

”Generalized gravity interaction model of business firms”

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We introduce a money flow model defined on a complex network of business firms by generalizing the gravity interaction model, which is popular in the field of international economy. The parameters of the model are fitted through data-assimilation with about 0.6 million business firms’ financial data provided by Teikoku Data Bank. For given network structure of real business firms representing money flow direction, we show that the model converges to a non-thermal equilibrium steady flow state, which is fairly consistent with the real money flow. As a natural consequence of this model’s nonlinearity we can confirm some non-extensive properties.