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THE CHALLENGES OF IBS TRANSPORTATION IN RURAL AREAS IN PERAK

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ABSTRACT

The Fourth Industrial Revolution (Industry 4.0) has prompted the development of the Construction Strategy Plan 4.0 to emphasise the usage of prefabrication such as Industrialised Building System (IBS). However, the rate of IBS adoption in Malaysia is still below the government's target despite its introduction in the 1960s. The implementation of IBS is impeded as underdeveloped road infrastructure proves to cause transportation constraints. Furthermore, the overloaded heavy vehicles of IBS transportation cause damage to the road infrastructure, further hindering the usage of IBS. This paper highlights the challenges of IBS transportation in rural areas through interview sessions with experienced individuals in the construction industry. The interviews aim to identify the issues regarding transport in rural areas and suggest methods of improvement towards the accessibility of IBS transportation. The research concludes that the design of roads plays an essential role in the efficiency of transit of prefabricated components.

Keywords: challenges, IBS, rural area, transportation, industry 4.0

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INTRODUCTION

The Fourth Industrial Revolution (Industry 4.0) is fuelled by technological advancements and innovations, including digitisation, automation, and increased use of Information and Communications Technology (ICT). The Construction Industry Development Board (CIDB, 2020) highlights its impact on the construction industry, leading the Ministry of Works, in collaboration with CIDB and other stakeholders, to develop a Construction Strategy Plan 4.0 (2021–2050). It improves the efficiency, productivity, and effectiveness in the construction industry (Zairul, 2021). Industrialised Building System (IBS) involves producing prefabricated components offsite and assembling them at the construction site with minimal on-site labour, reducing waste. Despite being introduced in Malaysia in the 1960s, the adoption of IBS remains below the government's target (Mohd Fateh et al., 2020). Contractors and consultants are hesitant to implement IBS in underdeveloped regions due to perceived unprofitability (Fee & Keong, 2018). Most IBS manufacturers are situated in industrial areas, leading to higher transportation costs for rural construction projects (Mohd Nawi et al., 2010). The transportation of IBS components requires compliance with road department regulations due to potential damage to road infrastructure caused by overloaded heavy vehicles (Thanoon et al., 2003). Underdeveloped road infrastructure in rural areas further hinders the transportation of large IBS components and heavy machinery (Hadi et al., 2017). The lack of proper infrastructure reduces incentives for rural areas, with few IBS manufacturers adopting IBS-based construction (CIDB, 2018).

LITERATURE REVIEW

The scarcity of land space in urban areas has led the Malaysian government to endorse construction in rural areas. However, implementing IBS in rural regions faces several challenges. Wong and Lau (2015) found that IBS is not commonly practised in rural projects due to the lack of infrastructure and amenities in such areas. One of the main hurdles is the lack of IBS manufacturers near construction sites, resulting in longer transportation routes and higher costs. Challenges in transportation have led the government to exempt contractors from using IBS in inland projects where transport is arduous (Azman et al., 2009). Access to construction sites in rural areas proves to be difficult, and coordinating travel time and vehicle usage presents significant challenges. Off-site construction projects face issues with safety scheduling, the performance of road transport workers, and the transportation of heavy and bulky IBS components (Jamalluddin et al., 2022). Moreover, the road infrastructure in remote areas is often inadequate to accommodate IBS transportation due to its long, narrow, and unpaved nature. This negatively impacts the livelihood of

the rural communities (Daud et al., 2009). Increased vehicular traffic and heavier loads cause road infrastructure in Malaysia to reach the end of its service life earlier than expected (Shehu et al., 2014). Transportation challenges also include size and weight limitations, route restrictions, permissions, and the availability of lifting equipment (Jabar et al., 2013). Therefore, it is suggested that the length, height, and weight of IBS components adhere to specific regulations to overcome some of these challenges, and the government should provide incentives and improve rural road infrastructure (Warszawski, 1999).

