

ABSTRACT

Public transport in Banjarmasin is provided not only by land transportation but also by water transportation. River transportation is an inseparable part of Banjarmasin, widely known as the city of a thousand rivers. However, recent development shows that the society's interest in using river transportation is gradually declining, compared to using land transportation. In order to restore the society's interest in using river transportation, it is necessary to improve the service of said transportation as a form of revitalization. Mode choice model is needed to observe the competitive level. The aforementioned model takes both structural factors (socio-demography, trip, and transportation system) and psychological factors into consideration. Social interaction (lifestyle in 'conditional' dimension) and mental result or human perspective (lifestyle in 'cognitive' dimension) are the forms of the later factors.

This study is aimed to acquire river transportation revitalization policy model by observing the influence of lifestyle attributes, travel time, cost, and (typical) mode of river transportation in mode choice model. The blueprint of typical boat design is procured based on National Transportation System (*Sistranas*) by using AHP (Analytical Hierarchy Process) method approach. Lifestyle attributes affecting river mode choice as attributes in choice model is resolved through SEM-PLS (Structural Equation Model – Partial Least Squares) approach. The mode choice model analysis uses MNL (Multinomial Logit Models) approach.

From this AHP analysis, the sought after boat design typical is double hull-boat type with front or back entry/exit access, standard speed, port and starboard which are possibly designed to close or open, accommodation for standing passengers during the ride, space for bicycles, passengers' lower position above the water surface, and the captain's position at the upper middle back. Based on SEM-PLS analysis result, in response to both the existing boat and on design boat model, the commuters are affected by prestige, reputation, arrogance, skepticism, and social status, as well as the influence from the commuters' relatives and surrounding. Based on MNL analysis result, lifestyles that can be modeled are only 5 (five): (a) prestige; (b) reputation; (c) arrogance; (d) skepticism; and (e) surrounding's influence. The outcome of mode choice model considering the combination of lifestyle in 'conditional' dimension and lifestyle in 'cognitive' dimension results in better model. The model accuracy level shows the increase in pseudo-R² score up to 2,97% and overall the choice accuracy level arises up to 1,09%.

Revitalization of river transportation can be constructed by restructuring of river transport, implementing a double hull prototype, preparing integrated infrastructure with road transport, actively introducing as well as promoting the idea by the respective authority (stakeholder), change of negative lifestyle image to positive, and travel time and tariff no different from road transport.

Keywords: boat design, lifestyle, river transportation, revitalization