for workforce, provide vocational training and skills development to further increase the human capital value and policies implemented by the government towards

the involvement of local workforce in manufacturing sector. Apart from internal strengths, the effort should also be aware on the opportunity that can help in the rebranding effort such as integration of advance technologies such as robot, drones and artificial intelligence. The growing and expansion of construction and agriculture is also an opportunity to increase job demand which can be filled in with local workforce. However, rebranding 3D sector could be affected by internal challenges whereby lack government support and slow in technology adoption in the sector may delay the rebranding efforts. External risks such as cost that need to be bear due to initial implementation and maintenance could be quite a surprise to the business owners therefore opt out from the rebranding efforts. Another threat is the outflow of the local talent to other countries which in turn requires employers to hire foreign workers due to local labour shortages. Overall, from this SWOT analysis, a more proper framework in attracting local workforce to 3D industries. This can be regarded as a valuable contribution to the existing thinking and perspectives within the respective industries where the industry players could focus on how to realize the strengths and opportunities identified. Authors observed there is lacking efforts in introducing the 3D industries in school to eliminate their perception that these industries belong to foreign labours. Future study should take a look into how the perception of 3D sectors belong to foreign can be intervene at a young age. As recommendation, analyst, researchers, policymakers and other respective bodies in these industries should focus on to strengthen the weaknesses, grab the opportunity, mitigate the risk and explore on new fresh ideas.

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