

## CAUSATIVE FAILURE FACTORS OF COMMUNICATIONS MANAGEMENT IN MIXED-USE DEVELOPMENT PROJECTS IN MALAYSIA

Chitdrakantan Subramaniam\*<sup>1</sup>, Syuhaida Ismail<sup>2</sup>, Khairul Zahreen Mohd Arof<sup>3</sup>, Nadirah Hazwani Najib<sup>4</sup>, Abd Latif Saleh<sup>5</sup>

<sup>1,2,3,4</sup>Razak Faculty of Technology and Informatics, University Teknologi Malaysia Kuala Lumpur, Jalan Sultan Yahya Petra, 54100 Kuala Lumpur, Malaysia.

<sup>5</sup>School of Civil Engineering, Faculty of Engineering, Universiti Teknologi Malaysia, 81310 Skudai, Johor, Malaysia

\*Corresponding author. E-mail: [schitdra@gmail.com](mailto:schitdra@gmail.com)

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### Abstract

Construction delay has been a persistent challenge for the Malaysian construction industry. This has resulted in many issues, including public complaints, government loss of reputation and income and a decline in the gross domestic product output of the industry. Furthermore, the construction industry is a complex business with several stakeholders continually sharing information. Hence, ensuring project success has to be the utmost important task of a project manager. Often the construction industry is marred by high cases of delays, overruns, poor quality, health and safety issues, emissions and sustainability issues as a result of ineffective communication practices. Therefore, this paper aims to examine causative failure factors of communications management in mixed-use development projects in Malaysia. Based on the literature review, 11 factors and 44 items were identified. These factors and items were evaluated by 141 respondents from the Malaysian construction industry. Data analysis was done using SPSS 23.0. This study found that the most critical causative failure factor is team meeting discussions. The respondents believe that there is lack of stakeholder cooperation due to poor representation during the discussions, which also reflects the inadequacy of mutual respect, confidence and trust among stakeholders. As a recommendation, frequent team meeting discussions provide a platform for effective information exchange, thus help to reduce mixed-use project failures in Malaysia.

**Keyword:** Causative failure factors, communications management, mixed-use development, Malaysia

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### INTRODUCTION

The construction industry has always played a pivotal role in a nation's economic growth. Malaysia, as a developing nation, has been executing various construction projects. The overall performance of the Malaysian construction sector recorded positively in all key indicators in 2015. Gross production was RM177.9 billion in 2015, a rise of RM86.6 billion compared to 2010, with an annual compound growth rate of 14.3 per cent (Department of Statistics Malaysia, 2017). It clearly shows a steady average increase of RM17.32 billion annually. Hence, the contribution of the construction industry has brought about a positive impact on the growth of Malaysia.

With the magnitude of contribution from the construction industry towards the country's economic growth, ensuring project success has to be the utmost important task of a project manager. Project managers often rely on their experiences managing other projects without clear guidance of possible project failure factors. Moreover, although research on project delay has been mushrooming around the world with attempts to put contingency measures into action, delay remains a global phenomenon in the construction industry (Riazi and Lamari, 2013).

Based on the findings of Sambasivan and Soon (2007), an indicator of successful project delivery is the timely delivery of projects within the budget and to the extent of the quality standard defined by the client. The failure to achieve targeted time, budgeted costs and stated quality lead to numerous unforeseen adverse effects on the projects. Furthermore, the study conducted outlines the ten most essential causes of project failure, which includes lack of communication between parties.

Considering that the construction industry in Malaysia is fragmented, it leads to inefficiencies due to different entities conducting various activities often in isolation throughout the entire construction activity. In the prevalent labour-intensive

construction activities, the lack of project integration tends to suffer added costs from conflicts, rework and longer construction times (Kog and Ph, 2019). Communication is the primary tool for integration and keeping close contact with all activities in a project site.

Therefore, project communications management plays a crucial role in project success, especially in the construction industry. It is equally important to identify the failure points in communications management and formulate a remedial action. Hence, the study aims to examine the causative failure factors of communications management in mixed-use development projects in Malaysia.

### LITERATURE REVIEW

#### Mixed-use development

Mixed-use development is usually related to contemporary planning, which forms an important premise for the common paradigms of New Urbanism and sustainable development. In the 1920s, the idea of zoning was adapted to separate land use, which was seen as incompatible in the vicinity (Grant, 2002). This was supported by the planners who kept land use commonality in the urban environment.

The theory of mixed-use, especially in urban centers, brings more variety and vitality into the urban fabric. Housing and working areas, as well as other compatible uses, should be closely linked in time and space to eliminate the need for travel and support energy conservation as well as reduce emission (Hoppenbrouwer and Louw, 2005).

