# Modeling the Distribution of Wealth in a Capitalistic Economic System

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Abstract

The U.S. commercial sector, though regulated by the government, is heavily dominated by the forces of supply and demand - natural guiding entities that result from competition and opinions of the customers. The forces of supply and demand generaters economic growth and distribution, as modelled in this project.
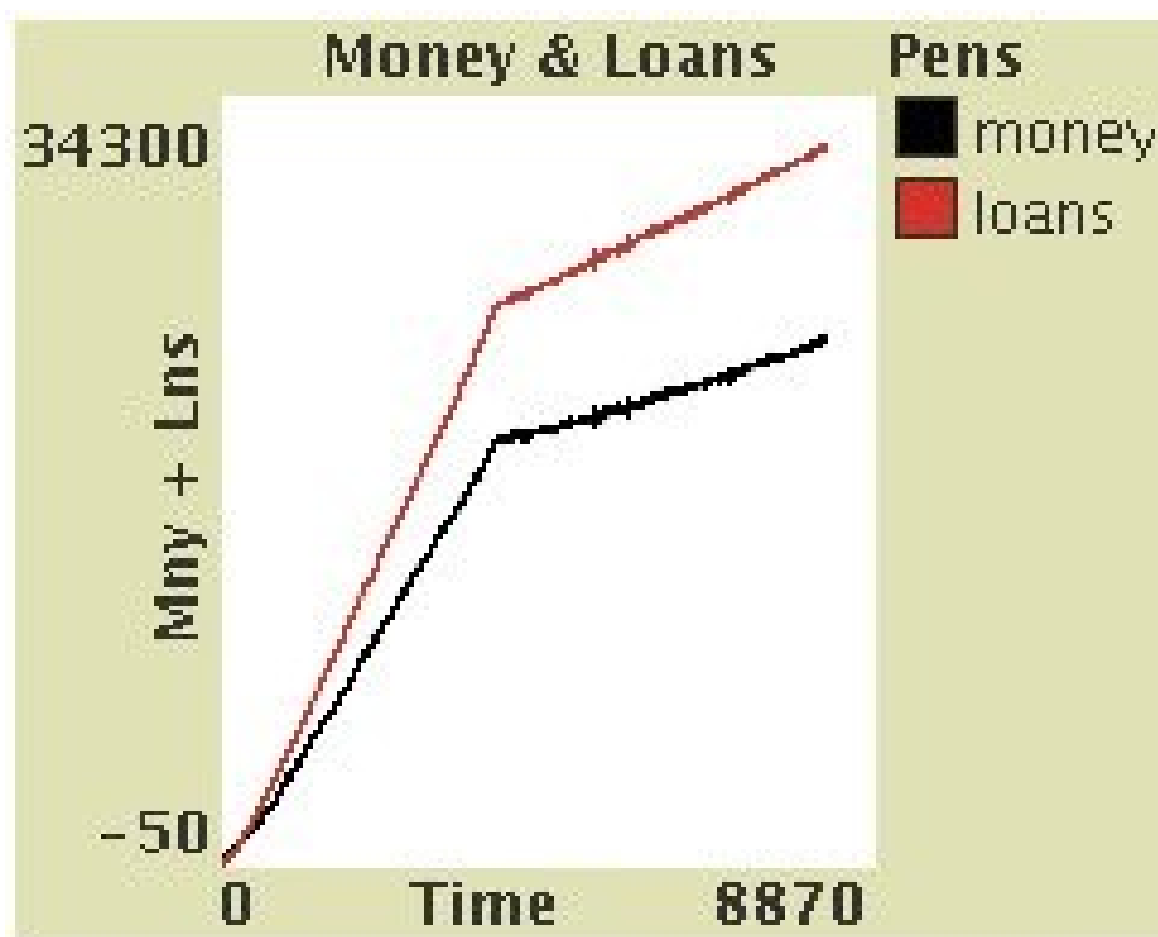
Tracking the Growth of Wealth

Background

Since Adam Smith's revolutionary Wealth of Nations introduced the capitalistic economic theory, economists have debated over the validity of capitalism as the ideal economic system. In the 19th century, communism came into being, and during the 20th century capitalism and communism battled each other during the bitter cold war. However, the economic overlap of the systems have shed light into the validity of Adam Smith's claims. .

