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# Sustainable Development of The Historical City: Revitalization of Bukit Mertajam Through Hybrid Architecture Approach

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**Abstract:** The efforts of historical city revitalization align with the United Nations key sustainable developments in protecting and safeguarding the world's cultural and natural heritage. This study demonstrates the effectiveness of hybrid architecture as an urban catalyst in revitalizing historical cities, as a mimetic between cultural identity preservation and modernization, as employed in the town of Bukit Mertajam. By intertwining diverse elements, hybridity creates "single entities constantly changing and evolving as one," attempting to revitalize the city rather than re-proposing a single concept or idea. Numerous historic towns experienced an urban decline as a result of urbanization, modernization, and rapid social and economic transformations. Indirectly, the gentrification of traditional businesses into boutique hotels and cafes led to the collapse of local businesses and cultures. Most gentrification projects prioritize tourists' interests over the local community. The loss of sense of belonging and the degradation of local identity caused by modernization and gentrification are unavoidable for the town to sustain. There is a lack of harmony in the current gentrification in terms of a balance between socio-economic development, the authenticity of the place, and community empowerment. The study is executed through surveys, where the revitalization of Bukit Mertajam through a hybrid architecture approach is explored. This research provides a fundamental parameter for adopting measures to improve future revitalization projects in socio-economic and cultural heritage support.

**Keywords:** Sustainable developments, hybrid architecture, revitalization, historical town

## 1. Introduction

A consequence of the fast-changing social and economic in many historic cities caused the cities to decay or be replaced by modern cities. A city's identity will be demolished if the city's historic centre is abandoned as it is the core of urban identity. Urban decline is seen as a natural process in urban development, and it causes unwanted changes such as physical decay, increased unemployment, worsening living conditions and arising social issues (Eni et al.,

2016), depopulation, property abandonment, disjointed families, economic reformation, political disenfranchisement, crime, and isolated urban landscape (Rosly & Rashid, 2013). Despite widespread urban planning activities, there is still a lack of public awareness about the value of historic cities. Little attention is given to assimilating old and new structures into a functional whole and involving broader stakeholder groups that better reveal community values and priorities in the planning process (Lamandi, 2004). Development, urbanization, and modern urban growth in Malaysia are divided into three phases based on the urban centres' structure, form, and functions. Most city centres in Malaysia are ancient historic cities, and the conditions of neglect and degradation of city centres are growing. Population in Malaysia raised to 28.3million in mid-2009. The population will increase vastly to accommodate the context of space requirements for economic and social activities (Rosly & Rashid, 2013). Urban problems resulting from rapid population growth, urbanization, and economic development affect the heritage cities in developing nations, including Malaysia. The local government assumed a solution to disperse population pressure from city centres to cater to population growth is to develop new townships. However, without consideration, new townships at the edge of historic cities were sterile, reflected the adaptation of inadequate urban design guidelines, and hence, failed to create harmony with the historic urban fabric. (Said et al., 2013) Revitalization needs to take place in old inner cities to preserve their cultural assets. (Yee Sing & Yoh, 2016)

Today, gentrification and revitalization efforts in deteriorated cities are seen as widespread. However, there is a lack of harmony in current gentrification development to keep the balance between socio-economic development and authenticity of place and community empowerment. Therefore, this study tries to find out methods of hybrid architecture approach in historical town revitalization can be efficient in reviving the local socio-economy while maintaining the balance between development and authenticity of the place and community empowerment.

