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The assessment of green economy connections constitutes an essential component in urban economic analysis. This study proposes a framework for analyzing green economy connections, considering energy and environmental factors. The multi-layer network is employed to construct an urban green economic system to evaluate the effectiveness and applicability of the proposed model and methodology. The results demonstrate that the proposed network model successfully captures previously unobserved green economy connections among cities, highlighting its structural properties and distinguishing them from conventional economic ties. These findings provide valuable insights for policymakers in designing industrial upgrading and urban competitiveness strategies.

Key words: green economy connection, input-output, multi-layer network projection, urban network, urban sustainable development

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