

# The Roles, Challenges & Improvement of Project Manager in Project Financial Management in Building Development in Penang, Malaysia.

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**Abstract**— Project Manager holds roles and responsibilities to ensure the success of construction projects for his organisation. And one of the roles is to ensure the well-management of Project Financial Management in his organisation. Recent research has identified project cost overrun has been a major issue in construction industry. These project cost overrun cases have been repeating and have reduced the profit and revenues of the project owners. Therefore, it comes across the researcher's mind of what the project managers who work for developer companies have been doing in order to overcome repeated cost overrun cases in the near future project developments. Hence, the set objectives of the research are: 1) To identify the important roles of Project Manager in Financial Management in building project development in Malaysia, 2) To identify challenges faced by Project Manager in Financial Management of building project development in Malaysia. 3) To identify solutions to overcome such challenges faced in Financial Management in building project development in Malaysia. However, due to time constraint, this research is limited and carried out in Penang, which is the second-smallest state in Malaysia, with strong population growth and has undertaken numerous construction projects in Malaysia. The research methodology used for this study is qualitative approach. Semi-structured interviews are used as research instrument for the data collection for this research. An overall of six interviews had been conducted with highly experienced Project Managers in Penang construction industry who has the knowledge and experiences in the Financial

Management of building development. The data from the successful interviews are then been analysed using content analysis method in which the data collected are categorized into groups in table forms. From the findings, the respondents had defined the Project Financial Management relating to three main aspects. Four (4) out of six (6) respondents are having moderate involvement and two (2) respondents are having high involvement in the Financial Management in building development in Penang. The research findings had also identified five (5) major roles of project manager in Project Financial Management. Furthermore, five (5) major challenges of project manager in Project Financial Management were also identified. Finally, research findings also identified four (4) major solutions to overcome the challenges faced by project manager in Project Financial Management. Ultimately, this research is anticipated to create awareness of the important roles of Project Manager in Project Financial Management to mitigate the cost overrun issues in construction projects.

**Keywords**— Construction Industry, Cost Overrun, Financial Management, Penang, Project Management.

## 1. Introduction

The importance of Project Manager is undeniable in construction industry. Project Manager carries high responsibility in construction site, where every small decision made is critically important towards the success of the construction project. Project Managers monitor construction processes, ensure safety compliance of construction site, ensure project quality, ensure compliance to local

authorities' requirements, and ensure project delivery in accordance to time and cost.

However Project Manager's role in construction industry is far beyond and Financial Management is one of it. The task of Financial Management is delegated to Project Manager in term of project specific or so called Project Financial Management. The role of Project Manager in Project Financial Management is critically important due to the norm occurrence of cost overrun in construction projects [1], [2]. This is due to identified significant causes of cost overrun such as poor project finance, financial difficulty of owner, lack of cost planning and monitoring during pre and post contract stages, inaccurate quantity take-off, inaccurate project cost estimation, and poor financial control on site are directly related to poor Project Financial Management [3] - [7].

Furthermore, cost overrun in construction projects has caused bad impacts towards every aspects and parties in construction industry. This include project suffering from negative cost variance such that final project cost exceeds contract sum [2]. Other impacts of cost overrun are project delay, negative effects in terms of growth in adversarial relationships among clients, contractors and consultants, mistrust, litigation, arbitration and cash-flow problems [8]. Therefore, knowing the disastrous impact of cost overrun in construction projects, there is a need to study into the roles of Project Manager in Project Financial Management, the challenges that are faced and the solutions to overcome those challenges.

## 2. Literature Review

### 2.1. Definition of Financial Management

Financial Management is an integral part of overall management [9]. The follows are some definitions on Financial Management:-

1. Financial Management is the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations [9].
2. Financial Management is the applying of general management principles such as planning, organizing, directing and controlling the financial activities such as procurement and utilization of financial resources of the organization [10].

3. Financial Management is defined as an activity concerned with planning, raising, controlling and administering the funds used in the business. [11].

In short, financial management is the acquisition and utilization of project funds which require management principles such as planning, monitor and controlling effectively and efficiently the funds to achieve the organization's objectives.

### 2.2 Objective of Financial Management

Financial Management in business organisation has a few objectives. These are presented in Table 1.