PROBLEM STATEMENT

The adoption of IBS in Malaysia commenced in the 1960s with the goal of creating synergy in the industry through training, exposure to IBS practices, and encouraging local IBS manufacturers (Jabar et al., 2013). However, the rate of IBS adoption remains low, partly due to the perception of contractors and consultants who are reluctant to implement IBS in underdeveloped regions, considering them unprofitable (Fee & Keong, 2018). The lack of IBS manufacturers near construction sites contributes to the low adoption rate, as transportation from distant locations increases costs and reduces profit margins (Ali et al., 2018). Additionally, the large size of IBS components poses transportation challenges, requiring special machinery and equipment (Ibrahim et al., 2022). Inadequate road infrastructure in rural areas further hinders IBS implementation. Poor road networks, weight limitations, and lack of access roads render IBS unsuitable for rural areas (Ramli et al., 2018). Furthermore, the public road infrastructure in Malaysia deteriorates prematurely due to increased vehicular traffic (Shehu et al., 2014). Rural roads are underdeveloped, making it challenging to transport IBS components and machinery (Hadi et al., 2017). Overall, the complexity of IBS transportation and insufficient infrastructure in rural areas contribute to the limited adoption of IBS in Malaysia, particularly in underdeveloped regions with fewer IBS manufacturers. The objectives of this research are to identify and analyse the challenges of IBS transportation in rural areas in Parit, Perak.

METHODOLOGY

The research embarked on a preliminary study and literature review, gathering information from books, journals, and conference papers to comprehend the challenges of IBS transportation in rural areas. Data were collected through interview sessions with five respondents selected based on specific criteria, such as highest qualification, working experience, related agency/company, and position in the company. The qualitative methodology of conducting interviews with the selected respondents provides insights into the condition of rural roads that limit IBS transportation. Data analysis comprised three phases: investigating the current

condition of rural roads in Malaysia, obtaining recent information through qualitative surveys, and using qualitative data analysis software (ATLAS.ti) to analyse the collected data and supporting evidence. It provides tools to visualise relationships between themes, allowing documentation of further insights and enabling the research to be analysed comprehensively. Finally, the research deliberates conclusions and provides recommendations for improving rural roads to facilitate the transportation of IBS components without affecting the community.

ANALYSIS AND FINDINGS

The demographic of respondents is tabulated in Table 1.

Table 1: Demographic of Respondents

RESPONDENT 1 (R1)	
Status	Employed
Education Level	Master
Working Experience	14 years
Name of Related Agency/Company	CIDB
Position in the Agency/Company	Managing Director
RESPONDENT 2 (R2)	
Status	Employed
Education Level	Degree
Working Experience	8 years
Name of Related Agency/Company	KEO International Consultants
Position in the Agency/Company	Civil/Architectural Inspector
RESPONDENT 3 (R3)	
Status	Employed
Education Level	Master
Working Experience	12 years
Name of Related Agency/Company	CIDB
Position in the Agency/Company	Researcher
RESPONDENT 4 (R4)	
Status	Employed
Education Level	Degree
Working Experience	25 years
Name of Related Agency/Company	Kayangan Jitu Teguh Sdn Bhd
Position in the Agency/Company	Director
RESPONDENT (R5)	
Status	Employed
Education Level	Degree
Working Experience	22 years
Name of Related Agency/Company	KUB Builders Sdn Bhd
Position in the Agency/Company	Director

The figure below shows the analysis of critical factors to be considered in constructing roads for IBS transportation in rural areas. T, which represents the “themes” of the study, are also the critical factors of the study, as listed in the figure below.

