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# Empirics of the Bazaar: Discussion

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# Five Years Ago-

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- ◆ Halloween documents
  - Leaked from Microsoft
  - Posted on Eric Raymond's website
- ◆ “Since money is often not the (primary) motivation behind open-source software, understanding of the threat posed requires a deep understanding of the process and motivation of open-source development teams....”

**And here we are...**

# The Empirics of F/OSS

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- ◆ Despite ESR's evocative name, F/OSS is NOT a Bazaar!
- ◆ Bazaars have transactions.
- ◆ Even if agents can “run a tab”, ie, have credit, there is still settling up.

# So What Is F/OSS? Three Views

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- ◆ Von Hippel
  - F/OSS is a user network
- ◆ Hann et.al.
  - F/OSS is a professional “school”
- ◆ Ghosh
  - F/OSS is a “cooking pot” economy
  - Possibly a “different way” of writing software

# Von Hippel

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“Horizontal, distributed innovation networks containing user participants only *can be fully functional.*”

## Evidence:

- ◆ Existence of other user networks: lots
- ◆ Conditions satisfied in F/OSS? Yes
- ◆ Gap in argument: **What if users compete with one another?**

# Hann, Roberts, Slaughter, Fielding

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“Greater open source participation... as measured by contributions, does not lead to wage increases. Higher status ...within the Apache Project does lead to significantly higher wages.”

**Claim: Spencian Signal, NOT Human Capital**

Very appealing claim, must examine it carefully...

# Hann, et al, continued

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## Evidence:

- ◆ Survey, Fitted wage equation (Mincer)

## Problems:

- ◆ Unrepresentative sample: 93 out of 137 respondents are NEW to Apache Project
- ◆ Distributions of key variables are left-censored and HIGHLY skewed, there are OUTLIERS
  - Need non-parametric tests and graphs
- ◆ Spence: “It is not necessary to insist that the actor... think of himself as signaling or conveying information.” **Yes, but... need mechanism!**

# Ghosh

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Look to the code... it is the only record of “transactions” in the F/OSS “cooking pot” economy.

- ◆ Overview of tools under construction and problems arising along the way.
- ◆ Very ambitious project, great promise.
- ◆ Stay tuned for results!



# Conclusion: Where is the money?

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From these papers:

- ◆ F/OSS is probably both of the following:
  - User network (Von Hippel)
  - Professional “school”/Source of training& reputation & credentials (Hann et al)
- ◆ F/OSS may be a different (better?) way to design complex systems/write code
  - In general, today large codebases are NOT VERY modular
  - **Because of code-mixing incentives of incumbents vs. enforced decentralization of open source,**  
F/OSS may be “More Modular”
  - More modular = More improveable = More valuable