Global Sustainable Leadership

Sustainability and Finance

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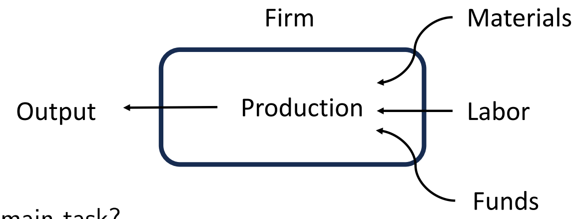
Sustainable Finance

- **Sustainable finance** refers to the process of taking environmental, social and governance (ESG) considerations into account when making investment decisions in the financial sector, leading to more long-term investments in sustainable economic activities and projects (European Comission).
  → Environmental considerations might include climate change mitigation and adaptation, as well as the environment more broadly, for instance, the preservation of biodiversity, pollution prevention and the circular economy.
  → **Paris Agreement**: "making finance flows consistent with a pathway towards low greenhouse gas (GHG) emissions and climate-resilient development"
  → Social considerations could refer to issues of inequality, inclusiveness, labor relations, investment in people and their skills and communities, as well as human rights issues.
  → The governance of public and private institutions – including management structures, employee relations and executive remuneration – plays a fundamental role in ensuring the inclusion of social and environmental considerations in the decision-making process.

What is a firm?

- A firm is a combination of different tasks and projects

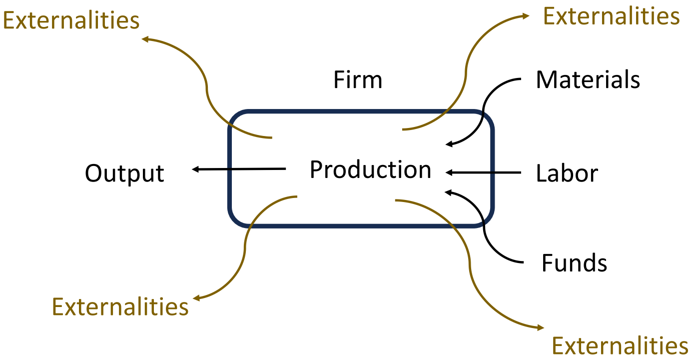


- What is the firm's main task?

$$\underset{\mathbf{p,q,m,l,f}}{maximize}\Big(p \cdot f(m, l, f) - (r \cdot Funds) - (w \cdot Labor) - (p_m \cdot Material)\Big)$$

What about externalities?

- Negative externality: A cost to an uninvolved party generated by another party
  $\rightarrow$ Should negative externalities change a firm's objectives?



Shareholders vs Stakeholders

- **Shareholder view**: A firm's objective should only be maximizing shareholders' value (i.e., profits)
  $\rightarrow$ Friedman: A manager is an employee of the firm's owners, and her main responsibility is to conduct the business in accordance with their desires, which generally will be to make as much money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom.
- **Stakeholder view**: There are negative externalities that a firm does not internalize. Therefore, a firm needs to pay attention to the interests of all the agents who are affected by their decisions.
- Sustainable finance is about the definition of the objectives of firms/projects
  $\rightarrow$, i.e., should firm's objective include ESG-related issues?

Shareholders vs Stakeholders

There are several opposing views!

- Management can almost always rationalize any action by invoking its impact on the welfare of some stakeholder (Tirole, 2001)
- Stakeholder theory expands the power of managers in an unproductive way, increasing the agency costs in the economy (Jensen, 2001)
- Shareholder view depends on the government to handle negative externalities (Hart, Zingales; 2017)
- **Considering all stakeholders in the objective can contribute to firm value (indirectly)!**

Considering Stakeholders

Considering all stakeholders in the objective can contribute to firm value indirectly

1. A better ESG profile can attract better employees
2. A better ESG profile can help a firm against climate change
   $\rightarrow$ Physical risk
   $\rightarrow$ Transition risk
3. A better ESG profile can attract cheaper funding opportunities

Firms' ESG profiles and Employees

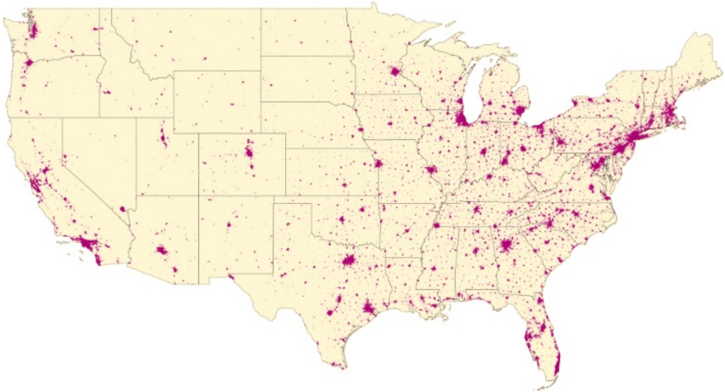
- Employees may care about their employers' ESG profiles
    1. Krueger et al. (2023) find that workers earn substantially lower wages in more sustainable firms
       → High-skilled workers accept lower wages to work in more environmentally sustainable firms
       → The effect gets larger in recent years
    2. Liu et al. (2023) find that firms offer generous maternity benefits to improve their gender balance
       → Offering these benefits can increase firm value

