Technological Disruption in Insurance and Credit Markets

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Information in credit markets

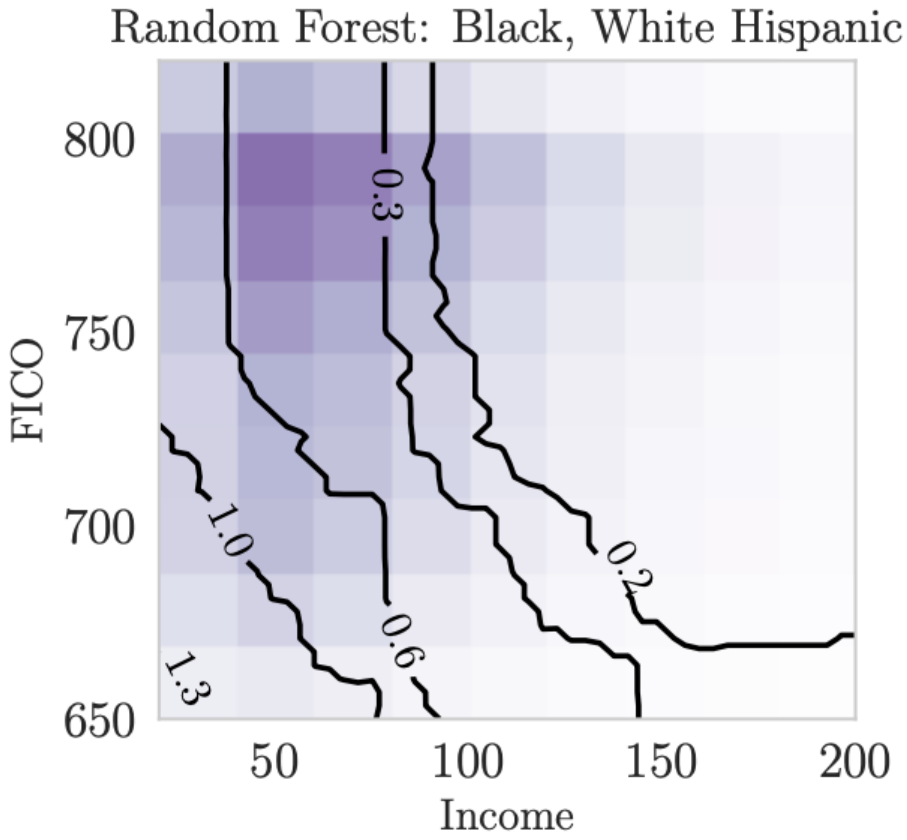
- What are the pros and cons of increased flows of information?
  - More flexible ML models, e.g., Pr[default] = f(x)
  - Bigger datasets: more variables in x

- Economics 101: In “complete” markets, information improves efficiency
  - More accurate allocation of scarce resources among consumers/firms
  - Provides a rationale for customization as a benefit of tech

- Points of discussion
  - Credit markets are not complete/perfect along several dimenions
  - Economic efficiency versus societal goals such as equal opportunities

Credit market imperfections

- **Incompleteness:** You cannot buy insurance against getting a low credit score
- Adverse selection: Acceptance rates may rise with better information
- Financial stability: What happens to systemic risk when everybody uses fine-tuned scoring models?



Fuster, Goldsmith-Pinkham, Ramadorai and Walther (JF 2022)

