When Flagships Falter: Comparing Finland and Waterloo

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Waterloo and Finland: Similarities

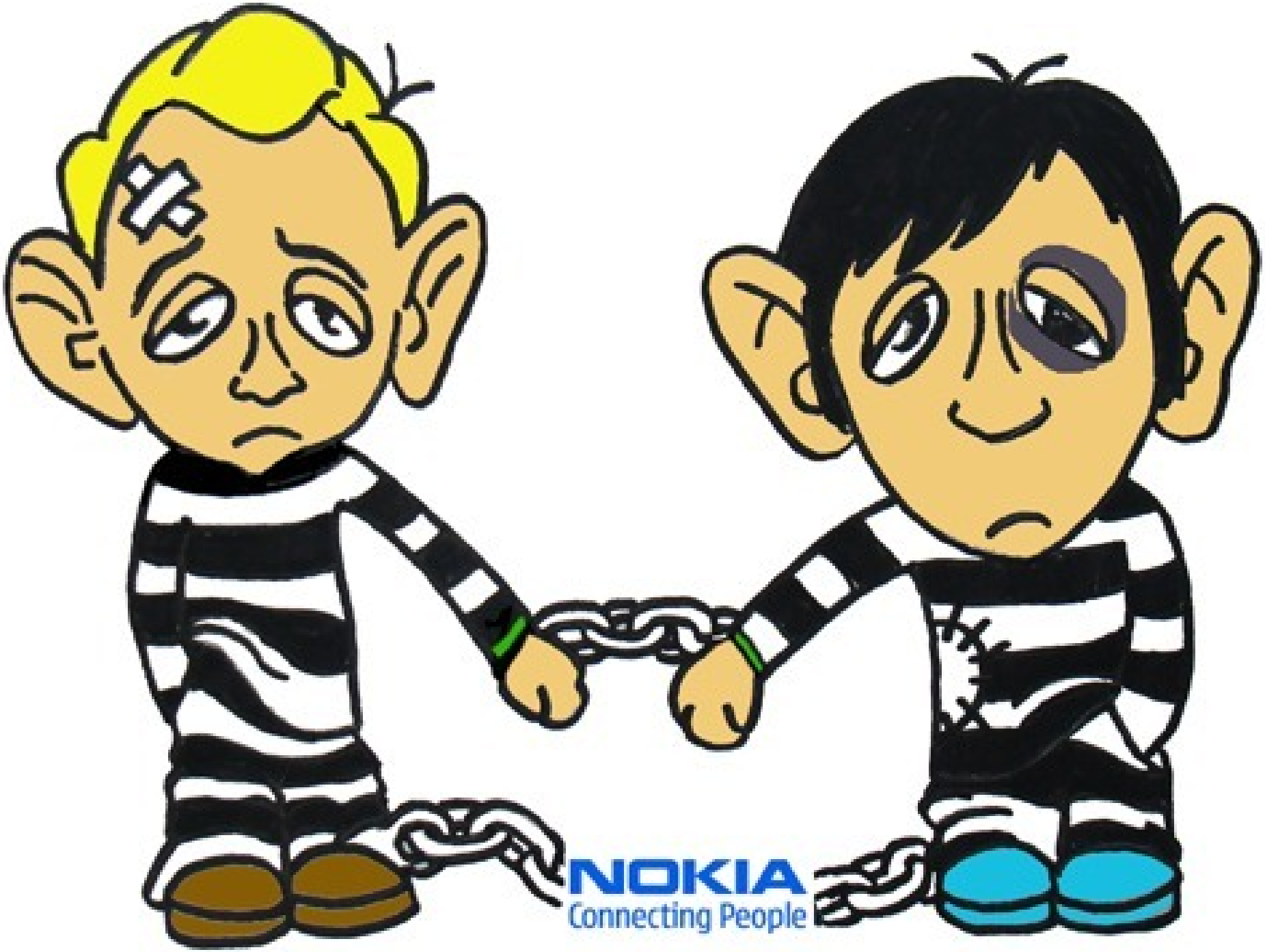
- Late entrants to high-technology markets (mobile communications)
- Success based on large, flagship firms representing at least 20% of ICT employment
- Both firms “declined” after 2008, shedding roughly 75% of their local workers
- In both cases, flagships have been replaced by a vibrant startup scene

Waterloo and Finland: Differences

- Finland: ~10% drop in ICT employment between 2008 and 2012, even steeper decline in output, productivity
- Waterloo: Haven't found comparable figures, but other indicators suggest that the ICT industry is larger than ever
- Why has the transition been so much more difficult in Finland than Waterloo?

