

## **Thesis title**

### Motivation:

- Agent based modeling is closer tied to the real world than common economic equations
- With today's extensive compute power technology, it computationally viable to have complex and large ABM's with many complex interactions

### Background:

- Step 3 in the method about the external environment is something that is always necessary to involve in ABM's because any system unless all variables are completely unaffected by an external environment, cannot be represented and simulated in its entirety unless the whole universe is simulated.

### Method:

1. Define agents from (as of now initially) common sense
2. Define interactions (as of now initially) common sense
3. Define external environment from the OECD database or similar
4. Define initial conditions from the OECD database or similar
5. Simulate many times (monte carlo) with random variables being reset each time
6. Compare with AR(0) and other status quo economic predictors
7. Readjust agent parameters, agent interactions and environment from result of comparison using reinforcement learning

### Agent definitions:

- Government
- Central bank
- Bank
- Company
- Household