Furthermore, because of the depletion of land resources and the concern for the functionality of the town, cities around the world have begun to assign floor space to public institutions and functions required for their residents' well-being within mixed-use high-rise towers (Mualam *et al.*, 2019). As a result, this helps in tackling life's complexity and the need to promote diversity and urban vitality.

Therefore, most developers in Malaysia have started to develop alternative marketing strategies to their development plans to enhance their consumers' quality of life and their commercial goals of increasing marketability and financial returns. Several measures were established to accentuate the developers' market positioning (Alias *et al.*, 2011). Hence, environmentally focused and friendly planning projects, park provision and leisure facilities were introduced.

By the year 2010, transportation and economic patterns have changed in favour of renewal projects towards modern planning. Mixed-use development has recovered popularity with its promise to restore vitality, ambient consistency, equity and productivity to the post-industrial city (Al-Kodmany, 2018). These factors contribute to an urban environment that is active at all hours and optimises infrastructure utilisation. Besides, mixed-use development allows people to live close to places where they can visit, work or play.

Additionally, according to Grant (2002), transit oriented development establishes a system of metropolitan areas with clusters of uses associated with the density from transit stations. This mixed-use development idea has proved popular as a justification for redeveloping cities with good transit systems. Commercial, office, entertainment and high-density residential developments are now located close to the station.

#### **Project Communications Management**

Communication is essential in executing project tasks in any industry and certainly applies to the construction industry. Project communications management is a process that ensures information on the project and the needs of the stakeholders are met through the implementation of activities (PMI, 2017). It is very crucial to ascertain that effective information exchange is achieved throughout the project.

Based on the ideas of BG Zulch (2014), communication is the transmission of meaning from one person to another or many people, whether verbally or non-verbally. Therefore, leadership communication skills are the essential skills that a project manager must learn to be successful. Another critical view is that communication can have different meanings, contexts and types depending on the specific discipline (Abdul Rahman and Gamil, 2019).

In the construction industry, communication can be defined as the mutual exchange of project information and processes with the assurance of creating an understandable platform between receiver and sender. Thus, a project manager is required to develop an interpersonal skill in understanding and disseminating information in the most appropriate manner.

Moreover, the construction business is a dynamic enterprise with multiple stakeholders whose relationship involves the analysis and transmission of information. Well communicated project information would help improve the performance of the project in terms of cost, time, quality, sustainability and comfort (Olanrewaju *et al.*, 2017). On the contrary, effective communication in construction is severely hampered by lack of adequate data channels, insufficient channels and unreliable data transfer. Therefore, it is vital to establish communications channels in the construction industry to fasten and ease the process of communication.

The degree of efficiency in terms of information flow plays a vital role in achieving project goals, which ensures that sending and receiving the information must be timely, consistent, appropriate and actionable. Khanyile *et al.*, (2019) highlights the importance of incorporating communications management practices that correlate with successful project outcomes.

Additionally, project communications management measures are suggested to be applied during the planning, executing as well as monitoring and controlling process stages in a project (PMI, 2017). During this process stage, it is equally important that the project manager develops a communications management plan before managing and monitoring the outcome. The evidence suggests that the implementation of the communications plan and regular time plan review are critical factors in project management activities to ensure the efficiency of project management (Badewi, 2015).

Olanrewaju *et al.*, (2017) expresses the opinion that communication is effective when the recipient understands the sender's information as intended. Details in the form of sketches, specifications, notes, letters, memos, templates, catalogues, instruction manuals and pictures should be processed, retrieved and shared at every point of the construction lifecycle. Usually, the information in various forms helps to increase the level of understanding of the tasks involved.

Through observation, construction companies that emphasize communication perform five times better than those which did not prioritise effective communication. Companies that effectively communicate complete more than 80 percent of their construction projects within budget, on schedule, in high quality and achieve other value systems for customers (PMI, 2013). These findings further strengthen the importance of effective communications practises in projects.

The lack of a shared language among team members, the tension in the workplace, superiors and the attitude of subordinates towards site workers, misinterpretation of orders and poor communication skills among employees are seen as causes of ineffective communications. As a result, the Malaysian construction industry is experiencing high cases of delays, overruns, poor quality, health and safety issues, emissions and sustainability issues (Olanrewaju *et al.*, 2017).

Due to the complexity and changing nature of construction projects, poor communications tendency in the construction industry is a significant issue affecting all construction industries around the world. Thus, achieving effective communication is a major challenge in the construction industry. As a result, the delay caused can be in the form of the slow flow of information, inappropriate communication channels, inaccurate design and incorrect interpretation requiring reworks (Gamil and Abdul Rahman, 2018).