RESPONDENT	T1					T2					T3					T4				
	T1 (a)	T1 (b)	T1 (c)	T1 (d)	T1 (e)	T2 (a)	T2 (b)	T2 (c)	T2 (d)	T2 (e)	T3 (a)	T3 (b)	T3 (c)	T3 (d)	T3 (e)	T4 (a)	T4 (b)	T4 (c)	T4 (d)	T4 (e)
R1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓
R2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	T5					T6					T7									
	T5 (a)	T5 (b)	T5 (c)	T5 (d)	T5 (e)	T6 (a)	T6 (b)	T6 (c)	T6 (d)	T6 (e)	T7 (a)	T7 (b)	T7 (c)	T7 (d)	T7 (e)	T1 - The Width of Wide Road				
R1	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	✓	✓	✓	T2 - Large and Numerous Signboards				
R2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	T3 - A Long Junction for the Ease of Turning				
R3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	T4 - Suitable Driving Time				
R4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	T5 - Blockage of Certain Roads using Barricades				
R5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	T6 - Employment of a Competent Driver				
																T7 - Prepare a Suitable Parking Area				

Accepted (✓) Rejected (×)

Figure 1: Factors to be Considered in Constructing Roads for IBS Transportation in Rural Areas

T1: The Width of Wide Road

Collectively, the respondents highlighted the importance of road width when planning roads for IBS transportation in rural areas. Sufficient road width is essential for the smooth movement of large and heavy prefabricated components, ensuring safety during transportation, and catering to the specific needs of rural infrastructure. Engineers and planners involved in road construction for IBS transportation should carefully consider road width to ensure the successful implementation of projects in rural regions (Ibrahim et al., 2022).

T2: Large and Numerous Signboards

The respondents unanimously agree on the significance of large and numerous signboards to facilitate safe and efficient IBS transportation in rural areas. Properly placed signage can inform drivers of load limits, increase awareness among road users, and enhance overall road safety, especially in areas with inadequate existing signage. Incorporating well-designed signboards should be a priority when constructing roads for IBS transportation in rural regions (Rural Health Information Hub, 2019).

T3: A Long Junction for the Ease of Turning

The unanimous agreement among the respondents indicates that a long junction for ease of turning is a critical factor to consider when constructing roads for IBS transportation in rural areas. These long junctions provide ample space for large and unwieldy transport vehicles to navigate turns safely and efficiently. Incorporating longer junctions into road designs can significantly contribute to the success and safety of IBS transportation in rural regions (Zhou et al., 2021). Hence, it is accepted.

T4: Suitable Driving Time

Interestingly, although one respondent disagreed on the importance of providing suitable driving time for drivers, most respondents agreed that it is a crucial factor in constructing roads for IBS transportation in rural areas. Efficient driving times can lead to faster project completion, smoother transportation, and improved driver safety. Considering road conditions, proximity to manufacturers, and other relevant factors can help determine the most suitable driving times for IBS transport vehicles, ultimately enhancing the overall success and effectiveness of IBS projects in rural regions (Zhou et al., 2021). Their acceptance of this factor highlights its significance in ensuring successful IBS transportation in rural areas.

T5: Blockage of Certain Roads using Barricades

All respondents unanimously agree that using barricades to block certain roads is a crucial factor in constructing roads for IBS transportation in rural areas. Barricades could prevent accidents, enhance safety for all road users, and control traffic flow during IBS transportation. However, it is essential to minimise disruptions to other road users while ensuring the safety and efficiency of IBS projects. Properly planned and implemented barricades can significantly contribute to the success and safety of IBS transportation in rural regions (Zhou et al., 2021). Their acceptance of this factor highlights its significance in maintaining safety and smooth traffic flow during IBS transportation.

T6: Employment of a Competent Driver

The majority of the respondents (T6[a], T6[c], T6[d], and T6[e]) agree that employing a competent driver is a crucial factor in constructing roads for IBS transportation in rural areas. Competent drivers play a vital role in ensuring the safe and efficient transportation of large and bulky prefabricated components. Their experience and skills contribute significantly to the success and overall safety of IBS projects in rural regions. While one respondent (T6[b]) was dubious, the consensus among the other respondents emphasised the importance of competent drivers in IBS transportation. Therefore, the employment of a competent driver is an important factor to consider when constructing roads for IBS transportation in rural areas (Zhou et al., 2021). Therefore, it is accepted.

