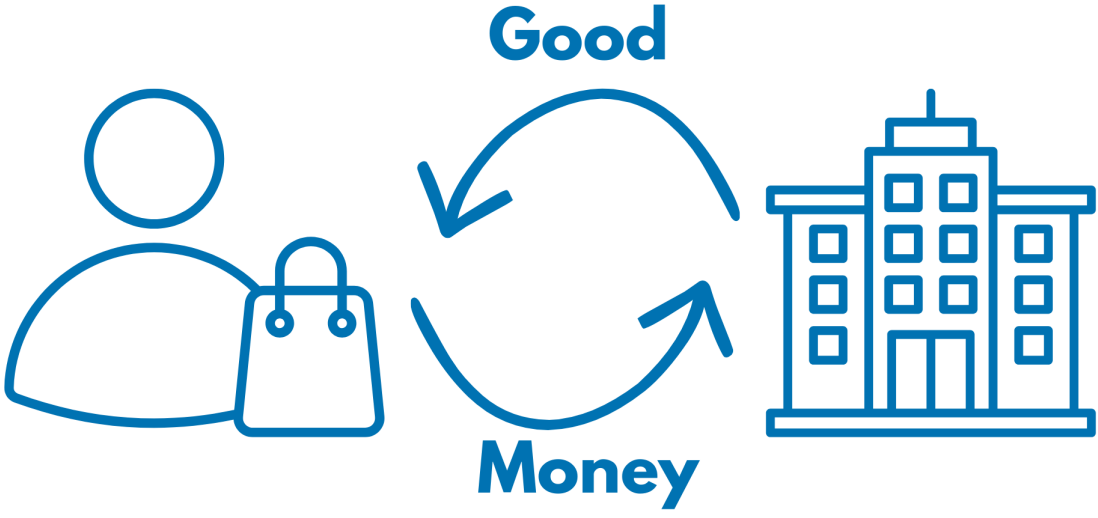
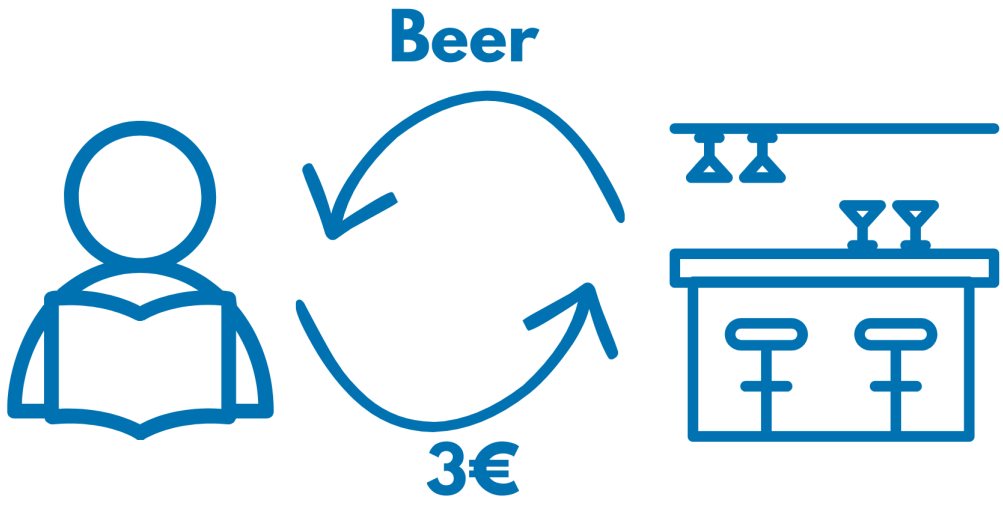
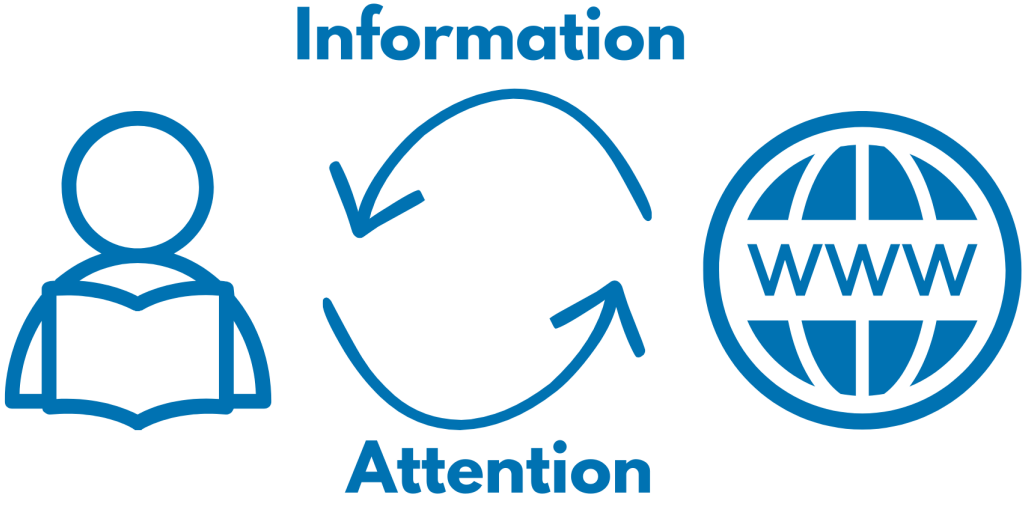
Will AI change the internet?