According to PMI (2013), it was found that ineffective communication was the primary cause of one third of project failures. In the same way, Riazi and Lamari (2013) expressed the opinion that lack of organisational communication is one of the leading root causes of project delays reported in Malaysia. Communication is seen as a critical factor of success in projects, however despite this, there are few empirical studies on this area. Then again, it can be noted that project communications management processes are poorly discussed (Molena and Rovai, 2016).

Table 1 illustrates the communications management failure factors particularly in a construction industry as discussed by Abdul Rahman and Gamil (2019), Harikrishnan and Manoharan (2016), Reymen *et al.* (2006), Olaniran (2015), Petter and Nils (2014), Zulch (2014) and Olanrewaju *et al.* (2017). Based on the discussion, it is apparent that most of the failure factors can be identified through the common communication channels in a project. The most important factor is informal communication and project reports, whereas the least important factor is the resource breakdown structure.

**Table 1: Failure factors in communications management**

No.	Communication Channel	Abdul Rahman and Gamil (2019)	Harikrishnan and Manoharan (2016)	Reymen et al. (2006)	Olaniran (2015)	Petter and Nils (2014)	Zulch (2014)	Olanrewaju et al. (2017)	Frequency of appearance
1.	Informal communication	/	/	/	/	/	/	/	7
2.	Project reports	/	/	/	/	/	/	/	7
3.	Formal communication	/	/	/	/	/	/	/	6
4.	Site review meeting	/	/	/	/	/	/	/	6
5.	Team meeting discussion	/	/	/	/	/	/	/	6
6.	Work breakdown structure	/	/	/	/	/	/	/	6
7.	Organisational breakdown structure	/	/	/	/	/	/	/	5
8.	Record management system	/	/	/	/	/	/	/	4
9.	Technology	/	/	/	/	/	/	/	3
10.	Employee suggestion scheme	/	/	/	/	/	/	/	2
11.	Resource breakdown structure	/	/	/	/	/	/	/	1

Source: Adopted and modified from Abdul Rahman and Gamil (2019), Harikrishnan and Manoharan (2016), Reymen *et al.* (2006), Olaniran (2015), Petter and Nils (2014), Zulch (2014) and Olanrewaju *et al.* (2017)

**LIMITATION**

The limitation of the study is subjected to the type of construction project where respondents gave their views based on mixed-use development scenarios. Apart from that, the study is limited to those involved in mixed-use development projects in the Klang Valley.

**METHODOLOGY**

This paper was prepared through literature review and questionnaire survey followed by data collection among respondents involved in mixed-use development projects in Malaysia. Based on the literature review, 11 factors and 44 items were identified. These factors and items were evaluated by 141 respondents from the Malaysian construction industry, namely consultants, contractors and developers. Data analysis was done using SPSS 23.0 to calculate the relative importance index (RII), rank, average relative importance index (Ave RII) and average rank (Ave Rank). The value of RII indicates the level of agreement on the factors of communications management failure in the mixed-use development projects in Malaysia.

**RESULT AND DISCUSSION**

Table 2 displays the result of the analysis carried on the causative failure factors of communication management in mixed-use development projects in Malaysia based on identified communication channels. The most critical causative failure factor is the team meeting discussion. The respondents demonstrate that there is lack of collaboration between the stakeholders due to poor representation during the discussion. This also reflects on the inadequacy of mutual respect, trust and confidence among the stakeholders. The second most critical factor is the project reports mainly due to improper communication time management and delay in information flow. The study also indicates the site review meeting as the third most critical causative failure factor of communications management in mixed-use development projects. The

respondents believe that a more established reporting mechanism and a communications plan helps in reducing failures in construction projects.

The respondents expressed that the resource breakdown structure is the fourth communications management failure factor. Respondents believe that clear project objectives, proper planning and correct instructions will be able to reduce failures in communications management. The fifth failure factor is the organisational breakdown structure caused mainly by a weak organisational structure and lack of experience. Formal communication is the sixth failure factor in communications management. Respondents reflected that an effective communications system, as well as reliable communication management, will positively impact the communications in the construction industry. The record management system has been rated as the seventh failure factor. Contractual barriers, lack of detailed drawings, inaccessibility to project information, among others causes failure in communications management. Following next is the work breakdown structure rank as the eight failure factor mainly due to lack of communications related training.

