

MALAYSIAN TREE SELECTION MODEL FOR RIGHT TREE SPECIES

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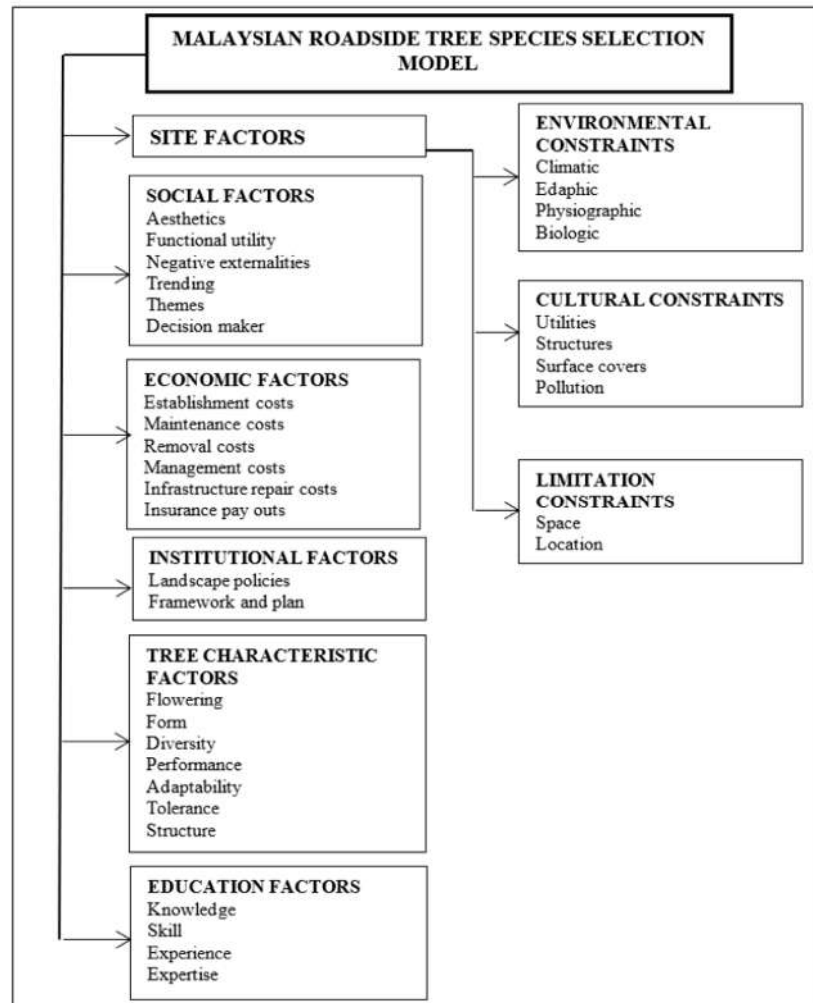
Highlights: The Malaysian tree selection model identifies the site factors, social factors, institutional factors, limiting factors, economic factors and tree characteristics factors of roadside tree species selection. As part of the tree species selection based on institutional factors mentioned in Roy's (2014) model, the researchers have included landscape policies, decision makers, framework and plan of the proposed roadside tree species as reported by Malaysian landscape architects. The researchers added a new factor to the model, namely limiting factors which comprise space and location. These elements influence the selection of tree species as reported by landscape architects, where the limiting space and location features affect tree growth.

Key words: *tree selection model, tree characteristics, landscape architects, tree growth*

Introduction

Urban trees are living organisms and vital elements of a city's infrastructure; thus, they should be considered at every stage of planning design and development. In Malaysia, rapid changes in the environment have indirectly influenced the roadside tree condition such as fallen trees. This is reflected with the statistic increment of public complaints by 39% from 2014 until 2016 regarding the roadside tree problems, which are very worrying for the local authorities. This study aims to develop a Malaysian Roadside Tree Species Selection for guidance in selecting the right tree species for a sustainable city. The objectives of this study are (i) to determine additional attributes in roadside tree species selection, (ii) to examine the relationship between existing and additional attributes and (iii) to develop a Malaysian Roadside Tree Species Selection Model based on these attributes. This research applied the quantitative and qualitative approaches. The results produced a Malaysian Roadside Tree Species Selection Model.

This section discussed the Malaysian Roadside Tree Species Model. The research findings indicate that roadside trees species selection among Malaysian landscape architects is a more complex process than the ones demonstrated in the literature (Roy, 2014; Miller et al. 2015). The researchers found that education factors including knowledge, experience, skill and expertise influence the selection of roadside tree species. Institutional factors including landscape policies, decision makers and framework and plan could influence the way urban roadside trees species are selected, managed and maintained. Limiting factors including space and location also seem to have influenced the Malaysian landscape architects regarding roadside tree species selection practices. Additionally, the researchers found that four new attributes for tree characteristics which are trending, flowering tree, tree form and themes have strong influence in selecting roadside trees, as well as budget constraints including establishment costs, maintenance costs and removal costs.



Proposed Malaysian Roadside Tree Species Selection Model

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