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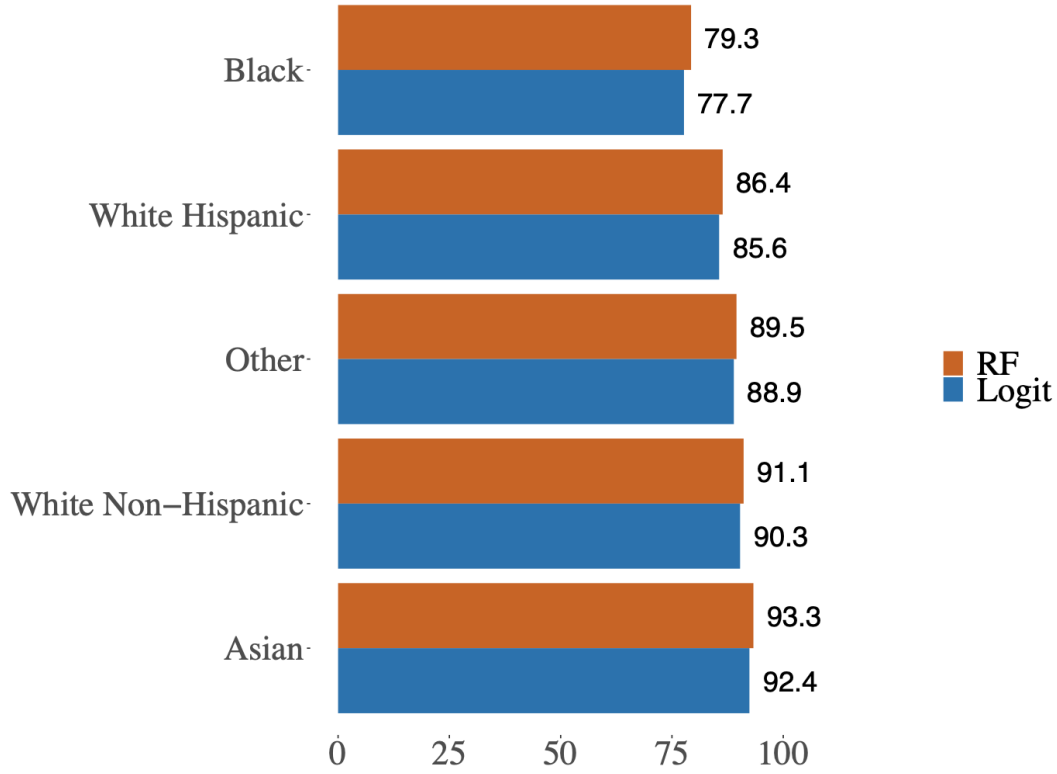

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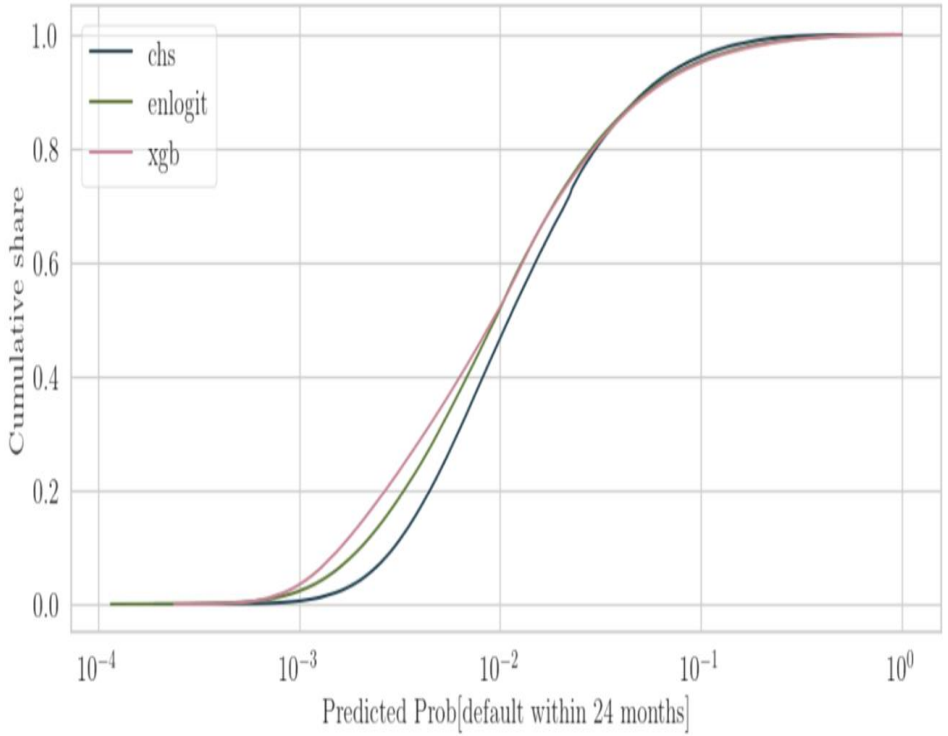


