ABSTRACT

The Human Development Index (HDI) is a key indicator for assessing the success of regional development. Differences in social, economic, and geographical characteristics across regions can lead to heterogeneous relationships among human development dimensions, making regional segmentation necessary. This study aims to identify valid and reliable indicators for each latent variable, analyze the relationships between latent variables using Structural Equation Modeling Partial Least Square (SEM-PLS), and classify regions based on the HDI model structure using the Response Based Unit Segmentation in Partial Least Square (REBUS-PLS) approach. The model includes four latent variables: decent standard of living, long and healthy life, knowledge, and HDI. Data were obtained from 35 regencies/cities in Central Java Province using secondary data from BPS. Outer model evaluation results identified 13 significant indicators. In the structural model, the relationship between long and healthy life and HDI was found to be insignificant, prompting model re-specification. The REBUS-PLS method successfully detected data heterogeneity by forming four regional segments. Local models showed higher R^2 and Goodness of Fit (GoF) values compared to the global model. The global R^2 was 0.492, while local models ranged from 0.571 to 0.812. Findings revealed that the decent standard of living dimension played a dominant role in local models, both in influencing HDI and other dimensions, indicating that response-based segmentation provides a more accurate picture of human development structure variation across regions.

Keywords: Human Development Index, Structural Equation Modeling, Partial Least Square, REBUS-PLS, Regional Segmentation.