T7: Prepare a Suitable Parking Area

Respondents T7(a), T7(b), T7(c), T7(d), and T7(e) unanimously agree that a suitable parking area is an important element in constructing roads for IBS transportation in rural areas. Having a designated parking area ensures the efficiency and safety of IBS transport vehicles, minimises disruptions to other road users, and facilitates loading and unloading processes. Incorporating suitable parking areas into road construction plans is essential for the successful implementation of IBS projects in rural regions. For this reason, preparing a suitable parking area is an important factor to consider (Rural Health Information Hub, 2019). Hence, it is accepted.

Table 2: Suggestions to Avoid Damage and Increase Road Safety in Rural Areas

Respondent	Additional factor	Accepted/ Rejected	Remark
R1	Transportation of IBS must follow the requirements of the Road Transport Department.	Accepted	This suggestion emphasises the importance of adhering to the regulations and requirements set by the Road Transport Department when conducting IBS transportation. By following these guidelines, the risk of damage to the road infrastructure can be minimised and road safety can be significantly improved.
R2	Increase layer of road for heavy transportation.	Accepted	This suggestion proposes to increase the thickness or strength of the road layers to accommodate heavy transportation, such as IBS transport vehicles carrying large and bulky prefabricated components. Strengthening the road can help to prevent damage due to the weight of the transported materials and enhance overall road durability.
R3	Practice and execute road survey thoroughly.	Accepted	Performing a thorough road survey allows for a comprehensive understanding of the road conditions and potential challenges in rural areas. By conducting detailed surveys, road planners and engineers can identify weak points, narrow passages, and other factors that may affect IBS transportation. This information enables better road design and implementation to enhance safety and minimize damage and risks.
R4	Minimize the number of trips for transportation.	Accepted	Minimizing the number of trips made by IBS transport vehicles can help to reduce wear and tear on the road infrastructure. By optimizing routes, planning efficiently, and using larger-capacity transport vehicles where appropriate, the impact on the roads can be lessened. This also leads to cost savings and increased transportation efficiency.
R5	-	-	No additional factor or suggestion was provided in this case.

CONCLUSION

In conclusion, this research explores the critical factors to be considered in constructing roads for IBS transportation in rural areas. The exploration of research begins with a preliminary study and literature review to analyse published research on the topic and provide a detailed comprehension of the limitations of IBS in rural areas. The preliminary study and literature review aim to answer the first objective of the research topic, i.e., to identify the challenges of transportation for IBS in rural areas. The study incorporated a qualitative methodology to acquire data through interviews of five experienced individuals. The interview aims to answer the second objective, i.e., to analyse the challenges of transportation for IBS in rural areas by providing recent and relevant information. In addition, the collected data were analysed alongside supporting evidence and contributed suggestions to resolve the limitations of IBS adoption in rural areas.

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REFERENCES

- Ali, M. M., Abas, N. H., Affandi, H. M., & Abas, N. A. (2018). *Factors impeding the industrialized building system (IBS) implementation of building construction in Malaysia*. International Journal of Engineering & Technology, 2209-2212.
- Azman, M. A., Ahmad, M. S., & Hanafi, M. H. (2009). Conceptual Spatial Site Selection for One Stop Centre for Industrialized Building System Manufacturing Plant in Pulau Pinang. *Fifth National Conference Civil Engineering (AWAN 2009)* (pp. 1-10). Pulau Pinang: ResearchGate.
- CIDB . (2018). DYNAMISM AND SUSTAINABILITY THROUGH IBS. Kuala Lumpur: *Construction Industry Development Board Malaysia*.

