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# THE INTERNATIONAL COMPETITION ON SUSTAINABLE EDUCATION



20TH AUGUST 2025

TRANSFORMING EDUCATION, DRIVING INNOVATION AND  
ADVANCING LIFELONG LEARNING FOR EMPOWERED WORLD

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THE EXTENDED

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ABSTRACT

C A T E G O R Y   C & D

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# INNOVATION IN EDUCATIONAL RESEARCH

## A METHODOLOGY TO INVESTIGATE THE CHALLENGES AND STRATEGIES FOR IMPROVING LIFE CYCLE COST (LCC) PRACTICE IN THE MALAYSIAN URBAN RENEWAL

Nur Adlina Shahimi\* & Mohd Fairullazi Ayob

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### ABSTRACT

*Malaysia began to look into urban renewal in 2015, and subsequently, in 2020, the government planned to establish the Urban Renewal Act (URA), aimed at redeveloping decayed buildings over 30 years old, notably in public housing. Many commentators emphasised the paramount importance of financial sustainability in urban redevelopment. Hence, there is increasing demand to adopt life cycle cost (LCC) practice in urban renewal, an economic assessment technique that provides stakeholders and cost estimators with valuable total cost information, enabling more accurate forecasts of renewal and future costs, resulting in better planning for maintenance, operation and replacement throughout the urban renewal service life. Nevertheless, the adoption of LCC in the Malaysian urban renewal is still at a rudimentary stage, with a need to improve the quality of input data used. Therefore, this study presents a proposed methodology to investigate the challenges in managing and optimising the life cycle cost in urban renewal projects as well as the appropriate strategies that can be recommended to improve the LCC practice in the Malaysian urban renewal projects. The methodology is designed with a qualitative research strategy that incorporates a semi-structured interview approach to interview respondents who have established knowledge, skills or experience in urban renewal and cost estimation. The study is expected to add value to the improvement of LCC practices in the urban renewal projects in Malaysia, in alignment with the Construction Industry Transformation Programme (CITP) and the upcoming policy of the Urban Renewal Act (URA).*

**Keywords:** Methodology, Urban renewal, Life cycle cost

### INTRODUCTION

While many abandoned, decayed and old buildings are being redeveloped abroad, Malaysia presently is still debating the Urban Renewal Act (URA) policy, which has been scheduled to be presented for endorsement in the Parliament by mid-2025. To maintain competitiveness and continue to attract investments to the country, Minister of Housing and Local Government (KPKT), Nga Kor Ming, stated

that the URA policy was introduced as a crucial initiative to rejuvenate the city centre, particularly in Kuala Lumpur (Azhar & Lee, 2024). Simultaneously, the government is moving forward with the initiatives to renew or rebuild Kuala Lumpur's decaying areas, identifying 139 locations for redevelopment under the Kuala Lumpur Structure Plan 2040 (KLSP2040) (The Star, 2024). Many commentators emphasised the paramount importance of financial sustainability in urban redevelopment. Hence, there is increasing demand to adopt life cycle cost (LCC) practice in urban renewal, an economic assessment technique that provides stakeholders and cost estimators with valuable total cost information, enabling more accurate forecasts of renewal and future costs, resulting in better planning for maintenance, operation and replacement throughout the urban renewal service life. Nevertheless, the adoption of LCC in the Malaysian urban renewal is still at a rudimentary stage, with a need to improve the quality of input data used. Therefore, this study presents a proposed methodology to investigate the challenges in managing and optimising the life cycle cost in urban renewal projects as well as the appropriate strategies that can be recommended to improve the LCC practice in the Malaysian urban renewal projects.

## PROPOSED METHODOLOGY

To achieve the study aim effectively, the methodology is designed with a qualitative research strategy that incorporates literature review and semi-structured interview approach. As the adoption of LCC within the Malaysian urban renewal is still limited, a qualitative research strategy allows a deeper and more thorough understanding of the cost factors of urban renewal in Malaysia. Simultaneously, this research strategy provides insights into the experiences and perspectives of various urban renewal stakeholders, whose actions have a direct impact on life cycle costs. Hence, a semi-structured interview is proposed to interview respondents who have established knowledge, skills or experience in urban renewal and cost estimation. These interviews are expected to produce valuable information that complements the literature findings as well as identify the challenges and strategies in implementing LCC within urban renewal projects. The criteria for respondent selection are i) possession of qualifications in the built environment, ii) have several years of experience in urban renewal construction or cost estimation, iii) provide their thought or discussion or article or paper related to urban renewal or cost estimation and iv) willingness and enthusiasm to support the study.

As the research is still ongoing, mapping of objectives and methodology serves to ensure the goals of the research correspond with the methods used to carry it out. The overall coherence, validity and effectiveness of the study depend heavily on this mapping as illustrated in Table 1 below.

**Table 1.:** Mapping of Objectives and Methodology

| Aim                                                                                                                | Research Objectives                                                                                          | Research Questions                                                                                                  | Research Methodology                                    | Expected Findings                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| To investigate the challenges and strategies of urban renewal in Malaysia from the perspective of life cycle cost. | To investigate the current practice of urban renewal in Malaysia versus other countries.                     | How do urban renewal practices in Malaysia differ than other countries?                                             | i. Literature review.<br>ii. Semi-structured interview. | i. Urban renewal practice in Malaysia.<br>ii. Urban renewal practice in other countries.                                         |
|                                                                                                                    | To identify the challenges in managing and optimising the life cycle cost in urban renewal projects.         | What are the challenges in applying life cycle cost for cost optimisation in urban renewal projects?                | i. Literature review.<br>ii. Semi-structured interview. | Challenges faced by the government and stakeholders in applying life cycle cost for cost optimisation in urban renewal projects. |
|                                                                                                                    | To identify the strategies that can be recommended to improve the life cycle cost practice in urban renewal. | How can a comprehensive and reliable life cycle cost analysis be implemented in urban renewal practice in Malaysia? | i. Literature review.<br>ii. Semi-structured interview. | Strategies that can be recommended to improve the life cycle cost practice in urban renewal in Malaysia.                         |

As mentioned above, the expected findings of the study include identifying the urban renewal practice in Malaysia and in other countries, the challenges faced by the government and stakeholders in applying life cycle cost for cost optimisation in urban renewal projects, as well as the strategies that can be recommended to improve life cycle cost practice in urban renewal in Malaysia. Furthermore, it is expected that the study findings would add value to the improvement of LCC practices in the urban renewal projects in Malaysia, in line with the Construction Industry Transformation Programme (CITP) and the upcoming policy of the Urban Renewal Act (URA).

## CONCLUSION

A methodology is designed to investigate the challenges and strategies for improving life cycle cost (LCC) practice in the Malaysian Urban Renewal. Since the adoption of LCC within the Malaysian urban renewal is still limited, a qualitative research strategy has been proposed as the methodology for the study. The qualitative research strategy incorporates literature review and semi-structured interview approach to interview respondents who have established knowledge, skills or experience in urban renewal and cost estimation to collect data that complements the literature findings as well as identify the challenges and strategies in implementing LCC within urban renewal projects.

## ACKNOWLEDGEMENT

This study contributes to the ongoing research undertaken by the first author as part of the dissertation requirement for the Bachelor of Quantity Surveying programme. The dissertation is being conducted under the supervision of the second author at the Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia.

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