Good
Money


Beer
3€


Information
WWW
Attention

Information

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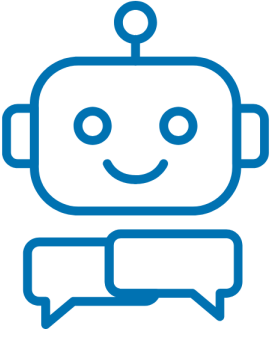

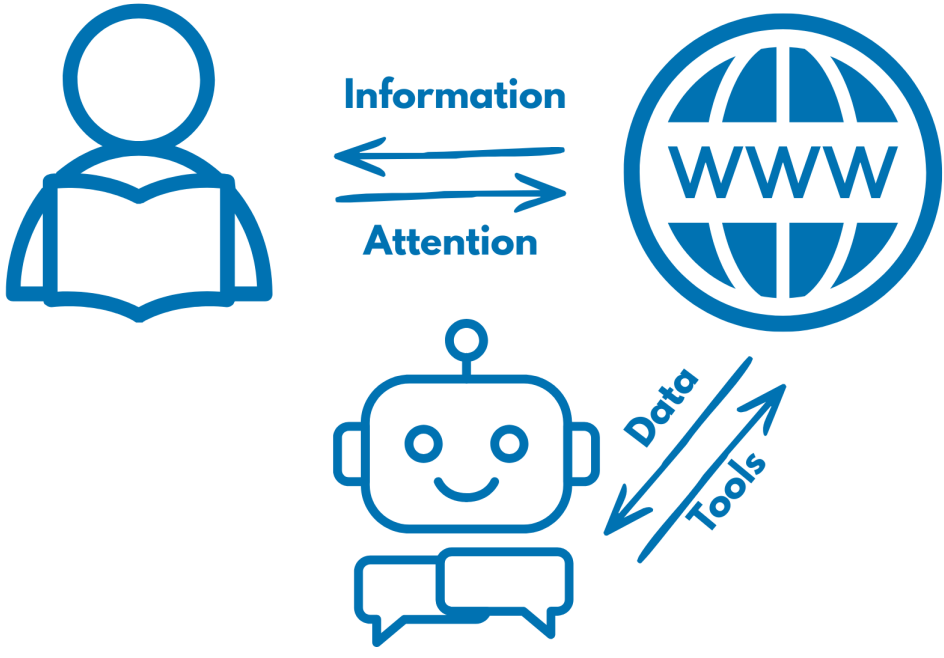
Information
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WWW
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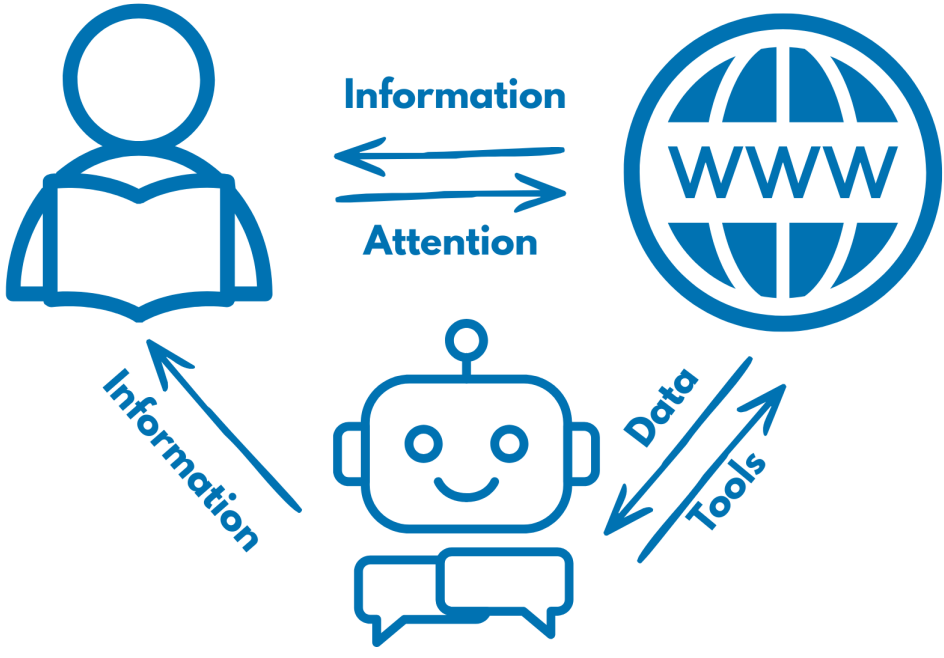
Tools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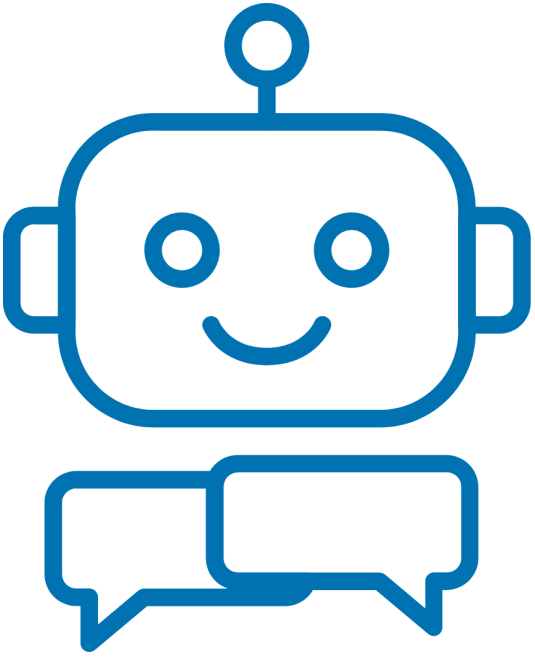