The third least important failure factor of communications management is informal communication due to personal factors mainly contributed by fear to communication, poor communication skill, introvert and language barrier. Employee suggestion scheme to overcome issues arising from different methods and terms as well as the improper communication channel is ranked as the tenth failure factor. The least critical failure factor of communications management is technology. Respondents believe that even if communication related technology is embraced and expanded, it will have a minimal impact on reducing the failure factors of communications management in mixed-use development projects.

**Table 2: Causative Failure Factors of Communications Management in Mixed-use Development Projects in Malaysia**

Communication Channel	Causative failure factors of communication management in mixed-use development projects in Malaysia	RII	Rank	Ave RII	Ave Rank
Team Meeting Discussion	1 Lack of collaboration among stakeholders	89.36	1	84.51	1
	2 Lack of representation among stakeholders	85.11	2		
	3 Lack of mutual respect among construction team	83.40	3		
	4 Lack of trust among construction team	82.55	4		
	5 Lack of confidence between stakeholders	82.13	5		
Project Reports	6 Improper communication time management	81.28	1	78.94	2
	7 Delay notification of change hence slow information flow among construction team	76.60	2		
Site Review Meeting	8 Poor progress reporting mechanism	76.17	1	75.74	3
	9 Lack of communication plan	75.32	2		
Resource Breakdown Structure	10 Lack of clear project objectives	76.17	1	74.72	4
	11 Poor planning	75.32	2		
	12 Incorrect instructions	74.89	3		
	13 Poor coordination	74.47	4		
	14 Incorrect technical information	72.77	5		
Organisational Breakdown Structure	15 Weak organisational structure	77.87	1	74.68	5
	16 Lack of construction sector experience	74.89	2		
	17 Different level of education among construction team	73.62	3		
	18 Different type of skill among construction team	72.34	4		
Formal Communication	19 Lack of effective communication system	76.17	1	73.87	6
	20 Poor communication management	74.89	2		
	21 Lack of communication coordination	72.77	3		
	22 Lack of effective communication platform	72.77	3		
	23 Lack of institutional support	72.77	3		
Record Management System	24 Contractual barriers requires high confidentiality	74.89	1	73.83	7
	25 Poor construction detailed drawing	74.89	1		
	26 Inaccessibility of project information	74.04	2		
	27 Constant review of contract document	71.49	3		
Work Breakdown Structure	28 Lack of communication related training	79.15	1	73.33	8
	29 Lack of communication procedure	73.19	2		
	30 Complexity of construction industry	67.66	3		
Informal Communication	31 Fear to communicate	74.47	1	70.74	9
	32 Poor individual communication skill	74.04	2		
	33 Lack of effective communication between construction team	73.62	3		
	34 Language barrier among construction team	69.79	4		
	35 Developed self-barrier / introvert personality	69.36	5		
	36 Diversity of culture among construction team	69.36	5		
	37 Diversity of ethics among construction team	68.94	7		
	38 Gender differences among construction team	66.38	8		
Employee Suggestion Scheme	39 Usage of different construction methods	71.49	1	68.94	10
	40 Usage of different construction terms	70.64	2		
	41 Improper communication channels	64.68	3		
Technology	42 Lack of support for effective communication technology	64.68	1	63.69	11
	43 Lack of support for advance communication technology	64.26	2		
	44 Communication related technology malfunction	62.13	3		

\*\*\*Note: RII= Relative Importance Index; Ave RII= Average Relative Importance Index; Ave Rank = Average Rank.

After examining both Table 1 and Table 2, the most critical causative failure factor of communications management differ between the literature review and questionnaire survey. The literature review indicates that informal communications and project reports play an essential role, whereas the survey reflects that team meeting discussions are crucial to eliminate the failure factor. This can be seen as the team meeting discussions have an adverse impact on communications management in mixed-use development projects in Malaysia. Team meeting discussions typically allow for information exchanges as well as updates on current development in the project that indirectly encourages communications among stakeholders.

**CONCLUSION**

In conclusion, the study found that team meeting discussions are the most critical causative failure factor of communications management in mixed-use development projects in Malaysia. It is followed by project reports (2), site review meeting (3), resource breakdown structure (4), organisational breakdown structure (5), formal communication (6), record management

system (7), work breakdown structure (8), informal communication (9), employee suggestion scheme (10) and technology (11). The respondents believe that team meeting discussion helps to eliminate the failure factor by providing a discussion platform and effectively exchange information. Hence, organising frequent team meeting discussions will help to reduce mixed-use development project failures in Malaysia. However, a more comprehensive finding can be established through further studies in other types of development projects. It will be beneficial in developing a framework to reduce failures in communications management.

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