## 1.1 The Need for Urban Revitalization of Historical Towns

Most historic urban cores in Asia have initially functioned as commerce centres, as most of the large cities served as trading centres for centuries. Many of these cores fell into neglect during the 20th century as an unintended by-product of rapid urbanization, even though many of them still abounds with historical and cultural value. This phenomenon flourishes in Southeast Asia, for instance, in Jakarta, Saigon, Semarang, Malacca, Manila, Penang, and the historic centres of similar cities in the People's Republic of China (PRC), Nepal, Pakistan, and India. Historic urban centres provide the opportunity for economic efficiency in national income growth. Revitalization is most common by upgrading infrastructure, increasing the real estate value and attraction to commerce, tourism, and trade. Besides, regeneration contributes to employment opportunities, reduces poverty, and civic and national pride. Successful revitalization strategies require consultation and participation by relevant stakeholders and public- and private-sector entities. (Steinberg, 2008)

As defined by Wallace (1956), the term revitalization is exemplary for understanding culture change, conveyed by significant and complex environmental, social, cultural, economic, and psychological stresses in the mass new or exaggerated contact with outside society. Rehabilitation methods and revitalization strategies in the rapid growth of old inner-cities in Asia, as highlighted by (Yee Sing & Yoh, 2016), include implementing rules and regulations in conservation and urban planning management. Socio-cultural elements that are compatible with local business and traditional industry will remain the main attraction for tourists with identity and landscape features.

In urban revitalization, gentrification is one of the most critical issues. According to the study by Rosly & Rashid (2013.), a thriving urban regeneration program should approach holistic ways that embark on the multi-disciplinary understanding of economic, sociological, cultural, and political matters as an integrated process. Urban regeneration practices in Malaysia are still at the beginning stage. In Malaysia, conservation can be categorized into building protection, area conservation, and cultural conservation. According to Kim & Kwon, a sense of time and place is embedded in materiality; the physical Appearance, landscaping, and tectonic relation composed of a specific time accumulation spectrum are essential for urban sustainability.

Aly (2011) claims that urban designers build lifeless spaces without understanding urban space, and the modern approach led to international identity, which caused the loss of local identity. Besides, "modern" and "innovative" levy a single-dimensional view of how a city should work. A city needs to be more humane (people needs) and sustainable; designed spaces should respect social traditions, culture, and human scale. The study uses inductive and deductive methodology through data collection by analyzing local adaptations and additions done to existing spaces during field visits and interviews with people to understand their views and know their identity, urban identity, and approaches to revive the urban identity.

Based on Othman (2017), conservation of local intangible cultural heritage value and local community involvement is essential in protecting the community's rights while creating a balanced development without compromising the quality of cultural heritage assets in historic cities. The local community has the right to participate in plans and policy development for urban heritage management. In contrast, the government has to develop a new policy to solve outside traders' becoming owners of buildings in the area, avoid side-lining, and protect the local community's rights. However, there is a lack of information and limited sources of information; quantitative research in identifying the cause and effect and the connection between the various cultural heritage elements and development patterns of the heritage area should be carried out in future research.

Besides, innovation hubs have been seen as the outcome of creative urban regeneration. Said (2016) recommended considering the modern use of rehabilitating historic buildings. Rehabilitating historic buildings with adaptive use brings advantages to economic and environmental impact and extends their lifespan stock. The study presented historical buildings can be reused as a management tool to prompt cultural, historical, and aesthetic value.

## 1.2 Gentrification in Historical Town

All Gentrification is seen as a new movement in the redevelopment or restoration of old neighbourhoods. Othman (2017) defines gentrification as a slow process that may take many years or a decade for completion in the upgrading of the geographical area and the expression of middle-class values common in the urban redevelopment process in many developing countries; and also affects heritage cities. For example, according to Foo & Krishnapillai (2019), gentrification has started in Malaysia, such as in George Town World Heritage Site (GTWHS). The findings found that the intangible living heritage is damaged by the process of gentrification, which replaced original inhabitants and traditional trades with tourist-oriented businesses and newcomers.

