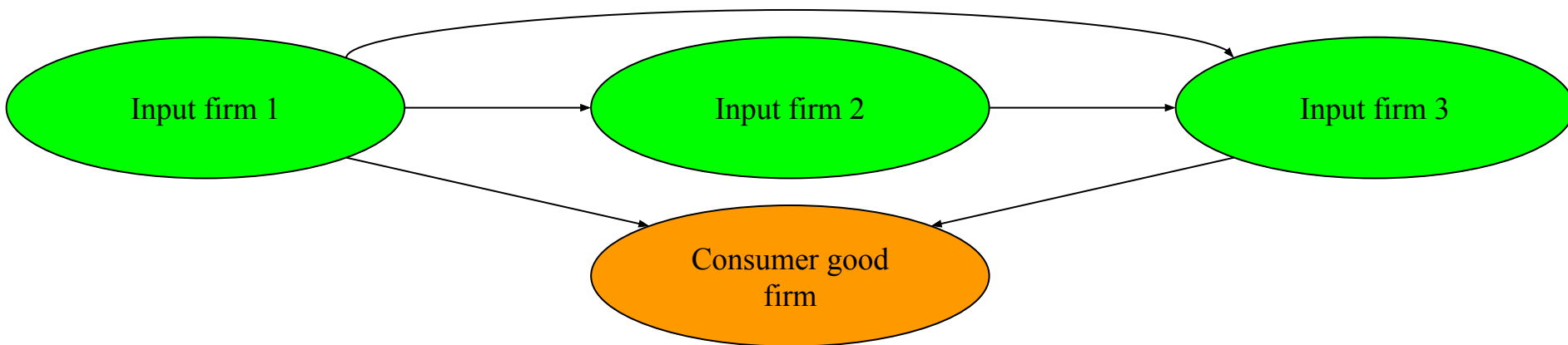


This flowchart provides a high level overview of how we will expand Lengnick’s Baseline Economy to support multiple firm types trading among one another. The firm structure in this model is going to be similar to the previous attempt involving the Dosi model. However, firms will interact in a different way this time.

This visual demonstrates the contracting structure I envision for the first version of the model. The structure is loosely based on a hypothetical clothing industry, but really the firms are arbitrary. Input firm 1 produces goods for all other firms and only takes labor as input. Input firm 2 produces a good for input firm 3 and takes labor and firm 1’s good as input. Input firm 3 produces a good for the consumer good firm and takes as input firm 2’s good, firm 1’s good and labor. The consumer good produces goods for consumers and takes as input labor, firm 1’s good and firm 3’s good.