**Table 1.** Objective of Financial Management

Objective of FM	Description
Profit maximization	This is a traditional and narrow approach. Any kind of business economic activity, including building project development, its ultimate aims is to gain profit. In building project development, the ultimate aim is to gain profit from the sales of the project. Profit maximization will be considering all the possible ways to increase the profitability, including the business of project development.
Wealth maximization	Wealth maximization is modern approach. The term wealth is referring to the wealth of the shareholders in the business concerned. Its ultimate aim is to improve the value or wealth of the shareholder.
Funds adequacy	To ensure sufficient and regular supply of funds for business running.
Funds optimal utilization	Once funds are procured, they should be utilized in maximum possible way at least cost.
Liquidity	There is a sound balance maintained between debt and equity capital, in order to secure cash flow.
Safety on investment	Investment on the development project if the project is proven is feasible to be take off after the market survey and feasibility

	studies.
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(Source: [9], [10])

### 2.3 Functions and Importance of Financial Management

Functions of Financial Management are presented in Table 2.

**Table 2.** Functions and Importance of Financial Management

Functions of FM	Description
Acquisition of funds	Funding is the fundamental and main business concern. The choice of sources of funds can be from loans from banks and financial institutions, public deposits to be drawn like in form of bonds, and also issue of shares and debentures. The choices of finance are depend on the relative merits and demerits of each kind of source and the financing period needed.
Investment of funds	The funds available in company have to be properly invested to create more future funds for company. Financial Manager or Project Manager with the help of finance consultants from banks or financial agencies are to help to decide to allocate funds into profitable ventures to ensure safe investment and regular returns are possible.
Financial planning and control	The Project Manager has to decide how to plan, allocate and utilize and control the funds wisely in project development to create more profitable ventures.
Increase value of the company	Financial Management is crucial to increase the wealth of the investors and shareholders in the company. The ultimate aim of any business including project development is concerning to achieve maximum profit that leads to maximize the wealth of the investors and shareholders.
Cash management	Cash is required in any business, including building project

	development for many purposes such as payment of salary, payment to contractors, utility billings, payment to creditors, meeting current liabilities, and purchasing of raw materials. Project Manager in this case is involved in the decision making regarding to cash management.
Promoting savings	Promote cost savings in any business; including building project development is an effective Financial Management to allow higher profit gaining and maximization of wealth of company. These including savings in project cost, corporate operational cost and overhead cost.

(Source: [9], [10])

### 3. Methodology

This study adopted qualitative research method using semi-structured interview session with six (6) experienced project managers. The number of six (6) respondents is found to be sufficient and acceptable by [12] and [13] which recommend six respondents for qualitative research, and is also in accordance with the recommendation by [14] to use appropriate sample size for interview to avoid ending up with repetitive information.

All respondents interviewed had over fifteen (15) years of experience in construction industry (refer Table 3). All respondents are from property developer companies and held high managerial position in their respective companies with vast experiences in Project Financial Management in building project development. This ensures that they can provide good point of view regarding Project Financial Management as well as ensuring that the information gained poses high level of trustworthiness. All respondents were contacted via phone calls and interviews were carried out using face-to-face approach. All interview sessions were duly recorded while responses remained anonymous.

Due to time constraint, this study only focused on the state of Penang. Penang was chosen due to it being known as the second-smallest state in Malaysia with strong population growth coupled with a thriving real estate market and burgeoning

tourism industries that has undertaken numerous construction projects in Malaysia in recent years.

**Table 3.** Respondents' Profile

Respondent	Working Experience (Years)
A	17 years
B	20 years
C	20 years
D	19 years
E	More than 20 years
F	29 years

#### 4. Results and Discussion

This section will present and discuss findings from this study.

##### 4.1. Definition of Project Financial Management

Table 4 presents the respondents definition of Project Financial Management.

**Table 4.** Definition of Project Financial Management.

Main Aspect	Description	Respondents
Project funding	Project funding	C
Project budget and cost	Project budgeting	A,D,E,F
	Cost planning	D,E
	Cost control	B,D,F
	Cost monitoring	A,B
Cash flow	Cash flow control	A
	Projection of project cash flow	E
	Reporting financial and final account	A

Based on Table 4, it appeared that there were similarities in defining project financial

management by all respondents. These similarities clearly suggest that Project Financial Management is related to project funding, project budget and cost (planning, control and monitor) as well as cash flow (projection, control and reporting).