Högskola (2014) highlighted gentrivation as the process of creating new living environments and new structures in rebuilt and renewal of districts, which also led to debate due to causing the displacement of local inhabitants as well as cultural, physical, and social changes. Consequently, the tourism experience that most tourists have nowadays is far away from authenticity, which the author refers to as "staged authenticity" that was manufactured to meet the demands of modern tourists. (Chimezie Uwaoma, 2020)

Communities are the crucial living heritage that carries an educational value with their socio-cultural practices in the historic cities. Yuen Beng Lee et al., (2017) stated that the development and modernization of the town had indirectly led to the decline of local traditional businesses such as the 'kopi-tiam' and budget hotels due to the restoration of the shophouses that transformed the traditional businesses into boutique hotels and cafes. This situation is also happening in Bukit Mertajam's old town in recent years, whereby vacant shophouses have been converted into cafes, restaurants, and boutique hotels. Lim gave an example of George Town should incorporate more meaningful feedback from the public and their welfare. However, more comprehensive studies about preserving culture and heritage should be about preservation and not capitalist purposes in isolation.

## 1.3 Hybrid Architecture as a Revitalization Strategy

In modernized architecture, how colonial society adapted to the idea of modernity is reflected in the local events, rapid technology, and multicultural influenced development (Lukito & Miranda, 2018); cultural renewal is undeniably needed for the future (Pranajaya, 2019). Hybrid spaces are directly connected with city development's social and economic conditions as the drivers of spatial, social, and public changes (Krasilnikova & Klimov, 2020).

Consequent to dynamic changes in cultural interactions and different characteristics of a place, the hybrid architecture combines various contradictory things between nature, technology, cultural influences of the locality, and the past. A hybrid is a combination and a cross between something different, whereas architecture is a combination between visual, beauty, expression, and meaning. The hybridity of all architectural interventions at once object, landscape, and infrastructure is known as hybrid architecture defined by Freitas (2011). Derome-Masse (2015) described hybridity as a concept defined by Allan Bullock and Stephen Trombley as "a thing of mixed character or composed of different elements" aiming to create a new Kind. Hybridization creates better adaptation to changes or disturbed habitats.

The hybrid building is a concept-container that accommodates various often contrasting-interpretations, which implies the loosening of relationships between form and content. The attempt of a hybrid building that escapes from the traditional but arid binomial form-function offers updated answers to our way of living, working, and entertaining rather than programmatic solutions in solving current urban issues. For instance, intensifying land use, programs, revitalization, and urban plans' economic feasibility have received attention in contemporary architectural practices. (Olindo Caso & Cavallo, 2013)

Both hybrid and hybrid spaces are characterized by combining different functions, real and virtual space, urban solutions with architecture solutions, connections of history and contemporaneity, culture and nature, and landscape architecture solutions. That contributes to sustainable development and efficient spatial form and preserves or creates the city's cultural identity. In summary, revitalization by a hybrid approach can be integrated with the followings aspects: (Pluta, 2012, Freitas, 2011, Krasilnikova & Klimov, 2020)

1) Nature/ landscape/ green infrastructure
2) Technology/ real and virtual space
3) The cultural influence of the locality
4) Past and future/ architecture styles/ history and contemporaneity
5) Functions

## 2.  Bukit Mertajam Revitalization

As mentioned earlier, gentrification and revitalization strategies have been introduced in decaying cities; due to the fast-growing populations, urbanization, and economic development, heritage cities in developing countries, including Malaysia, are facing a spike of urban issues. In this study, Bukit Mertajam was selected as the study area for these issues. Bukit Mertajam, one of the nucleus towns of Seberang Perai, had been through a divergent transformation from an agrarian economy town to a commercial and industrial-focused town due to urbanization. According to the interview of the president of the Municipal Council of Seberang Perai (MPSP)- YBhg. Dato' Maimunah in The Edge Markets, Bukit Mertajam, and Juru have been undergoing massive land-use transformations. From non-built-up to built-up development in the past three decades, few high-rise, terraced and institutional developments have been approved near the old town of Bukit Mertajam, in Jalan Ciku, Jalan Datuk Ooh Chooi Cheng and Jalan Aston.



