

Graphical Modelling

Environmental Systems #2

Marburg Open Educational Resources

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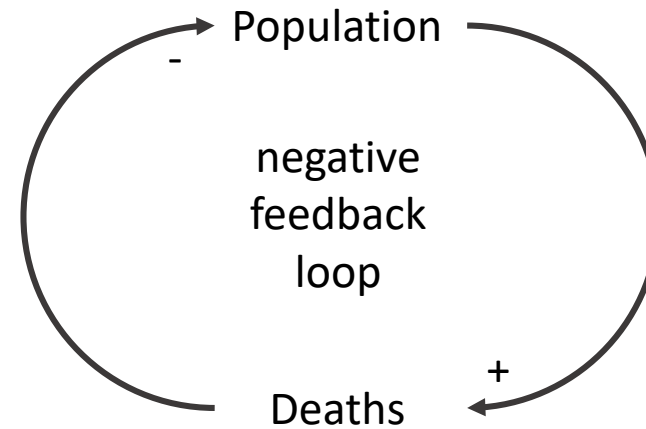
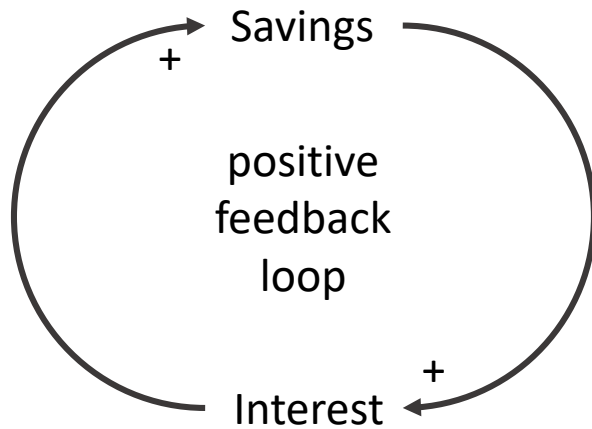


Graphical Modelling



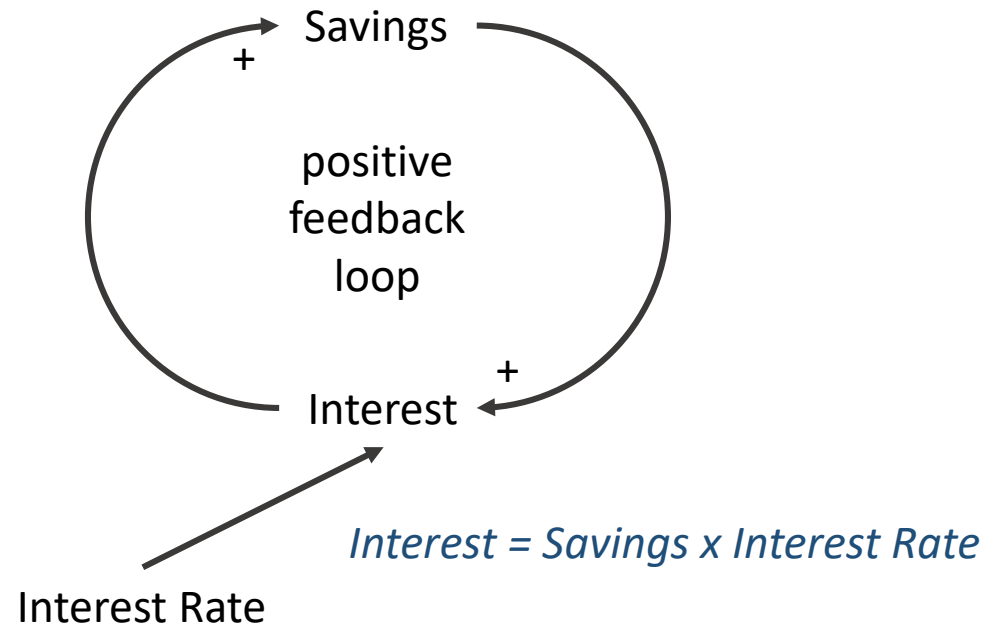
[\[PD\] via Wikipedia.org](#)

