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# Challenges and Opportunities in Revitalizing Colonial Building: Barriers to Adaptive Reuse in Malaysia

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## ABSTRACT

Adaptive reuse of colonial buildings has increased attention as one of the sustainable solutions to preserving architectural heritage buildings while meeting modern needs. However, the implementation of adaptive reuse in Malaysia faces significant obstacles that prohibited the broader implementation of this effort. This study explores the key challenges and opportunities in the adaptive reuse of colonial buildings in Malaysia, drawing on interviews with four professionals from diverse backgrounds, including an architect from the Public Work Department, a conservator and a lecturer in architecture. The findings identified key economic factors, such as the high cost of restoration and the limited profitability of converting buildings into non-commercial spaces like museums and galleries. Additionally, long-term maintenance issues were identified as essential for preventing these buildings from becoming vacant. The study also stresses the fact that government has a responsibility of preserving colonial buildings especially those in its possession and the research finds that there should be sustainable management of colonial buildings. By connecting these findings to existing literature, the paper underscores the need for improved financial support, clearer regulatory frameworks, and stronger public-private partnerships to overcome the barriers to adaptive reuse. The study enriches new insights into the economic feasibility of adaptive reuse and the challenges of long-term building conservation, offering recommendations for policy makers and conservationists.

**Keywords:** *Adaptive reuse; colonial building; barriers*

## 1. Introduction

Malaysia has a rich legacy of buildings [1], each with its own worth and narrative [2], reflected in the architectural styles of previous British, Dutch, and Portuguese rulers. These landmarks, located in places like as Kuala Lumpur, Georgetown, and Ipoh [3,4], represent the nation's cultural and historical histories. However, as urbanisation intensifies, many colonial structures are at risk of degradation or destruction, owing to development constraints unrelated to development growth [5]. In response, adaptive reuse has arisen as an important technique for preserving heritage building while reusing them for modern usage [6,7].

Adaptive reuse is the act of reusing heritage structures for new uses while preserving their historical and architectural importance [8,9]. It provides a sustainable alternative to demolition by prolonging the life of existing structures while minimising the environmental effect of new

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development [10]. Adaptive reuse has been widely used as a technique for sustainable development, historical conservation, and urban redevelopment. However, in Malaysia, this practice is still in its early stages, ambiguous and confusing [11-13]. The procedure confronts substantial challenges, especially when applied to colonial buildings that have been turned into governmental structures.

While adaptive reuse offers several potential, ranging from economic gains through tourism to the preservation of cultural identity, it is frequently confronted with significant hurdles. These include legislative limits [14], significant restoration costs, and opposition from stakeholders who may prefer short-term economic rewards over long-term cultural preservation [15]. Furthermore, there is a lack of consistent rules and incentives to encourage adaptive reuse of heritage buildings, resulting in bureaucratic and financial delays for many projects.

The purpose of this research is to investigate the significant obstacles and potential for adaptive reuse of colonial structures in Malaysia. This project will provide insights into how these hurdles might be addressed to promote more broad adoption of adaptive reuse approaches by studying them through the lenses of an architect and a conservator. Finally, it aims to contribute to Malaysia's continuing discourse on sustainable urban growth and cultural protection by suggesting solutions to these challenges.

## *1.1 Literature Review*

### *1.1.1 Adaptive reuse*

Adaptive reuse is the act of adapting old or underutilised buildings for a use other than their original design while retaining its historical and architectural significance [8]. Adaptive reuse has gained popularity worldwide as an alternative to deterioration since it has several benefits such as lowering environmental effect, protecting cultural heritage, and helping to urban redevelopment [16]. In developed countries, adaptive reuse is often used to maintain heritage buildings, providing economic and social advantages through tourism and community participation [17]. However, adaptive reuse remains an underutilised method in developing countries, including Malaysia, and is frequently hampered by several hurdles.