**Fig. 1 - The aerial view of Bukit Mertajam townscape**

Once a glory-trading town, it was now being neglected by the public, mostly young generations. The population had decreased in the town while vacant buildings increased due to urban expansion occurring at the edge of the old town. Population in the old town had reduced from 18,177 in the year 2000 to 13,097 in the year 2010. New developments such as Juru Autocity, Icon city, and Batu Kawan development have become new attractions in recent years. Though the local government was putting on more effort into developments, the main focus of the action was still on Penang Island; the mainland was being side-lined. (New Straits Times, 2019)

The sign of the redevelopment that took place in Bukit Mertajam's old town was the demolishment of the old train station, which had served the communities for decades, to implement a new dual-track railway plan by the Malayan Railway Company (Keratapi Tanah Melayu) in 2013. The new railway station off Jalan Muthu Palaniappa was built to accommodate the electric train service. (The Edge Malaysia, 2017) The new train station's location is not as strategic as the old station; thus, most locals find it inconvenient to access.

Like many other old towns, private investors' gentrification of vacant shop houses into cafes has been taking place in Bukit Mertajam in recent years. Regardless of the negative impacts, gentrification brings benefits in preserving the old buildings and prompting property sales within and around the heritage site. Local business owners who can't afford the increased rental price thus choose to either move out of the town or close down the business. Yuen Beng Lee et al.(2017) claimed that although the state's economy might be improved through the increase in property sales, the adverse effects of gentrification are often ignored. Forced displacement occurs to residents and age-old businesses, and this phenomenon leads to the loss of local cultural identities. In the case of George Town, the study found that increased property values had led to an increase in the rental price; thus, traditional trades owners tended to close down or convert into boutique hotels and hipster cafes, which are often invested by foreigners who bought up the shophouses.

Bukit Mertajam old town urban renewal project in collaboration between MPSP and Yokohama City, Yokohama City University, Japanese International International Corporation Agency (JICA), Yokohama-Seberang Perai Urban Development Friendship Committee, and Universiti Sains Malaysia, which aimed to rejuvenate and improve the sustainability of the town. (Shong Chian, 2017) The main urban renewal projects include the conservation and re-adaptive reuse of shophouses, acknowledgement of former Penang Chief Minister-Tan Sri Wong Pow Nee's house as a heritage building, and restoration of Bukit Mertajam 130 years of the public market into a historical landmark, urban regeneration of converting an alley into public space. (Community Feedback, Youth Space in Bukit Mertajam Town | Pearl Bulletin, 2017) Based on the Seberang Perai structure plan, Bukit Mertajam, with an area of about 12km by 18km, is set to be transformed into a digital city, known as BM Digital Initiative. Bukit Mertajam is growing into an urbanized area with more than 212,300 residents amidst the shift to the commercial and light industrial-based economy. This has led to social and economic changes. (Buletin Mutiara, 2019) Though renewal initiatives have been implemented, the vitality of the town is still limited to a certain period but not in the long term, when there are events; the town is still lacking attractions.

## 3.   Research Methodology

A survey involving 101 respondents was conducted in this study. The structure of the survey was developed based on the attributes of hybrid approaches in revitalization. The survey is performed and generated based on the opinions of Bukit Mertajam visitors from both the local population and outsiders. As a result of the respondents' various backgrounds, genders, and ages, the study was able to accumulate their diverse viewpoints and preferences. Of the 101 respondents to the survey, the percentage of the respondents aged 56 and over is the highest, followed by adults (26-35 years old and 36-45 years old). The majority of respondents have resided in Bukit Mertajam for more than ten years, while the remainder are non-locals. This survey is intended for both local and non-local respondents; therefore, it will be beneficial to learn their perspectives. Those who have resided in Bukit Mertajam for more than ten years would provide more insightful responses to the survey, particularly addressing the local identity.

