Skill Rebound – a qualitatively new type of rebound?

Digitalisation and the Rebound Effect, ETH 2020

Noah Hiltpold
Outline

- Skill Rebound – Definition
- Some Examples of Skill Rebound
- Other Types of Rebound in Relation
- Discussion
Skill Rebound – Definition

"(...) a lowering of the skill requirements needed to perform a specific activity that leads to an increase in that activity" [1]

"largely been ignored as such"

[1]: Vlad C. Coroamă and Daniel Pargman. Skill rebound: On an unintended effect of digitalization
Self-Driving Cars

Skill Rebound:
anyone, regardless of ability or physical fitness, can use a car independently

Self-Driving Cars

- **Direct Rebound Effects:**
  - Cheaper Transportation

- **Indirect Rebound Effects:**
  - Time Rebound
  - Income Effect
  - Skill Rebound?

Self-Driving Cars

- Direct Rebound Effects:
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  - Time Rebound
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- Skill Rebound?

Self-Driving Cars

Experimental Evidence:

- 34% of the increase in VMT were in lieu of chauffeuring
  → picking up family members, getting gas, getting groceries

- 61% of these trips were «zero-occupancy»
  → finding a parking spot, first trip of picking up people

Image source: https://www.dreamstime.com/photos-images/chauffeur.html
Digitalisation as a Whole

- Before digital computers were around: human computers
- Did digitalisation lower the skill hurdle for computing?

Image source: https://ece.engin.umich.edu/stories/human-computers-from-pioneer-high-school
Digitalisation as a Whole

- The job «Computer» was quite specialised & skilled
- Specialized computers were faster & more reliable than most engineers
- Yes, it lowered the skill hurdle
- So is all of modern computing a Skill Rebound effect?
Music Production

- Before 2000, music production equipment was very expensive & specialised
- Mixing & mastering a track needed good ears and some experience
Music Production

- Nowadays: pro-level software affordable for amateurs
- Modern tools make recording, mixing, mastering etc. easier
Many Terms and Definitions

- Direct Rebound: single service
- Indirect Rebound: effects across product domains
- Induction, Income, and Substitution Effect
- Time Rebound
- Backfire
- Macroeconomic (world-wide) Rebound
Many Terms and Definitions

- Direct Rebound: single service
  - backfire
- Indirect Rebound: effects across product domains
  - Induction, income and substitution effects
  - Time rebound
- Macroeconomic (world-wide) Rebound
  - Multi-level indirect rebound
Classification of Rebound Effects

- Direct Rebound
  - efficiency gain → lower cost → higher consumption of same good

- Indirect Rebound
  - efficiency gain → lower cost → higher consumption of different good

- Skill Rebound (???)
Classification of Rebound Effects

- Direct Rebound
  - efficiency gain $\rightarrow$ lower cost $\rightarrow$ higher consumption of same good

- Indirect Rebound
  - efficiency gain $\rightarrow$ lower cost $\rightarrow$ higher consumption of different good
  - Product easier to use $\rightarrow$ broader market (Skill Rebound??)
Classification of Rebound Effects

- **Direct Rebound**
  - efficiency gain → lower cost → higher consumption of same good
  - Skill Rebound in some parts

- **Indirect Rebound**
  - efficiency gain → lower cost → higher consumption of different good
  - Skill Rebound in some parts
Discussion: Where would you classify Skill Rebound?

submit answers:
https://app.sli.do/event/sbzlyeai
Discussion: Opening of new markets

Skill Rebound as an opening of markets to customers that were previously not able to participate.

Does it make sense to classify it as a rebound effect?
Discussion: does it matter?

What are the implications of not considering Skill Rebound as a «true» rebound effect?

Does it change the approach to solve the problem?