Firms' ESG profiles and Climate Change

- Can a better ESG profile provide protection for the firm against climate change?
- There are two main ways that climate change is affecting firms
  $\rightarrow$ Physical risk
  $\rightarrow$ Transition risk

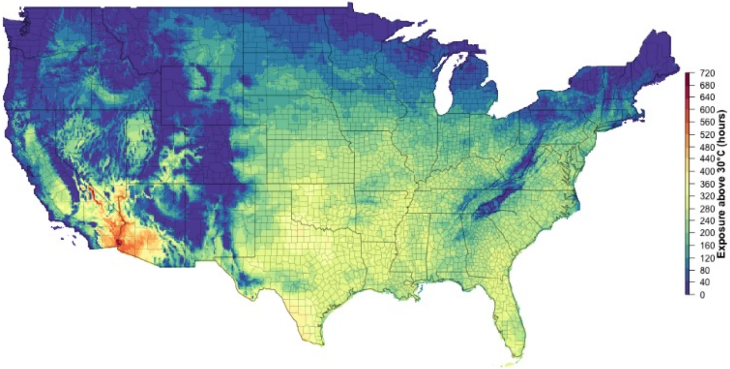
Physical risk

- Physical risk refers to the physical impacts of climate change on firms
  $\rightarrow$ Location of public firms in the US



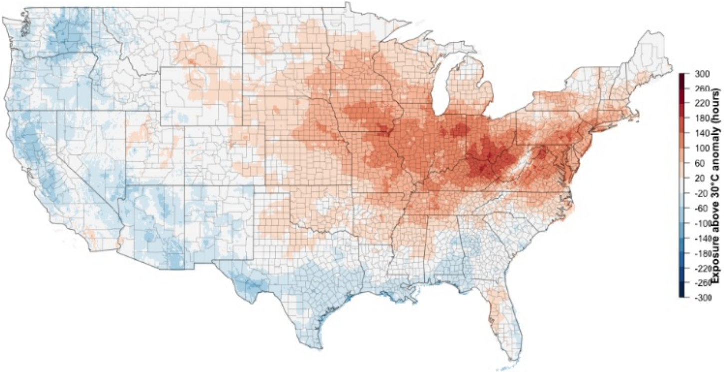
Physical risk

- Physical risk refers to the physical impacts of climate change on firms
  $\rightarrow$ Heat



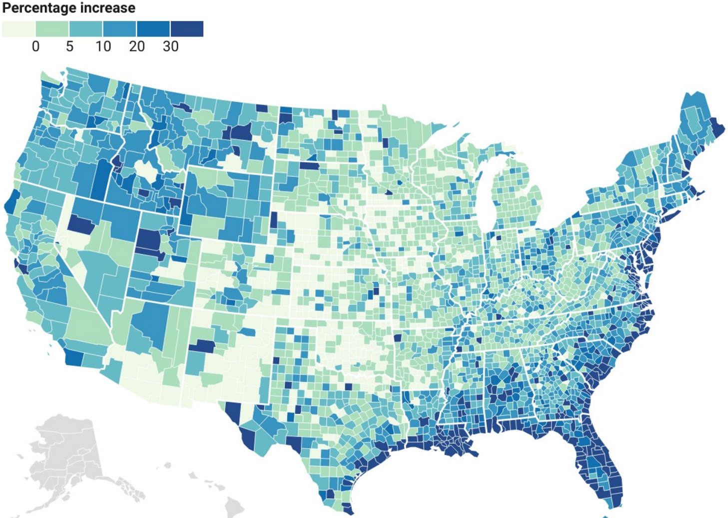
Physical risk

- Physical risk refers to the physical impacts of climate change on firms
  $\rightarrow$ Heat



Physical risk

- Physical risk refers to the physical impacts of climate change on firms
  $\rightarrow$ Flood



Transition risk

- Transition risk refers to risks that the transition to a low-carbon economy entails
- This transition comes with several binding policies that can affect firms' profits
  $\rightarrow$ EU-ETS
- Transition may require investment in new technology
- Due to the transition, the markets that the firm operates in may change
  $\rightarrow$ Product market, labor market

Firms' ESG profiles and Funding Conditions

- To the extent that it lowers the firm risk, a better ESG profile can lower funding costs
  $\rightarrow$ Lee et al. (2023)

$$EnvProf_j = HighEmissionsInd_j$$