## 4.   Results

Most respondents agreed that the current urban renewal project had caused a difference in improving the Bukit Mertajam old town district and bringing in more tourists as shown in Figure 2. With the arrival of more tourists, the local socio-economic activities will be enhanced. However, 39.6% of respondents answered maybe, and also, 11.9% of respondents feel the current urban renewal project didn't impact the old town.
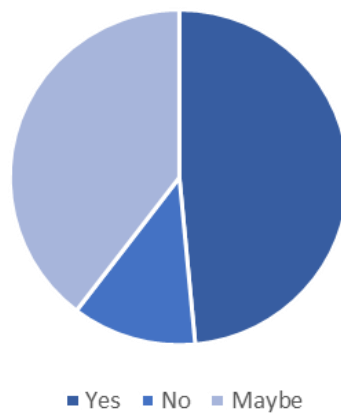


■ Yes  ■ No  ■ Maybe

**Fig. 2 - Perception of the urban renewal project**

A total of 47.5% of the respondents agreed to have creative activities that include performance, presentation, exhibitions, publications, and artists' showcases as part of the revitalization activities, whereas 35.6% strongly agreed as shown in Figure 3. It was seen that local communities are strongly supportive of having creative activities happening in the town.
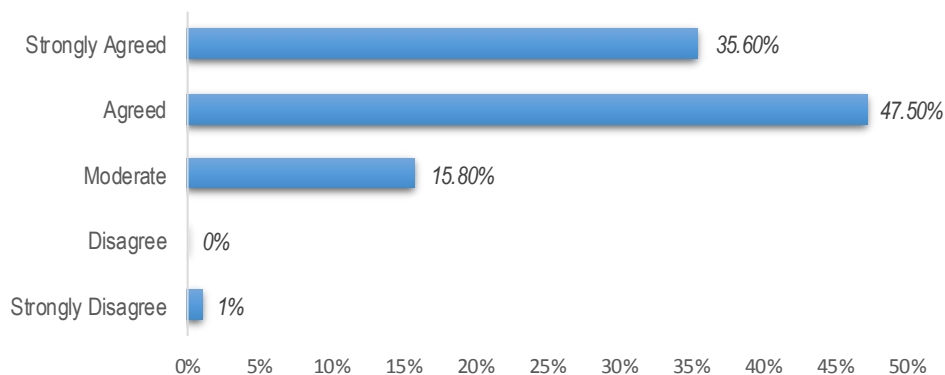


**Fig. 3 - Creative activities on revitalization**

A total of 46.5% of the respondents strongly agreed that revitalization should consider integration between the past and contemporary as shown in Figure 4. If the renewal ignores the historical past, it will lose its originality and value. People are attracted to visit the old town primarily due to the heritage value or attachment towards the place. Therefore, it is crucial to consider when planning out the revitalization project, not by simply gentrifying shophouses into cafés.
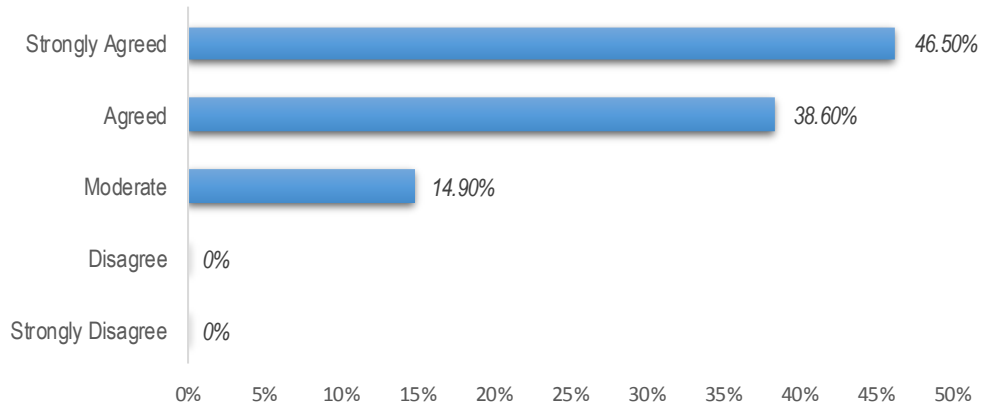
**Fig. 4 - Revitalization in integration of past and contemporary**