Global Variables

-

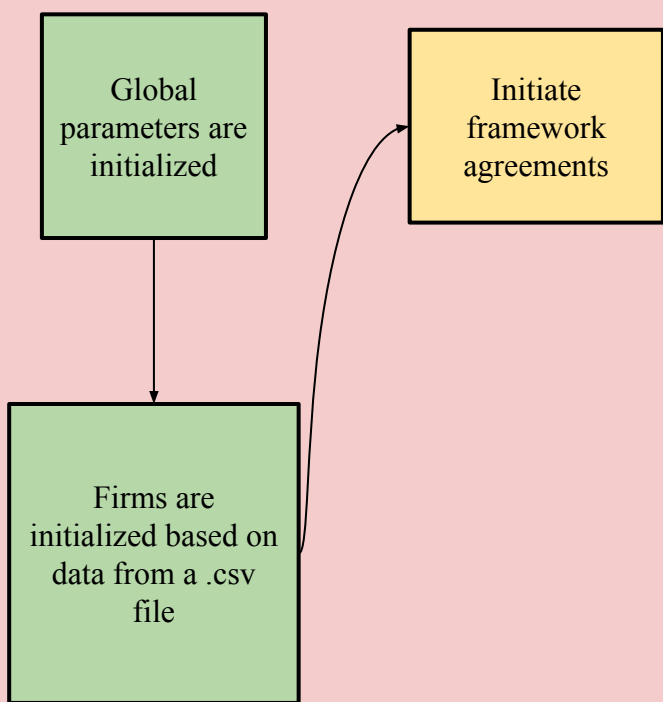
Input Firm Variables

- Type
 - Productivity of labor
 - Framework agreements
 - Productivity of capital - type 2 firms will have 1 such function, type 3 firms will have 2 such functions, type 1 firms won't have any such functions
 - Liquid assets
- I'm assuming that all firms can invest in R&D to improve their production functions. Investing in R&D won't involve doing business with another firm, rather it will be an internal procedure that stochastically improves production functions.

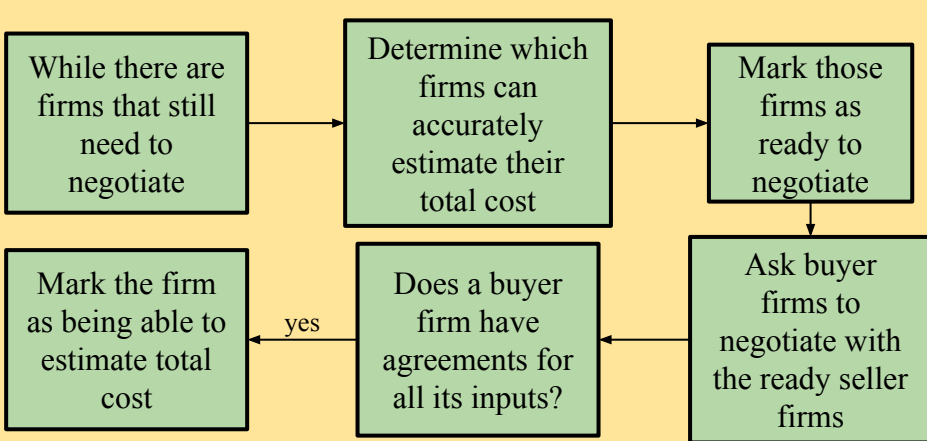
Consumer Good Firm Variables

- Productivity of labor
- Framework agreements
- Productivity of capital - there will be 2 such functions
- Market share
- Estimated demand
- Desired production
- Inventories
- Liquid assets
- Competitiveness

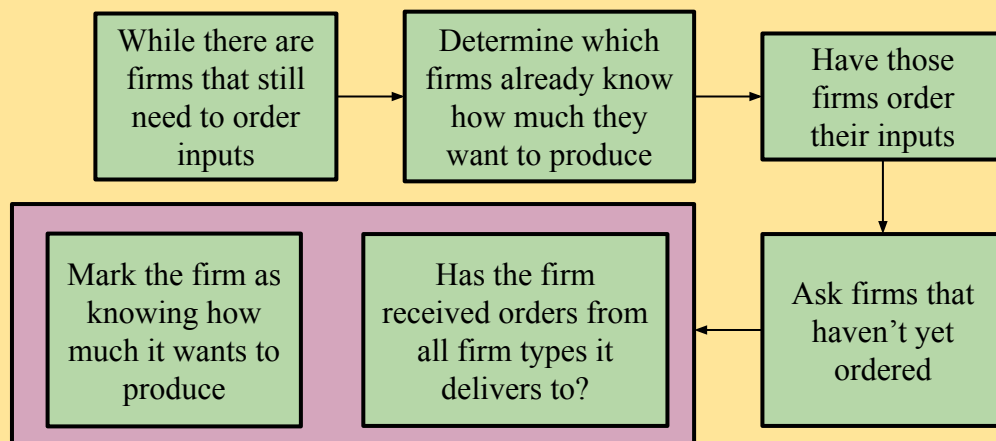
Setup



Initiate Framework Agreements



Order Inputs



Each time step (green boxes and negotiations are turtle run procedures, red boxes are run by the observer after all of the turtle procedures)