Effect 1: The AI steals customers, thus **less** incentive to produce **content.**

Effect 2: The AI makes it easier to produce, thus **more content.**

Introduction

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- **Preview:** Gen AI makes things worse but not always.

Literature Review

- **Gen AI's Impact Online**
  Burtch, Lee, and Chen 2024; Rio-Chanona, Laurentsyeva, and Wachs 2023; Reeves, Yin, and Simperl 2025; Shan and Qiu 2025; Lyu et al. 2025; Zhao and Berman 2025; Koren et al. 2026
  Contribution: Structured, comprehensive adn credible evidence of Gen AI's impact both on supply and demand.

- **Discrete Choice & Monopolistic competition**
  Melitz 2003; Krugman et al. 1980; Train 2009 adn many many many many more
  Contribution: Novel literature application to a new field: Online market with interest of AI.

The Model

- **"Firms"** (Providers)
  - Create information online.
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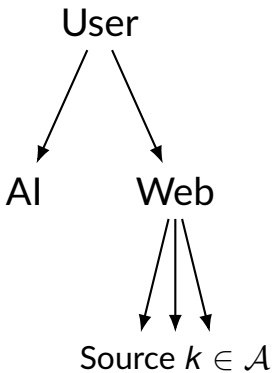
Timing of the model:

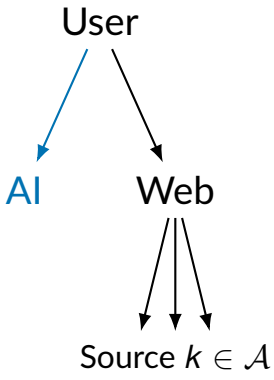
1. Providers draw quality of their information.
2. Given the quality decide whether to enter the market or not.
3. Users pick the sources among the providers that entered and GenAI

User Side



User Side

$\mathbf{Q_j}$-Quality of j



- Utility:

$$U_{iA} = lnQ_A + \epsilon_{iA}$$

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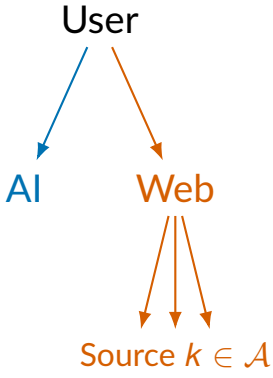

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$$U_{iA} = lnQ_A + \epsilon_{iA}$$
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$\epsilon_i \sim GEV(\theta)$

δ_W-Web preference;

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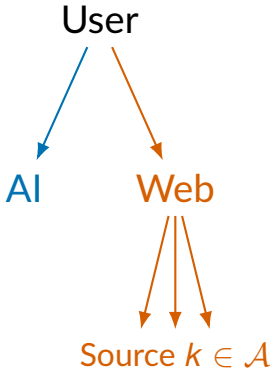

