

## **The probabilistic of abandoned project status using ordinal logistic regression analysis**

*Salam Saidah An'nisaa, Nur Farhayu Ariffin, Mohamad Idris Ali, Noram Irwan Ramli*  
Faculty of Civil Engineering Technology, Universiti Malaysia Pahang, Lebuhraya Tun Razak,  
Pahang, Gambang, 26300, Malaysia

### **ABSTRACT**

The abandoned housing project leads to many negative impacts on the environment, Malaysian economy and society. The homebuyers are the victim in this matter since they are unable to own their dream house and need to pay for their existing rental house. Even worse, unfortunate homebuyers are not allowed to cross over Malaysia and get other loans from the financial institution if they failed to pay for the abandoned housing loan. Therefore, the objective of this paper is to identify the factors that contribute to the abandoned housing projects and their impact on the nation, environment, and society. Through extensive literature review from the previous studies, several factors and impacts have been listed. A quantitative research methodology was conducted in data collection through a well-designed questionnaire which was based on the extensive literature review, semi-structured interviews, and discussions with the expert panels. The questionnaires had been distributed to 100 respondents from the population of housing development stakeholders such as developers, contractors, consultants, and authorities. After that, the data were analysed using the descriptive statistics of Ordinal Logistic Regression (OLR) method whereby the relationship between each factor that contributes to the abandoned housing project and the project status for 10 selected respondents from the interview session was obtained. Further, this study develops the Probabilistic Model of Abandoned Project Status (PMAPS) to show the relationship between the factors of abandoned housing projects and the probability of project status. The findings conclude that the main factors of abandoned housing projects are financial factors, followed by project participant factors, project management factors, market signal, procurement factors, and external factors. The PMAPS can predict the project status with regards to the problem (factors of abandoned housing project) faced in each project. These findings could assist the stakeholders involved in predicting their project status regards to the problem faced. It also can be a guide for the development practitioner to apply the appropriate mitigation plan to avoid project abandonment.

### **KEYWORDS**

Construction industry; Project abandonment; Ordinal Logistic Regression (OLR)

**ACKNOWLEDGEMENTS**

The authors would like to thank the Ministry of Higher Education for providing financial support under University Research grant RDU190384 and Universiti Malaysia Pahang for laboratory facilities.