### *1.1.2 Theoretical framework of adaptive reuse*

Adaptive reuse is a theoretical paradigm that combines historical conservation, urban renewal, and sustainability [18]. By lowering the number of resources needed for new building, adaptive reuse is in line with the ideas of sustainable development, claims [19]. The social and cultural importance of preserving historic structures is also emphasised by heritage preservation theories, which contend that adaptive reuse guarantees the continuation of cultural narratives in urban areas [20]. With the help of established laws and incentives that promote the incorporation of historic structures into contemporary urban environments, adaptive reuse has been effectively applied in nations like Australia, Canada, and portions of Europe [14].

### *1.1.3 Adaptive reuse in Malaysia*

#### *1.1.3.1 Opportunities and challenges*

In Malaysia, colonial buildings, especially those from the British period, represent a significant part of the country's historical and cultural heritage [21]. Cities such as George Town and Melaka, both UNESCO World Heritage Sites, showcase numerous colonial structures that have been adaptively reused for tourism and commercial purposes, contributing to both cultural preservation

and economic growth [22]. By increasing building lifespan and reducing construction waste, adaptive reuse supports Malaysia's drive for green urban planning and presents chances to improve sustainable development [23].

There are also economic advantages due to tourism for heritage building which offers business opportunities [24]. Once converted to boutique hotels, museums and cafes among others they get patronized by both domestic and international travelers hence forming an added economic value zone. Besides, the extension of the use of colonial buildings contributes to community pride since it provides a physical link to the colonial past; creating social solidarity through collective heritage [25].

#### *1.1.3.2 Barriers to adaptive reuse in Malaysia*

In Despite the potential, Malaysia confronts a number of major obstacles to adaptive reuse. One of the most significant barriers is economic. When opposed to dismantling and replacing buildings with new, modern constructions, the expense of repairing and preserving older structures frequently outweighs the possible financial advantages [26]. Private developers are sometimes deterred from investing in adaptive reuse projects by the high expenses of adhering to historical protection legislation and the perceived dangers of preserving historic buildings [15].

Adaptive reuse initiatives are often hampered by regulatory obstacles. Despite being backed by the National Heritage Act (Act 645), Malaysia's legal system does not provide enough incentives for developers to employ adaptive reuse [14]. Modifications to heritage buildings must undergo many levels of official permission, which may be a time-consuming and complicated regulatory procedure. Developers are hesitant because historical rules, which place a strong emphasis on conservation, do not clearly outline the economic viability and contemporary utility of adaptive reuse [27].

Regulatory barriers also impede adaptive reuse efforts. Malaysia's legal framework, although supported by the National Heritage Act (Act 645), lacks sufficient incentives for developers to engage in adaptive reuse [14]. The regulatory process is often slow and complex, with layers of bureaucratic approval required for heritage building modifications. According to Omar *et al.*, [27], heritage regulations focus heavily on conservation but fail to provide clear guidelines for the economic feasibility and modern functionality of adaptive reuse, leading to hesitation from developers.

Another significant impediment is social problems. Because of worries about gentrification, commercialisation, and the possible loss of the building's original cultural importance, local groups may occasionally oppose adaptive reuse initiatives [28]. According to Jaafar *et al.*, [29], there is frequently little community involvement in adaptive reuse projects in Malaysia, with stakeholders and locals not being fully included in the design phase. This lack of participation may result in proposals that put financial gain ahead of cultural preservation, which would cause a gap between the building's historical significance and its current use.

## **2. Methodology**

This research examines the prospects and difficulties of adaptive reuse of colonial buildings in Malaysia using a qualitative methodology, primarily semi-structured interviews. To shed light on the obstacles to the adaptive reuse of colonial administrative buildings in Malaysia, interviews were conducted with four participants (refer Table 1) from a variety of backgrounds: a conservator, an architect from the Public Works Department, and an architecture lecturer. The 45–60 minutes interviews were recorded, transcribed, and subjected to theme analysis. Anonymisation of participant identities was achieved, and ethical permission was acquired. Although generalisability is

limited by the small sample size, the study provides insightful information about adaptive reuse from the viewpoint of important Malaysian experts.