##### 4.2. Involvement of Project Manager in Project Financial Management

Table 5 presents the respondents extent of involvement in Project Financial Management.

**Table 5.** Respondents' Involvement in Financial Management

Respondent	Working Experience (Years)	Involvements
Respondent A	17 years	Moderate
Respondent B	20 years	Moderate
Respondent C	20 years	Moderate
Respondent D	19 years	High
Respondent E	More than 20 years	Moderate
Respondent F	29 years	High

Based on Table 5, four (4) out of six (6) respondents had moderate involvement in Project Financial Management, while another two respondents were highly involved. It can be realized that Respondent E, whom had more than 20 years working experience, only experienced moderate involvement while Respondent D with only 19 years working experience had a high involvement in Financial Management. This apparently proves that Project Managers with longer working experience does not necessarily denote that he/she has had high extent of involvement in Financial Management; it mostly depend on the job scope defined by the company policies.

##### 4.3. Roles of Project Manager in Project Financial Management

Table 6 presents the perception of the respondents in regard to the roles of Project Manager in Project Financial Management. All responses were based

on respondent's experiences throughout their career.

**Table 6.** –Roles of Project Manager in Project Financial Management

Roles	Description	Respon- dents
Project funding	Secure funding for project	B, C
Project budgeting & cost	Monitor and control project cost.	A, D
	Ensure project within budget.	A, B, C
	Ensure accuracy of cost estimation	D, E
Cash flow	Control and monitor cash flow	A, C, E, F
	Forecast, plan and prepare cash flow projection.	A, C, E, F
	Ensure smooth cash flow	D, E, F
Time frame	Securing time delivery of project.	B, D, E, F
Coordinati on	<p>Consultant</p> <ul style="list-style-type: none"> <li>- Coordinate the consultants' construction drawings to be buildable on site.</li> <li>- Coordinate the amendment or changes of drawings with the consultants and contractors to avoid project delay.</li> </ul>	E, F
	<p>Marketing department</p> <ul style="list-style-type: none"> <li>- Monitor the stages of progressive claim from buyer.</li> <li>- Ensure the sequence of construction phase in path with the property selling.</li> <li>- Ensure project department work closely with marketing department</li> </ul>	D, E

	<p>Top management</p> <ul style="list-style-type: none"> <li>- Refer back to management for decision making purpose.</li> <li>- Highlight major issues affecting project cost to top management for important decision making.</li> </ul>	D, F
	<p>Contract department</p> <ul style="list-style-type: none"> <li>- Refer back to contract department for budgeting purpose.</li> </ul>	F
	<p>Local authorities</p> <ul style="list-style-type: none"> <li>- Ensure project is executed according to rules and regulation of local authorities.</li> <li>- Be aware of the new implementation on the predevelopment charges by local authorities.</li> </ul>	B, D
	<p>Contractor</p> <ul style="list-style-type: none"> <li>- Ensure project is done according to specified scope and specification.</li> <li>- Ensure project follow correct construction methods and also Standard of Procedure set by company.</li> <li>- Avoid redo construction work.</li> </ul>	A, B
Others	<p>Create data system and reference for cost estimating, project budgeting and project cost monitoring purpose.</p>	A
	<p>Determine the profit margin of the proposed development.</p>	B
	<p>Resource allocation such as machinery and labours.</p>	C
	<p>Familiar with project site topography.</p>	D

	Has some saying on how much contractor can claim monthly.	A
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With reference to Table 6, opinions from the respondents were categorized into six (6) groups. Five out of the six groups were categorized as major roles due to these roles being significantly mentioned by a few respondents during the interviews. The five (5) major roles of project manager in Project Financial Management are: 1) project funding, 2) project budgeting and cost, 3) cash flow, 4) time frame and 5) coordination. The sixth group, labelled as 'others' refers to the minor roles of Project Manager, as the roles are being stated once only by the respondent and appeared to be non-significant.

#### 4.4 Challenges Faced by Project Manager in Project Financial Management

The respondent's perceptions regarding the challenges faced by Project Manager in Project Financial Management are tabulated in Table 7. All respondents have contributed their opinion based on their own working experiences.

