SUSTAINABLE URBAN STRUCTURE BASED PEOPLE TRAVEL BEHAVIOR: LOCUS SURABAYA

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ABSTRACT
Transportation problem, which has emerged since the industrial revolution, were found almost in all cities of the world, including Surabaya. Some policies and solutions on the transportation problems have been planned and implemented, but the result still have not reached expectations. There have been many studies and theories lead to an evidence that the elements of the urban spatial structure, which consists of land use, public facilities and street pattern is a dominant factor in the use of travel mode, travel distance, and travel time. In addition, various models of travel generation and attraction of land use or facility that produced on the district or micro level. The use of the concept of travel distance (first dimension) and accessibility (second dimension) as an indicator of travel behavior is often used. This study attempted to fill gaps in the framework of the theory of urban spatial structure and the relationship with travel behavior, especially in the urban spatial structure elements (affect) and travel behavior indicators which also consider aspects of the energy in the movement (affected). Therefore, the research questions will be answered in this study is: what is the form of urban spatial structure, which can generate sustainable travel behavior?

The theme of this research is categorized in the field of urban study and planning, with an emphasis of urban spatial structure related to transportation. While the umbrella of this research paradigm is more a rationalistic direction. Analysis steps that will be used to achieve the research objectives are: (1) Preparation of theoretical models as the deduction phase, (2) Operationalization of the variables to be used in empirical observations, (3) Empirical Exploration through cycles: the testing, interpretation, inference to obtain an empirical generalization of urban spatial structure and movement behavior, (4) Examination of the results of empirical generalizations with theoretical models, and (5) Formulation of the model and the proposition of the urban spatial structure based travel behavior.

Empirical articulation of the Surabaya conclude that both sustainability level and mobility level are categorized at ‘good’ level. This phase also developed a mathematical, diagrammatic and geometric model of sustainable urban spatial structure based travel behavior. The model is a function of the people mobility of an area affected by the density of educational facilities, road density, intersection density, diversity of land uses, clustering of housing and the ratio between the intersections of roads.

Reconstruction theory based on empirical articulation produces a richer knowledge in terms of urban spatial structure elements that influence the travel behavior, the use of the concept of mobility as an indicator of travel behavior, and development of new methods (the method of quantification of the urban spatial lstructure, the canvas method for assessment of sustainable urban spatial structure, mobility assessment diagram).

Key words: urban spatial structure, travel behavior, mobility, and sustainable