**Table 1**  
The background of participants

Participant	Background <i>Position</i>	<i>Organization</i>	<i>Location</i>
A	Lecturer Cum Registered Conservator	Public University	Kuala Lumpur
B	Architect	Public Works Department	Kuala Lumpur
C	Architect	Public Works Department	Kuala Lumpur
D	Architect	Public Works Department	Johor

### 3. Finding and Discussions

#### 3.1 Economic Barriers

##### 3.1.1 Budget constraint and high cost of maintenance

The financial challenges highlighted by Participant A reflect a well-documented barrier in adaptive reuse projects. As explained by participant A, “The biggest issue is budget constraint. Restoring colonial buildings is incredibly expensive. These structures often require specialized materials and skilled craftsmanship to maintain their authenticity, which drives the costs even higher. It's not just about superficial repairs; we need to address structural integrity, conservation of original features, and ensure the building can meet modern standards of safety and functionality”. The significant expenses of repairing and modifying historic structures are highlighted by earlier research, including that conducted by Shipley *et al.*, [26] and Bullen *et al.*, [16]. According to these authors, adaptive reuse projects can necessitate a large initial outlay of funds, especially when specialised manpower and materials are required to maintain the architectural integrity of older buildings.

##### 3.1.2 Low economic yield

The idea in the literature that adaptive reuse initiatives, particularly those targeted at non-commercial purposes, may struggle with economic sustainability is supported by the interview with participant B, who stated that turning colonial buildings into museums or galleries does not provide financial returns. She stated that, “When you convert the colonial building into a museum or gallery, you have to accept that it's not going to be a big money-maker. These types of uses are primarily cultural and educational, aimed at preserving history and providing public access to heritage, rather than being profit-driven ventures. Museums and galleries, while valuable to the community and important for tourism, don't generate the kind of revenue that can cover the high costs of maintaining these historic buildings, especially when you factor in ongoing operational costs like staffing, utilities, and upkeep”. There isn't much research in the literature on the particular issue brought up by participant B, which is the low profitability of turning colonial administration buildings into non-commercial facilities like galleries or museums. Although financial difficulties are acknowledged in the literature, little attention is paid to how some uses—especially those that are public or cultural—may make these limitations even worse because they don't generate much income.

### 3.2 Maintenance and Sustainability

Participant C brought attention to the possibility that colonial structures might be abandoned if they are not adequately maintained. He stated that, “If proper maintenance isn’t carried out on these colonial buildings, they will eventually be abandoned. Over time, they’ll fall into disrepair, and their condition will worsen to the point where no one will be interested in using or repurposing them”. The statement is in line with earlier studies that highlight how crucial long-term maintenance is to adaptive reuse initiatives. Adaptive reuse is not a one-time endeavour; it needs continuous maintenance expenditure to guarantee the buildings stay functioning and do not deteriorate, according to studies by Langston *et al.*, [17] and Douglas *et al.*, [8]. The possibility of buildings being abandoned due to neglect is consistent with research showing that proper planning is essential to the long-term viability of adaptive reuse projects, especially when it comes to making sure the modified buildings continue to have a function and bring in enough money for maintenance. Although this worry is not a novel discovery in the literature, it does support what is already known about how important maintenance is to the effectiveness of adaptive reuse.

### 3.2 Government Responsibility and Long-Term Conservation

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## 4. Conclusions

This study has highlighted the key challenges and opportunities in the adaptive reuse of colonial buildings in Malaysia, they include sources of funding, high costs of restoration, unprofitable uses like museums and galleries. Further, sustainability of these structures is important and maintain the building properly or else they become vacant or even dilapidated. Regarding the government’s actions more attention was paid to the issues of effective management and preservation of the colonial architecture with the further need in establishing better approaches of colonial building conservation. Despite the fact that these findings corroborate prior studies, new knowledge was identified with respect to the economic issues of non-commercial adaptive reuse and what actual obstacles were experienced by government operated projects. However, it is acknowledged the following limitations in this study: the sample size in this study includes only four participants; thus, may not fully reflect the apparent experiences and views regarding adaptive reuse. This suggests a need for future empirical studies to examine other funding strategies, including public-private partnerships and contracts with government monetary aids for non-profit businesses. Furthermore,

future research should explore appropriate long-term management of government-owned heritage buildings and the place of community involvement in adaptive reuse for architectural conservation and commercial viability. Filling these gaps can help in presenting a better picture of how adaptive reuse can be taken forward in Malaysia.

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