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Simina Branzei* (simina.branzei@gmail.com), 1205 Lawson Building, 305 N University St West, West Lafayette, IN 47907, and **Ruta Mehta** and **Noam Nisan**. *Universal Growth in Production Economies*. Preliminary report.

We study a basic model of an economy that develops over time, in which players invest their money in different goods and use the bundles obtained for production.

We show that a simple decentralized dynamic, where players update their bids proportionally to how useful the investments were, leads to growth of the economy in the long term (whenever growth is possible) but also creates unbounded inequality, i.e. very rich and very poor players emerge. We analyze several other phenomena, such as how the relation of a player with others influences its development and the Gini index of the system.

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