Post-Flagship Waterloo v. Finland: Possible Explanations

- Firm size? But Blackberry had a larger impact on the local labor market
- Comparative advantage? Not so different, and doesn't explain outcomes in ICT
- Macroeconomic conditions? Significant, but limited relevance to ICT industry
- Institutions? Yes, but institutions that inhibited adjustment in Finland were not exogenous, actively shaped by Nokia


NOKIA
Connecting People

Embedding Firms in Local Communities

- Public policy: Most effective when it connects firms to high-quality public goods, like human capital
- Networks: For example, long-term relationships with local suppliers
- Ideas: Firms might identify with and contribute to the local community

Embedding Can Be Good for Firms

- Provides access to high-quality collective goods (skilled labor, knowledge, etc)
- Supplier networks can facilitate adaptation to changing circumstances
- Relationships with government, other firms, knowledge-bearing institutions, etc. can foster innovation

Embedding Can Be Good for Communities

- Firms are less likely to leave if they depend on local resources (e.g. Blackberry – University of Waterloo)
- Firms are more likely to compete on the basis of quality or novelty, less vulnerable to cost competition
- Local communities may benefit from technological diffusion and learning

Flagship Firms

- Large enterprises can be particularly beneficial
  - More productive
  - Have the scale to invest in collective goods
  - Can deliver reputational benefits (put Finland, Waterloo “on the map”)
- But they can also create problems, exacerbate lock-in (Grabher 1993)
  - Political capture
  - Functional lock-in (e.g. supplier networks)
  - Cognitive lock-in: Groupthink

Blackberry in Waterloo

- No political capture, because there were few policies to capture
  - Close ties to local universities, but didn't control education policy
  - ~$50 million in subsidies, but little after 2004
  - Limited influence over innovation policy
- Limited ties to other, local technology firms. Most important local suppliers were restaurants
- A dominant force in the local media, but within other outlets

Nokia in Finland

- Controlled multiple policy levers via formal representation and informal ties

”When I was working at Nokia, [the] industry associations, the Federation of Technology Industries and even the Finnish government would approach us and ask ‘What is the next thing we need to do?’ And I thought, ‘Why are you asking me? Shouldn’t you have a plan of your own?’”

-Former employee, 14 June 2016, Finland

Nokia in Finland

- Controlled multiple policy levers via formal representation and informal ties
  - Controlled education policy via the Science and Technology Policy Council
  - 175 million Euro in R&D grants between 1995 and 2008
  - More importantly, contributed to emphasis on R&D
- Supplier network (14,000) almost as large as Nokia itself (21,000). At the center of Finnish R&D networks
- Hegemonic force in Finnish media, the definitive model of corporate success

When Flagships Falter: Nokia in Finland

- When Nokia got into trouble, extended to its massive supplier network. Not just manufacturing, but software and IT consultancy
- Not a large universe of ICT firms to absorb talent that left Nokia
- Technology policies designed to promote R&D, not entrepreneurship. Poorly adapted to needs of startups until Nokia decline
- Institutions have changed (Slush, Vigo, etc.), but this is a very recent development

When Flagships Falter: Blackberry in Waterloo

- When Blackberry got into trouble, it was just Blackberry, no supplier network
- Other firms in unrelated areas (e.g. OpenText) could hire Blackberry talent
- Smaller but broader range of initiatives to promote innovation that predated Blackberry's collapse
- Startup scene is relatively new, but building on a more mature foundation than Finland (could access resources other than R&D subsidies)

Conclusions

- In both cases, the decline of a flagship firm wasn't fatal. Both ICT industries survived, and may become stronger than ever
- But the transition was more difficult in Finland, because the entire ICT industry and public policy more generally was built around Nokia
- Paradoxically, Waterloo may have benefited from the limited scope of its innovation policies and low levels of coordination