

An Introduction to the Heterogeneous Agents Resources and toolKit

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“Hands-On Heterogeneous Agent Macroeconomics”
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Agenda: A Flavor of HARK

1. “Microeconomic” models in HARK: the `AgentType` class

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2. Example HARK model
 - ▶ Consumption with permanent and transitory shocks to income
3. 30,000 foot view: What else is in HARK?

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Model solution can be constructed as iteration on sequence of “one period problems,” conditional on solution to subsequent period.

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- ▶ *Ex ante* heterogeneity: Agents differ in objectives, preferences, expectations, etc before anything “happens” to them
 - ▶ Some people are more risk averse than others, e.g.

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 - ▶ Much easier to compare and exchange models
- ▶ Complex models extend basic ones through “class inheritance”

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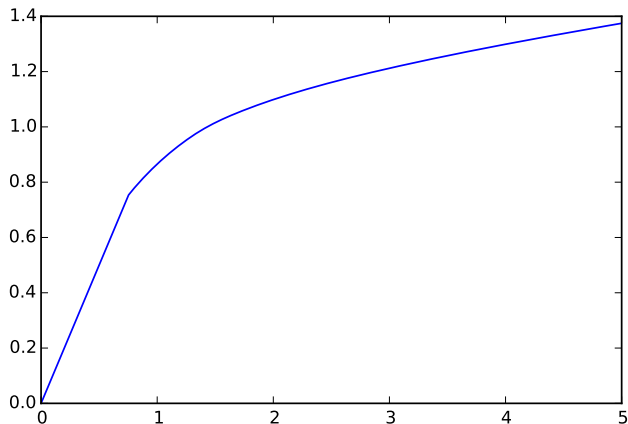
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 - ▶ Mathematical Details: [Formal model](#)

Buffer Stock Model Consumption Function



Horizontal Axis: "Money"; Vertical Axis: "Spending"

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- ▶ Much room for improvement: endogenous labor supply (e.g.)

References I

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