

DEVELOPING THE PREDICTION MODEL FOR  
MITIGATING THE ABANDONED HOUSING  
PROJECTS IN MALAYSIA

SAIDAH AN'NISAA BINTI SALAM

DOCTOR OF PHILOSOPHY

UNIVERSITI MALAYSIA PAHANG



## SUPERVISOR'S DECLARATION

We hereby declare that We have checked this thesis and in our opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Doctor of Philosophy.

A handwritten signature in black ink, appearing to be 'Nur Farhayu Ariffin', written over a horizontal line.

(Supervisor's Signature)

Full Name : TS. DR NUR FARHAYU ARIFFIN  
Position : SENIOR LECTURER  
Date : 04/11/2022

A handwritten signature in black ink, appearing to be 'Mohamad Idris Ali', written over a horizontal line.

(Co-supervisor's Signature)

Full Name : PM. DR MOHAMAD IDRIS ALI  
Position : SENIOR LECTURER  
Date : 04/11/2022



## STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

A handwritten signature in black ink, appearing to be "TS. SAIDAH AN'NISAA BINTI SALAM", written over a horizontal line.

(Student's Signature)

Full Name : TS. SAIDAH AN'NISAA BINTI SALAM

ID Number : 871104-49-5778

Date : 04/11/2022

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TS. SAIDAH AN'NISAA BINTI SALAM

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## ABSTRAK

Isu projek perumahan terbengkalai berlaku di seluruh dunia, dan ianya tidak membawa apa-apa nilai positif kepada pihak berkepentingan serta aspek ekonomi dan persekitaran. Sejak tahun 1970 sehingga kini jumlah projek perumahan terbengkalai di Malaysia masih meningkat. Walaupun pelbagai insentif, usaha menangani, dan undang-undang yang telah digubal oleh kerajaan Malaysia, namun masalah projek perumahan terbengkalai masih terjadi dan belum dapat ditangani sepenuhnya. Projek perumahan terbengkalai membawa banyak kesan negatif kepada alam sekitar, ekonomi dan masyarakat Malaysia. Pembeli rumah adalah mangsa utama dalam masalah ini, mereka tidak dapat memiliki rumah idaman mereka malah mereka juga perlu membayar bayaran rumah sewa sedia ada. Lebih teruk lagi, pembeli rumah yang malang tidak dibenarkan untuk keluar negara dan sukar untuk membuat pinjaman lain dari institusi kewangan sekiranya mereka gagal membayar pinjaman perumahan yang terbengkalai tersebut. Oleh itu, objektif kajian ini adalah untuk mengenal pasti faktor-faktor yang menyumbang kepada projek perumahan terbengkalai dan kesannya kepada negara, persekitaran, dan masyarakat. Beberapa faktor telah disenaraikan melalui sesi temu ramah separa berstruktur dengan 10 orang responden yang berpengalaman luas dalam bidang pembangunan perumahan serta informasi melalui tinjauan literatur dari kajian sebelumnya. Metodologi penyelidikan kuantitatif dilakukan dalam mengumpulkan data menggunakan soalan kaji selidik. Soalan kaji selidik dibuat berdasarkan tinjauan literatur yang luas, wawancara semi-struktur, dan perbincangan dengan pakar dalam bidang tersebut. 100 orang responden dalam kajian ini adalah dari populasi pihak berkepentingan pembangunan perumahan seperti pemaju, kontraktor, perunding, dan pihak berkuasa. Untuk mencapai objektif kedua, data dianalisis menggunakan statistik deskriptif kaedah *Ordinal Logistic Regression* (OLR) di mana pekali untuk setiap faktor yang menyumbang kepada projek perumahan terbengkalai dengan status projek akan diperolehi. Selanjutnya, 3 status kebarangkalian untuk sesebuah projek berdasarkan masalah yang dihadapi boleh dihasilkan. Manakala, objektif ketiga adalah menentukan keutamaan penyelesaian untuk mengurangkan projek perumahan terbengkalai melalui tinjauan soal selidik. Kajian ini menggunakan *Analytical Hierarchy Process* (AHP) untuk untuk mendapatkan jalan penyelesaian yang terbaik bagi membendung masalah perumahan terbengkalai. Kedudukan tertinggi dalam ranking senarai cadangan penyelesaian masalah tersebut menjadi penyelesaian utama untuk mengurangkan projek perumahan terbengkalai. Objektif terakhir ialah dengan menggabungkan dapatan objektif 2 dan 3, model ramalan untuk membendung masalah perumahan terbengkalai akan tercapai. Hasil kajian menyimpulkan bahawa faktor utama projek perumahan terbengkalai adalah faktor kewangan, diikuti oleh faktor peserta projek, faktor pengurusan projek, isyarat pasaran, faktor perolehan, dan terakhir, faktor luaran. Semasa proses pemantauan projek, model ramalan dapat digunakan untuk mengetahui kebarangkalian status sesuatu projek melalui masalah (faktor projek perumahan terbengkalai) yang dihadapi oleh projek tersebut. Di samping itu, kebanyakan responden menekankan bahawa pemaju yang mempunyai masalah kewangan harus mempunyai dana alternatif untuk menyelesaikan masalah kewangan mereka, seperti contoh cadangan menggunakan dana kerjasama komuniti pemaju. Responden bersetuju bahawa masalah itu juga dapat diselesaikan dengan perancangan yang tepat sewaktu kajian awal, penjadualan yang tepat dalam fasa pembinaan, melalui perkongsian swasta dan kerajaan (PPP), usaha sama, dan kajian yang mencukupi mengenai isyarat pasaran. Penemuan ini dapat membantu pihak berkepentingan yang terlibat dalam mengurangkan masalah projek perumahan terbengkalai di Malaysia.