- CIDB. (2021). Construction Industry Standard . Kuala Lumpur: *Construction Industry Development Board Malaysia 2021*.
- CIDB IBS SDN BHD. (2022). *CIDB IBS*. Retrieved 2022, from *IBS DEVELOPMENT & TRANSFORMATION CENTER*: <https://cidbib.com.my/news-insights/ibs-database/>
- D., D., C., T. P., M., L., & Q., W. D. (2009). Green & Quality Rural Roads in Malaysia. *Rural Roads*.
- Fee, L. C., & Keong, S. M. (2018). *A Study on Factors Affecting the Implementation of Industrialized Building System (IBS) on High-Rise Construction in Developing Regions of Malaysia*. INTI JOURNAL.
- Hadi, N. A., Muhamad, W. N., & Othman, M. K. (2017). Critical factors of implementing Industrialised Building System in Sarawak: A research on SMEs. *IOP Conf. Series: Earth and Environmental Science* 67 (pp. 1-6). IOP Publishing.
- Ibrahim, I. H., Sorazan, W. F., & Muhammad, W. N. (2022). *Transportation and Cost Issues in Modular Construction for IBS (Industrialized Building System)*. *International Journal of Academic Research in Business & Social Sciences*, 1498-1508.
- Jabar, I. I., Ismail, F., & Mustafa, A. A. (2013). Issues in Managing Construction Phase of IBS Projects. *Procedia - Social and Behavioral Sciences* 101 (pp. 81-89). Langkawi: Elsevier Ltd.
- Jamalluddin, N. A., Adnan, H., Bakhary, N. A., & Rosman, M. R. (2022). Risk Mitigation in Industrialized Building System (IBS) Construction. *IOP Conference Series: Earth and Environmental Science* (pp. 1-7). IOP Publishing.
- Mohd Fateh, M. A., Zakariah, H., & Ezanee, S. E. (2020). Improvement for significant clauses in the standard form of contract for industrialized building system construction. *IOP Conference Series: Materials Science and Engineering*. 713, pp. 1-12. IOP Publishing. doi:<https://doi.org/10.1088/1757-899X/713/1/012037>
- Mohd Nawi, M. N., Lee, A., & M. A. (2010). The IBS Barriers in the Malaysian Construction Industry: A Study in Construction Supply Chain Perspective. *Proceedings of the conference on built environment in developing countries (ICEBDC)*. Salford.
- Ramli, M. Z., Malek, M. A., Hanipah, M. H., Lin, C. L., Sukri, M. M., Zawawi, M. H., . . . Fuad, N. M. (2018). Study of factors influencing construction delays at rural area in Malaysia. *International PostGraduate Conference on Applied Science & Physics 2017*, 1-8.

- Rural Health Information Hub. (2019, April 6). *Google*. Retrieved June 15, 2023, from Rural Health information Hub.
- Samad, R. A., Usman, I. M., & Raman, S. N. (2020). A review on construction of additional building school using Industrialized Building System (IBS) in Sarawak, Malaysia. *Journal of Xi'an University of Architecture & Technology*, 706-716.
- Shehu, Z., Elma, N., Endut, I. R., & Holt, G. D. (2014). Factors influencing road infrastructure damage in Malaysia. *Infrastructure Asset Management*, 1-11.
- Taherkhani, R., Saleh, A. L., Nekooie, M. A., & Mansur, S. A. (2012). *External Factors Influencing on Industrial Building System (IBS) in Malaysia*. International Journal of Sustainable Development & World Policy, 66-79.
- Thanoon, W. A., Peng, L. W., Abdul Kadir, M. R., Jaafar, M. S., & Salit, M. S. (2003). The Essential Characteristics of Industrialised Building System. *International Conference on Industrialised Building Systems*, 10, pp. 283-292. Kuala Lumpur.
- Warszawski, A. (1999). *Industrialized and Automated Building Systems: A Managerial Approach*. London: Routledge.
- Wong, S. S., & Lau, L. K. (2015). *Advantages and Setbacks of Industrialized Building System (IBS) Implementation: A Case Study in Sarawak*. International Journal of Sustainable Construction Engineering & Technology, 52-61.
- Zairul, M. (2021). A thematic Review on Industrialised Building System (IBS) Publications from 2015-2019: Analysis of Patterns and Trends for Future Studies of IBS in Malaysia. *PERTANIKA JOURNALS*, 635-652.
- Zhou, Z., Duan, J., Li, W., & Geng, S. (2021). Can Rural Road Construction Promote the Sustainable Development of Regional Agriculture in China? *Sustainability*, 1-32.

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