In terms of building design preference, 41.6% of the respondents agreed to have a building design reflecting the site's history, and 29.7% strongly agreed as shown in Figure 5. Bukit Mertajam's old town has the rich architectural style of old shophouses and buildings. Therefore, it would be great if the new buildings or new projects could use the existing style elements. Doing that will also attract tourists and thus improve the socio-economic of the town while keeping its identity.
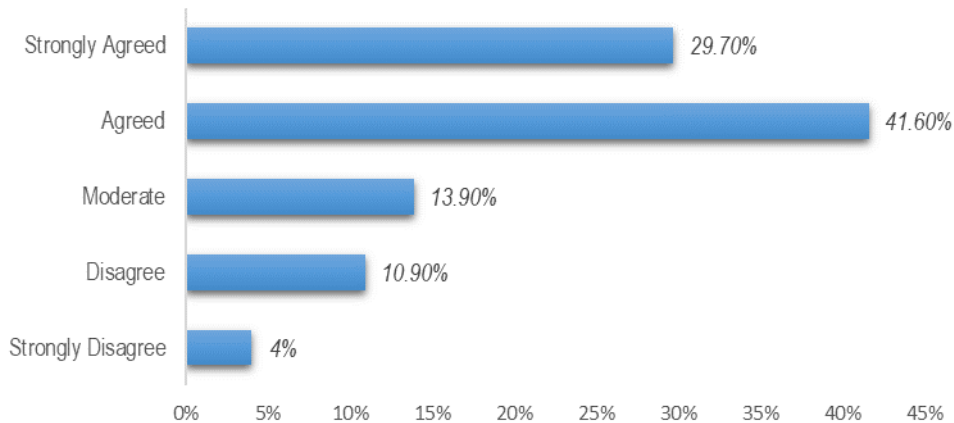


**Fig. 5 - Preference of having new buildings that reflect the site's history**

A total of 47% of respondents agreed to the integration of new programs and local socio-economic activities in the heritage buildings, whereas 29% strongly agreed as shown in Figure 6. Having the cooperation of local trading activities or craftsmanship activities will also help to promote the local business. Therefore, it can improve the socio-economic situation without replacing the original business.
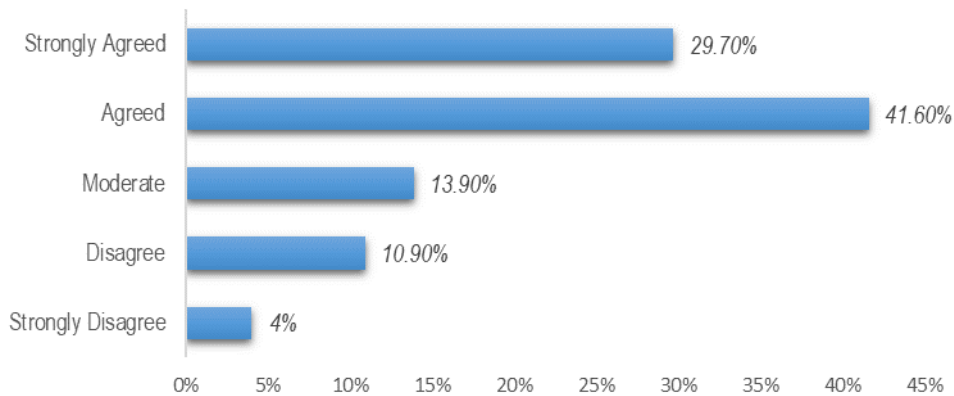