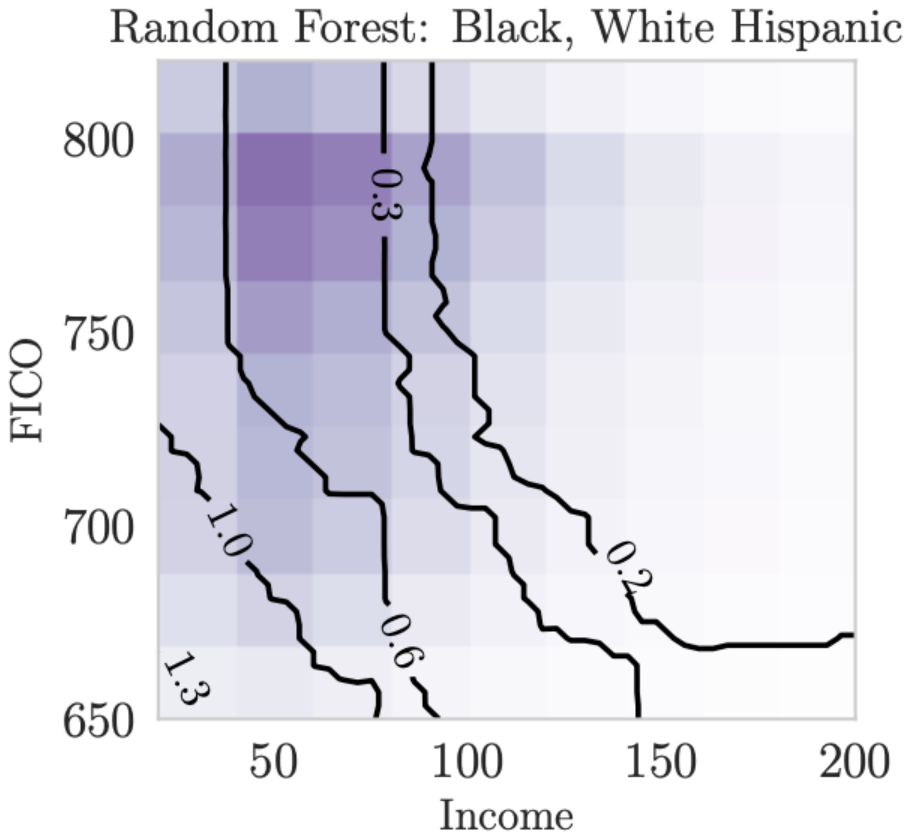
Feldhutter, Halskov, Ramadorai and Walther (work in progress)

Efficiency versus equal opportunities

- **Redistributive effects**: It is hard to predict who winners/losers are until you have fit a model to data

- Regulation: Laws against disparate impact allow for broad risk-based pricing
  - Business necessity defense
  - Fine-grained ML pricing can simultaneously exacerbate inequality and remain compliant

- New questions: Are regulatory/industry objectives fit for the age of AI?
  - Combine CS + welfare/public economics



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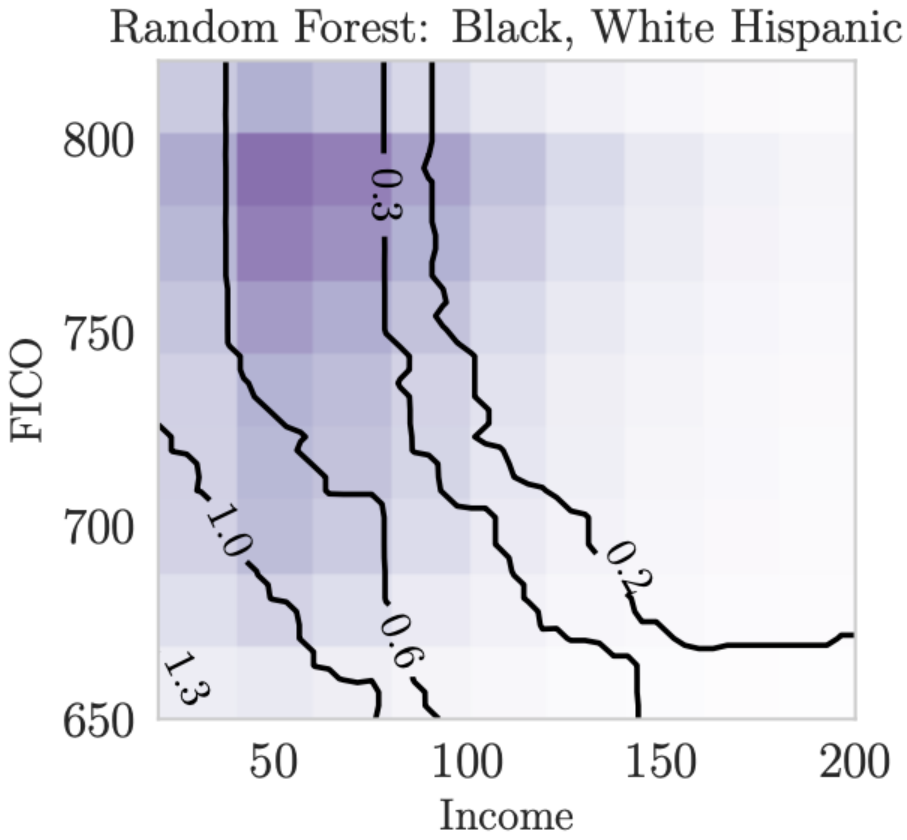

