Spatial equilibrium from density cost and Landlords

The hypothesis paper states that

Spatial morphology: reaction to cost changes

What effect does the adjustment of costs have on the agents’ ability to produce emergent equilibria?

This section focuses on the People’s reaction to cost changes as it is reflected in settlement size.

Each of the costs in this experiment is related to the People’s real wage: whilst goods, delivery or commute costs increase, the real wage decreases. However, this does not always result in the same outcome.

Figure XXX shows how people choices effect the settlement morphology as the costs are increased.

FIG XXX

The change to Goods Cost, Delivery Cost and Commute Cost and the consequent settlement size.

[How the data is displayed in the graphs]

In the hypothesis paper, three conclusions are drawn from the results of similar experiments: “People facing density costs or Landlords make the same choices given a change in cost (though see below regarding base wages). Those choices vary depending on the cost type. Base good cost and its delivery cost produce opposite results: cheaper base-cost goods means denser settlements as People can afford to buy more goods, trading off against land or density bought. Decreasing either delivery or commuting costs expands the settlement: the effect of varying either type of distance cost is the same.”

(REF PAPER)

Our experiments produced similar results

### The impact of differences in wealth and preferences

Additions to the code

Potential Additions to the code

Landlords- The further a piece of land is from the landlord, the higher the land cost of the patch.

This would enable testing of

Firms- When the radius is decreased below the limit that allows all firms to be placed within it, reduce the maximum amount of firms on the parameter slider.

This would increase the functionality of the model and allow a SMOOTHER UI.

People- Frugality and Favouritism – Personal Preference over spending on different items. This could potentially produce more accurate data if it was implemented in accordance with a formal study of the population’s spending preferences.

Display the Radii of each Person’s personal bubble on screen. ADD FUNCTIONALITY