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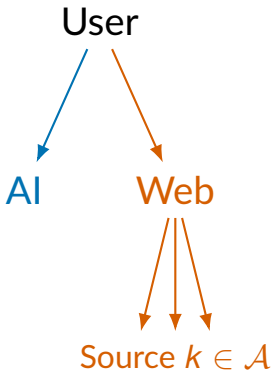

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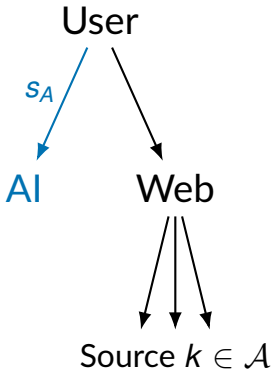
- AI aggregates the information available on the web, with efficiency ϕ

$$Q_A = \phi \left(\sum_k Q_k^{1/\theta} \right)^{\theta}$$

User Side



- The shares of users that go to:
  - AI

$$s_A = \frac{\phi}{\delta_w + \phi}$$

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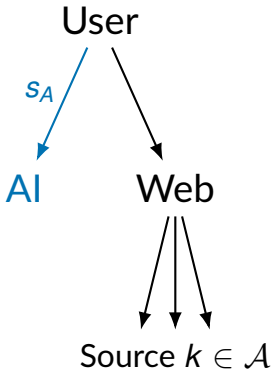

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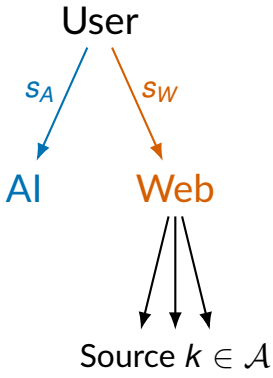

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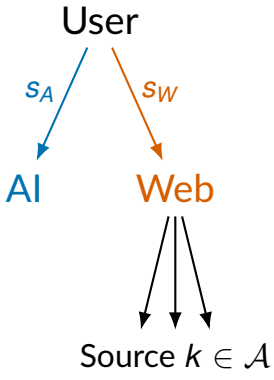

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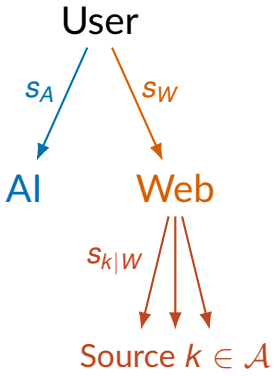

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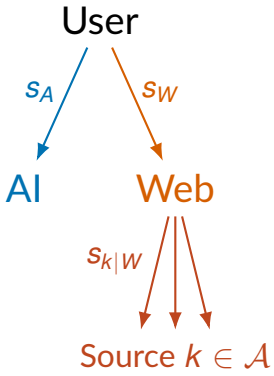

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Provider Side

$\mathbf{Q_j}$-Quality of j; $\mathbf{s_j}$-share of users using j;
$\mathbf{Q_0}$-Quality cutoff of entry;

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$$Q_0 = \left[\frac{Fm\gamma}{r(\gamma - 1/\theta)}(1-\eta)\frac{\delta_W + \phi}{\delta_W}\right]^{1/\gamma}, \quad \downarrow \eta \text{ and } \uparrow \phi$$

δ_W-Web preference; ϕ-AI's Ability r-Revenue per share; F-Fixed cost; η-Cost reduction due to AI

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$$m_{\mathcal{A}} = Q_0^{-\gamma}, \quad \uparrow \eta \text{ and } \downarrow \phi$$

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Supply of information:

- **increases**$\uparrow$ because AI decreases the cost of provision (η).
- **decreases**$\downarrow$ because AI steals the consumers, thus there is less incentive to produce (ϕ).

Quality

- We care about the quality that is consumed by the users:

$$\widetilde{Q} = s_A Q_A + \sum_{j \in \mathcal{A}} s_j Q_j$$

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$$\begin{aligned}\widetilde{Q} &= s_A Q_A + \sum_{j \in \mathcal{A}} s_j Q_j \\ &= \frac{Q_0}{\delta_W + \phi}\left[\frac{\delta_W(\gamma - 1/\theta)}{\gamma - 1/\theta - 1} + \phi^2\left(\frac{r\delta_W}{F(1-\eta)(\delta_W+\phi)}\right)^{\theta}\right]\end{aligned}$$

Issues

- DATA
  - GESIS Panel.dbd Prerelease
  - 6k german users, >1mil datapoints.
  - Captures user, time, URL, and HTML snapshots of visitied pages.
  - Socio-economics stuff available.
- Produciton side without a production function.

Conclusions

1. How does Generative AI (GenAI) affect online content supply and quality?
2. Ideally Structural model, but for now theory.
3. When we reduce the cost of information provision, there is more information quality and supply.

Thank you!

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