The GUI of the Economic Model
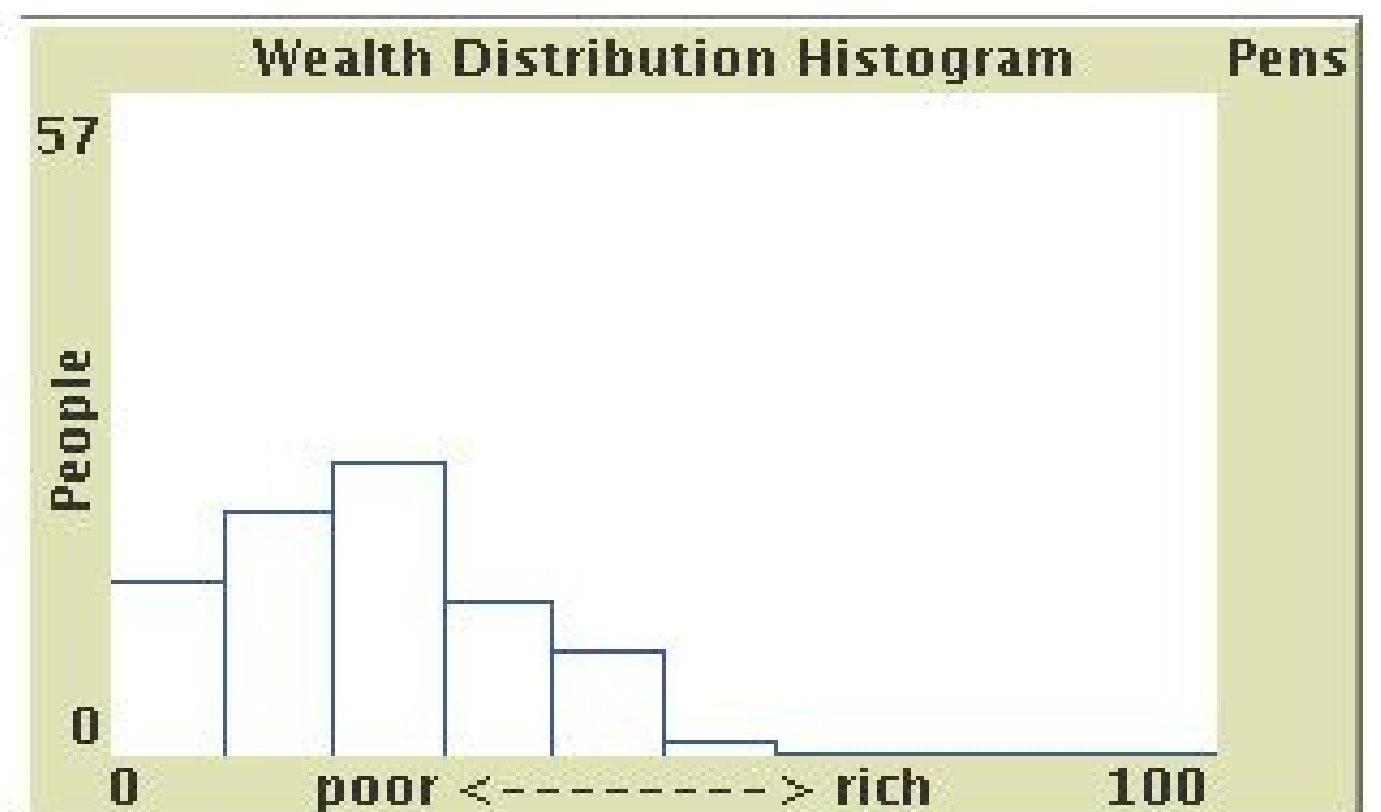
Tracking the Distribution of Wealth

Procedure

This project builds off of the Bank Reserves model that is packaged with NetLogo. The Bank Reserves model is a representation of a society of agents buying and selling some arbitrary product amongst each other. In this model exists a bank, which loans out money and stores savings from the individuals. The purpose of the model is to track the distribution of wealth in the capitalistic society. When one runs the model, one sees that, over time, the wealth of the society grows logistically. As the wealth peaks out, the distribution of the wealth results in a distribution of the wealth in a manner such that there are roughly equal populations of wealthy, poor, and middle-income individuals.

The first thing was to add in three corporations, each selling some arbitrary product - all that matters is that these products are similar in nature, thus producing competition. After crafting these corporate entities, the interaction method that allowed the agents (the people) to trade amongst themselves was removed. Methods were implemented such that corporations could have the same interaction with the banks as the people.

Conclusion

When I originally built this model, I was hoping to do so much more. I was interested in adding government regulation, taxes, and other variables. However, I had to discard many of my methods because it caused a glitch in the program. However, my results still show that a simple capitalistic economy both generates and normally distributes wealth.