

**UNIVERSITI TEKNOLOGI MARA**

**SPATIAL MODELLING FOR DISTRIBUTION OF  
MIGRATION POTENTIAL IN KLANG VALLEY  
REGION**

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Thesis submitted in fulfilment of the requirements  
for the degree of  
**Doctor of Philosophy**

**Faculty of Computer and Mathematical Sciences**

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### Candidate's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of University Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as references work. This thesis has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

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## ABSTRACT

Internal migration is one of the important spatial phenomena in urban areas that contributes to high level of urbanisation and urban growth. However, it has been known that high volume of internal migration without adequate planning and support creates urban problems. This issue has been recognised and acknowledged by previous researchers in the migration field. Thus, internal migration is the significant element in the urban planning process. Because of that, the understanding of trends and spatial distribution of migration in urban areas is needed for urban planners. Unfortunately, to date, there has not emerged any satisfactory approach that can be applied for the purpose. Besides that, migration data from census are also limited for urban planning requirements. Hence, this study aims to develop a proposed migration model for spatial modelling distribution of migration potential in urban areas for urban planning requirements. The Klang Valley region has been selected as the area of study in this research. This study has developed the Migration Potential Model (MGP) for spatial modelling distribution of migration potential in the Klang Valley. The development of the MGP model is based on the GIS-based Multi-criteria Decision Analysis (MCDA) approach framework and the model criteria (factors of migration decision-selectivity) are selected from the migration behavioural analysis. This study has also applied the Gini Index and Multiplicative Component Model. Overall results have shown that, the centres of migration potential in the Klang Valley for the present and future are in the outskirts of the metropolitan territory of Kuala Lumpur. The Kajang Municipal Council (MPKj) is expected to have the highest number of destinations for migration potential. Other Spatial Planning Units (SPUs) have the potential of being focused for migration potential but different in the degree of focus. In the future, trends and spatial distribution of migration potential in the Klang Valley are expected to be balanced. As a consequence from that, strategies of urban development planning in the Klang Valley in the future should be in line with the scenarios of trends and spatial distribution of migration potential in the area.

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*Mohd Fadzil Abdul Rashid*  
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