## ABSTRACT

Abandoned housing projects is a relentless global issue which carries no positive value to involving stakeholders, economy, and sustainable aspects as well. Abandoned housing projects in Malaysia had prevailed since 1970 and the numbers are heavily escalating regardless of the Malaysian government's efforts to curb the issue through promulgation of numerous incentives, policies, and laws. The incompleteness of housing project could detriment the surrounding environment and social aspect as well as negatively impact the economy at a national scale. Nonetheless, homebuyers are the direct victim of this matter following the un-fulfillment of their intention to own a property in addition to extension of commitment for rental arrangement. To certain extent, unfortunate homebuyers would become ineligible for international travel and loan application from financial institutions ensuing failed housing loan payment. Therefore, the aim of the study is to analyze the factors that contribute to the abandonment of housing projects and its impact towards the nation, environment, and society. Through semi-structured interview session with 10 expert panels with the information generate from extensive literature review from previous study, several factors and impacts had been listed. A quantitative research methodology was conducted for data collection through a well-designed questionnaire which was developed based on the extensive literature review, semi-structured interviews, and discussions with expert panels. The 100 respondents in this study incorporated population of housing development stakeholders such as developers, contractors, consultants, and local authorities. Data collected was analyzed using the descriptive statistics of Ordinal Logistic Regression (OLR) method to satisfy second objective of the study whereby the relationship between each factors that contributes to the abandoned housing project and the project status was obtained. Subsequently, the probability for 3 category of project status was also developed to illustrate the probability of project status. The third objective of this study determines the solution priorities to mitigate the abandoned housing project through a pair wise questionnaire survey. This study utilizes Analytical Hierarchy Process (AHP) to derive the weighted value for each criterion by comparing the criteria with several alternatives to which the highest value would indicates the best solution to mitigate the abandoned housing project. The last objective is developing the prediction model to mitigating the abandoned housing project by combining the result gathered from objective two and objective three. Finally, by combining the finding from objective 2 and 3 the prediction model to mitigate the abandoned housing project developed. The findings conclude that the main factors of abandoned housing project are financial factors, followed by project participant factors, project management factors, market signal, procurement factors, and lastly, external factors. During the project monitoring process, the AHPM can displayed capability in predicting project status with regards to the issues (factors of abandoned housing project) faced in each project. In addition, most of the respondents stressed that developers facing financial difficulties should prepare alternative fund in order to settle their financial problems, such as by utilizing the developer community cooperation fund. The respondents agreed that the issue could be rectified through proper planning during preliminary study, proper scheduling during the construction phase, incorporating public private partnership (PPP), joint venture, and adequate study on the market signal. These findings could assist the stakeholders involved in mitigating the problems of abandoned housing projects in Malaysia.

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