Centrality of agents of interbank payments network – an analysis from the perspective of the theory of cooperative games

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Abstract

The objective of this study is to estimate the degree of centrality of agents of interbank payments network in Bolivia from the perspective of cooperative game theory. For this purpose it is used the Eigenvector centrality methodology and it is applied a cooperative game scheme in which the reciprocal connections between financial institutions are essential to profit-making. Likewise, Shapley values are used to estimate the magnitudes of centrality.

Routine application of this methodology and calculation of results will allow having a monitoring and early warning tool. Thus, continuous oversight to central agents becomes an important task of financial supervisión authorities, considering that it allows obtaining useful information to identify sources of systemic risk and to prevent systemic crises.