Graphical Modelling | Causal Loop Diagrams



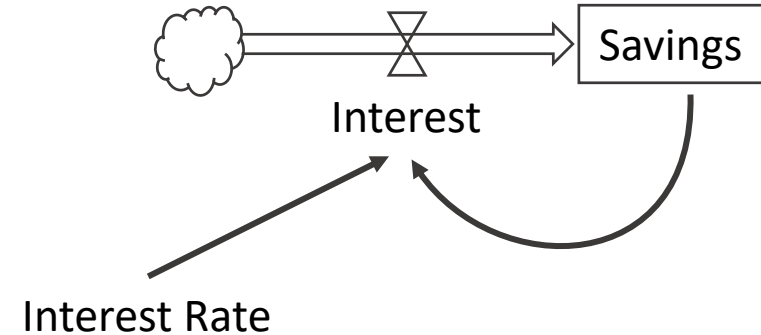
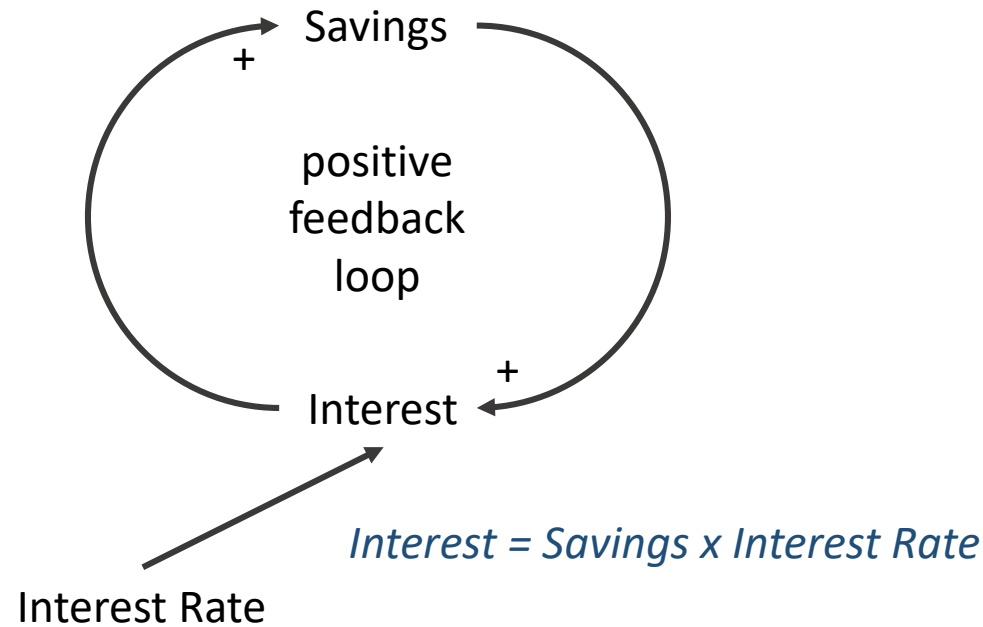
Graphical Modelling | Causal Loop Diagrams

$$Savings = Savings_{before} + Interest$$



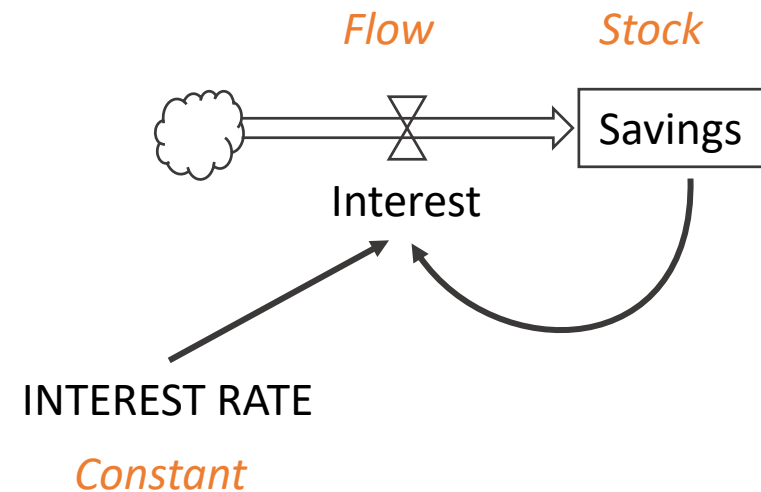
Graphical Modelling | Stock and Flow Diagrams

$$Savings = Savings_{before} + Interest$$



Graphical Modelling | Stock and Flow Diagrams

- Stocks and flows are the atomic blocks of systems
- Stocks integrate flows over time
- Stocks are only changed by flows
- Flows depend only on stocks or constants
- Flows do not directly interfere with each other (only over stocks)
- Stocks are also called levels, flows are also called rates



Graphical Modelling | Negative Feedback Loop