**Table 7.** – Challenges Faced by Project Manager in Project Financial Management

Challenges	Description	Respondents
Uncertainty in construction industry	Uncertainty is still at large in construction industry such as foreign labour policy.	A
	Increase of material price	D
	Increase in labour cost	D
	Changing guidelines of the local authorities affecting the work programme and completion time, thus extra cost to the project.	E
	Construction industry is facing short construction period timeframe whereby contractors are facing	F

	short working hours set by local authorities.	
Bad working attitude and practices in construction industry.	Bad attitude of working (ignorance, greedy and laziness, blaming, more talking than solving) affect teamwork performance thus project Financial Management.	B
	The wastage of material and equipment tools due to labour or supplier problem.	D
	The defects due to discrepancy of the plans which causing variation order and extra cost for rectification on the work done.	D
	Mistake done in cost estimation and tender documentation due to lack of experience of Quantity Surveyor.	F
Acquisition of financing for project funding	Acquisition of capital for project funding.	C
	Acquiring financing for project.(end financing, which very much dependant on project sales & upfront cash)	E
Selection of contractor and subcontract or	Selection of the contractor for the project.	E
	Selection of subcontractors, working attitude and workmanship quality.	F
Evolution of new technology and technique	Introduction of new construction technique and new technology.	A
	Fast evolution of technology.	C
Business ideology	Business ideology of the company bosses.	B

Based on Table 7, the challenges faced by Project Manager could be categorized into six (6) groups

with five (5) of them being the major challenges. They are: 1) uncertainty in construction industry, 2) bad working attitude and practices, 3) acquisition of financing for project funding, 4) selection of contractor and subcontractor and 5) evolvement of new technology and technique. These challenges were categorized as major challenges due to it being repeatedly mentioned by respondents. On the other hand, one minor challenges was discovered namely 'the business ideology of the company boss', which was mentioned only once.

#### 4.5 Solutions to Overcome Challenges Faced by Project Manager in Project Financial Management

Table 8 publishes the respondent's point of view in term of the beneficial solutions towards overcoming the challenges that Project Managers face during Project Financial Management.

**Table 8.** – Solutions to Overcome Challenges Faced by Project Manager in Project Financial Management

Solutions	Description	Respondents
Accept and apply of new technology	Construction industry has to accept the evolvement of new technology, to prepare for new changes from time to time, and to use the new technologies to shorten the construction time and settle labour shortage problem.	A, D, F
Training	Educate, provide trainings to workers, and send construction staffs for seminars to update their knowledge and skills.	A, B, C, D
Improve alertness	Project Manager to improve their alertness in internal and external environment, such	A, B, D, E

	as the changing local government guidelines, compliance to local authorities' requirement, current construction problems, alternative material within quality targeted, related market price,	
Improve working attitude and practices	Improve communication and cooperation for better work quality, all construction players to work professionally, construction site to monitor labours' productivity and control material wastages, and practice the culture of prevention is always better than cure.	B, D, E, F
Improve track record	Check the contractor's track record and capability prior project awarding.	E
	Ensure Developer's maintaining good track record (good financial report and good reputation) to secure project financing.	C

In accordance to Table 8, responses were categorized into five (5) groups with four (4) of them being major solutions namely: 1) accept and apply of new technology, 2) training, 3) improve alertness, and 4) improve working attitude and practices. On the other hand, "improve track record" appeared as least significant due to it not being consistently mentioned by respondents.

## 5. Conclusion

The final purpose of project manager's role in project financial management is to optimize the

organization financial and economic benefits from project development. Therefore, the involvement of project manager in project financial management is crucial to mitigate the cost overrun issues in construction projects. From the findings above, all respondents' responses had proven the important role of project manager in project financial management. All respondents also understand the elementary roles in project financial management. All respondents themselves in average are also having moderate involvements in the project financial management in their real work life. This directly proven that their roles and responsibility in project financial management is undeniable crucial for the success of construction projects. Likewise, project manager faced several challenges (refer Table 5) in the task of project financial management as construction industry is well-known with uncertainties and different problems. Several solutions (refer Table 6) were also recommended by all respondents to help project manager to overcome the challenges faced in project financial management. In conclusion, financial management is an important criterion in achieving successful construction project and if not well managed, it could lead to serious problem of cost overrun [15]. Finally, it is anticipated that this paper will increase the awareness of the important role of project manager in project financial management in project development in construction industry.

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