At the roots of lean: the political and institutional determinants of consensus

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• **1988:** the “lean production” concept is first developed by John Krafcik within the International Motor Vehicle Program

• **1990:** publication of the The Machine that Changed the World

• **1990s:** the Lean production turns into a dominant managerial paradigm

• **2000s:** … and still it is today

• **The aim of the presentation:**
  • Trace back (and deconstruct) the political and institutional roots of the “lean” consensus

**Introduction**
• From the debate on the Japanese competitive advantage to the lean production theory
  • Two visions:
    1. The « unfair competition » view (meso-macro)
    2. The « taking Japan seriously » view (micro-management / socio-cultural)
  • 1980-1986: coexistence
  • 1986-1990: opposition / ideological polarisation → Lean production thesis – *The Machine that Changed the World*
• What does the lean concept to the Japanese model?
  • It takes the « Japanese » out
  • It reduces the « competitive advantage » to a productive machine / a one best way

• The “switch” in the representation of the “Japanese model” is both extreme and very rapid
  • 1984 – Altshuler et al., *The Future of the Automobile*
  • 1990 – Womack et al., *The Machine that Changed the World*

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The 1980s Debate on the Japanese model
The sources of the Japanese competitive advantage

- A revolutionary productive model
- BUT
- Very low wages and very long hours
- Protectionism
- Cheap capital
- Luck (Low variety)
- Doubts about the employment relationship
- Caution concerning the transplants

1984 VS 1990

- A revolutionary productive model
- Empowerment
- Competitiveness / Built to order
- Innovation
- Faster product development (High variety)
- Better employment relationship / The 3 pillars
- Transplants are the proof
• So, what has changed so dramatically between these two books in such a short period of time?

• The « lean » people’s answer is: it is not the way we were looking at things that changed, but the object itself → “The role of the Japanese transplant operations in shaping the research agenda has been widely understated in my view” (Holweg 2007: 421)

• What has really changed:

1. The institutional framework of the IMVP research
2. The political context

1984 VS 1990
• **TAKAOKA**: 16 hours 45 defects

• **FRAMINGHAM**: 31 hours 135 defects

• **NUMMI**: 19 hours 45 defects

• **Takaoka**: 5727 workers / 4 models on two lines / pilot factory for automation / full capacity / overtime / average age 28 yrs

• **Framingham**: closed in 1982 and for good in 1989 / 2100 workers / 2 models on two lines / half capacity / average age over 45 yrs

• **NUMMI**: 18 months of production / 1200 workers / 40% local content / 1 model on 1 line /

**The IMVP survey: comparing apples with pears?**
1. The financing of IMVP phase II
   • From the Sloan Foundation to complete private funding (60% of which goes to the MIT faculty)
   • The role of the Japanese (Jay Chai, executive vice president of C. Itoh) – (see also Holweg 2007)
2. From Alan Altshuler to James Womack:
   • “We wanted a book that would not be an academic book and we hired an agent to represent us and to find a good ghost writer” (D. Roos, Boston, 19/04/2005).
   • “Womack was not cut out to work in the academic world. What he really wanted was to be close to the action and and to be accountable to nobody” (M. Cusumano, 20/04/2005).
   • “The personality of Jim was so strong that either you loved him or you hated him. Therefore, those who remained were very united, and followed Jim with a lot of energy” (J-P. MacDuffy, 11/10/2004).

The change in the institutional framework of the research
• The anti-intellectual and anti-academic stance of Womack:
  • Almost no theoretical or methodological approach
  • Journalistic writing (ghost writer)
  • Target: managerial community / the objective is to communicate
  • Benchmarking and recipe for miracle: producing twice as much with less time and work effort!

• “What is surprising, even very surprising retrospectively, is the success that the book has enjoyed in the academic world. Nobody thought that it could become an university text-book, as it is the case today” (D. Roos, Boston, 19/04/2005).

An « airport book »
• “MIT unworthy”… “but the message was right” … “and the data was the best we ever had”

• Ruth Milkman: “In my opinion, you can criticise the book, but the message was right. [...] IMVP had an agenda, which in my opinion does not take away the fact that their data was really a breakthrough in the debate around American factories, it set things clear and that was very important” (Boston, 23/04/2005)
• **Paul Adler**: “The data is complicated, but the critics that the first IMVP research suffered in those works were just so rude, un-collegial, you know, these people worked very hard to make a serious work, of course there was ideology also in the IMVP work but not in the assembly plant methodology survey, they did a very good job, **that data was the best we ever had on this**” (Los Angeles, 28/04/2005).
• **Michael Cusumano:** “*The Machine that Changed the World* was a book conceived to have an impact on the top management. It is therefore curious that academic people in Europe have attacked the book so fiercely. [...] **It was a popular book written for the business: you cannot criticize it because it is not precise, academic or whatever**” (Boston, 22/04/2005).
• Adler: “The IMVP structure is a good indicator of the colonisation of academia by industry in the USA. […]
• As a result, when you teach in a business school in the United States, you can't take union point of view on business problems. It is illegitimate, even if ideologically that is where you are oriented. There is no language, there is no possible identity within the business school as pro-union person. It is a professional suicide. […]
• As far as we need industry people's money a book like (The Machine that Changed the World) is a good resource. It shows that we can deliver something that has an impact. So if we are in the position of having to look for money in the industry we do embrace a book like this” (Los Angeles, 28/04/2005).

The American consensus (Academic)
• **The political consensus:**
  • From 240 yens for 1 dollar in 1984 to 127 yens for 1 dollar in 1988
  • Japanese automobile production in the US: from 0.6 million in 1986 to 1.5 millions in 1990
  • Japanese automobile exports to the US: from 3.4 millions in 1986 to 2.2 millions in 1990
  • Agreement between the Big Three and the UAW on the introduction of Japanese methods as a way to “save” the North American factories
  • NUMMI embodied this double political compromise and was conceived as the experimental object that would demonstrate the validity of such a programme

• Not surprisingly, resistances came from the “margins” of the union, academic and political fields:
  • Local unions
  • Parker and Slaughter ‘Choosing sides’
  • Ross Perot (1992 presidential candidacy)

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**The American consensus (Political – Stake-holders)**
• In Europe:
  • The transplants were not « welcome »
  • More Union & Academia resistance
  • The Swedish and German carmakers represented an alternative

• Yet, the *lean consensus* has taken root here too:
  • The European carmakers could have easily contested the results and conclusions of the IMVP book → they embrace it
  • The dramatic weakening of the unions
  • The side-effects of the post-fordist debate
  • The declining importance of “work and employment” in social sciences

The more constrained European consensus
• The « lean production » theory was the product of both
  • A political compromise over the Japanese transplants as a political solution to the trade and employment crisis of the late 1970s
  • A transformation of the institutional framework of research, marked by the growing influence of business school and enterprise ideology in the academic field affecting both financing of research and career patterns
• The consensus on the « lean concept » was politically and institutionally driven, while resistance and criticism were politically and institutionally marginalised

Conclusions