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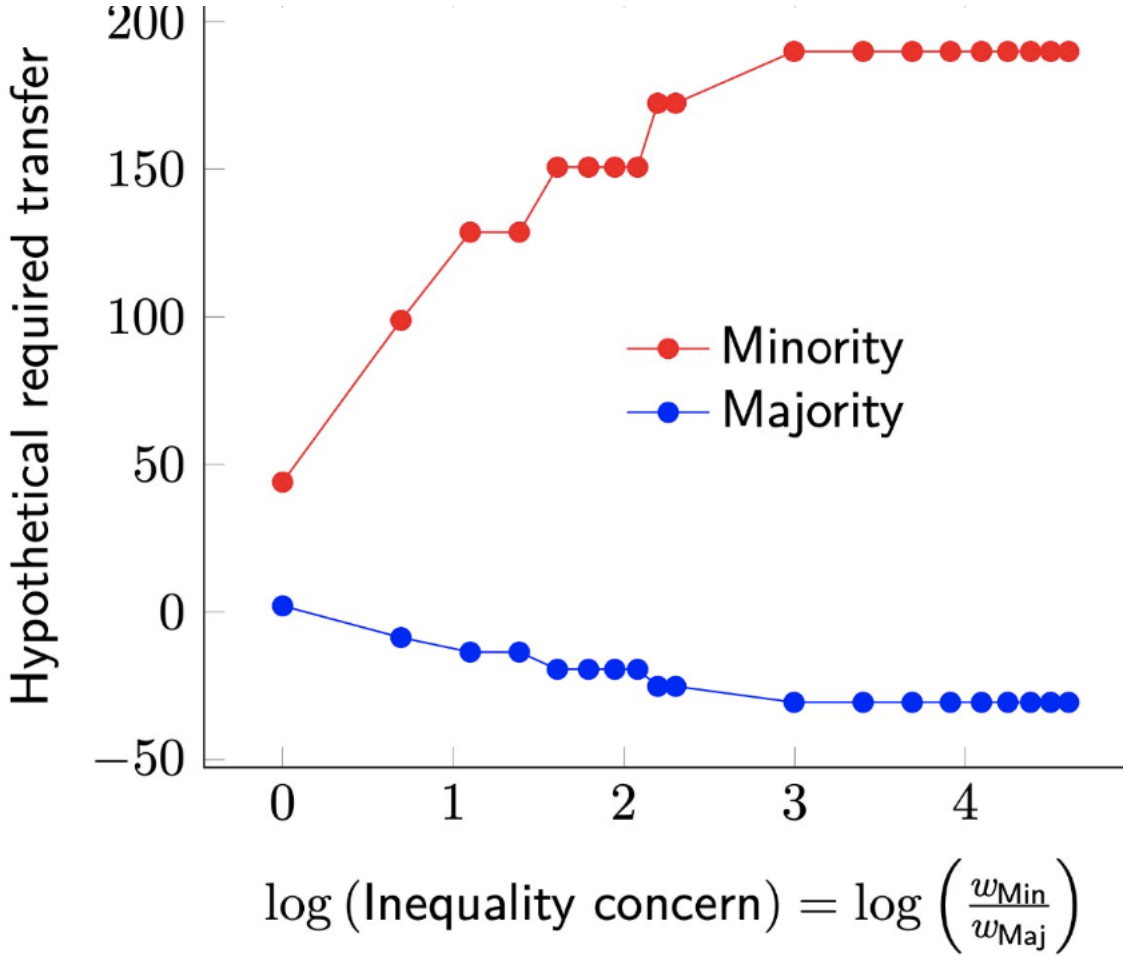

Campos, Misener, Ramadorai and Walther (work in progress)