**Fig. 6 - Preference of having new programs incorporating local socio-economic activities**

In the views of green urban ideals, 65.3% of the respondents strongly agreed to have more green components in the future revitalization project as shown in Figure 7. Almost none of the respondents disagree with the suggestion. Having more planted trees by the road will improve pedestrians' walkability when exploring the town. However, due to the limited road size, it will be another challenge to resolve.
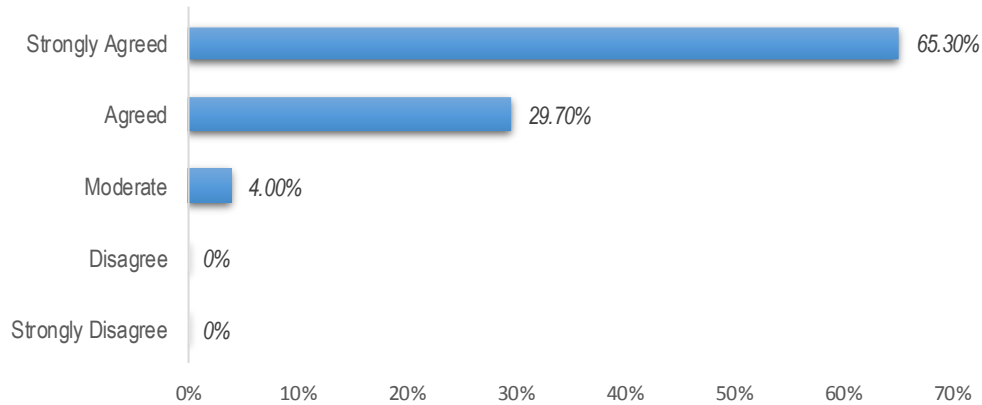


**Fig. 7 - Perception of having more greens in the revitalization project**

## 5.   Discussion

In the views of hybrid architecture ideals, the findings show that the criteria of historical consideration and programs with cultural relations are found to be highly supported by the respondents. Most respondents support the proposed strategies of integrating culture and arts activities as the hybrid approach to revitalizing Bukit Mertajam's old town. Therefore, the respondents have highly accepted this approach of combining historical and contemporary revitalization of the old town. That will retain the memories for the local community and provide more attractions to the younger generations. Memories attachment is rather important, but development is the key for the old town to move forward.

The most common method of revitalization is through gentrification, by capitalizing or commodifying the old town. The current approach is still lacking consideration in maintaining local cultures and identities. The findings show that hybridization in an urban context in which revitalization with a hybrid architecture approach that focuses on the context that combines diverse contradictory can create a better adaptation to the original habitants. The issue of urban decline and gentrification in the historical town of Bukit Mertajam is vital to get more attention from the communities before the local identity is entirely replaced or gone. Even though renewal actions are taking place, the town lacks vitality, and the old shop is unable to sustain itself due to the replacement by the new business.

## 6.   Conclusion

Various scholars have proved that many of the historic cities in Asia faced the issue of depopulation, decline of the urban fabric, and economic downturn. This study is conducted to give a brief overview of urban revitalization, the legislative acts related to heritage conservation in Malaysia, and identify the issues related to urban decay and gentrification. Revitalization strategies can alleviate urban decay problems by creating a rational framework that seeks a balance between socio-economic redevelopment and ensures local identity sustainability. Revitalization practice in Malaysia is still at the beginning stage. Gentrification can be seen as the most common method used in the restoration of historic old towns. However, there is still a lack of issues created, such as the forced displacement of residents, increased rental prices, and old business replacement. To create a successful revitalization localized to its context, hybrid strategies that consider integration with the context are found to be a better way of revitalizing a historic town. Therefore, the study hypothesizes that a hybrid of the locality's cultural influence with nature could form a more holistic revitalization framework for the historical town's socio-economic and identity to be applied in the future.

## Acknowledgement

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