Workers’ awareness context in Italian 4.0 factories

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- technological innovations are accompanied by organizational innovations
- the higher the degree of workers’ awareness of technological innovation the higher the exploitation of new productive potentiality
The research questions

1. to what extent and in what sense is technological change perceived by the workforce within the workplace?

2. in what way does the organisational dimension feed the increase in the awareness of change by the workforce?

3. and in what sense does this awareness increase the intervention authority of the subjects?
Awareness context

Grounded theory

“the total combination of what specific people, groups, organisations, communities or nations know what about a specific issue”

[Glaser and Strauss, 1964]

Theory of the firm

after all, the well functioning of an organisation is not simply based on employees’ obedience, but rather on “[e]mployees taking initiative and applying all their skill and knowledge to advance the achievement of the organisation’s objectives”

[Simon, 1991]
how to open the awareness context?

- **autonomy**  production of own rules
- **discretion**  variable margin of action within a regulated process
Autonomy and discretion

Figure: graphical representation of autonomy (a) and of discretion (b).
Organisational levers – HPWPs

structural conditions of the awareness context

1. de-hierarchisation and development of team-work
2. job rotation practices
3. performance evaluation, mobility and career systems
The research design flow

14.0 TECH. ARTIFACTS → OPENNESS OF AW. CONTEXT → HPWPs

WORKERS’ VALUE CREATION

DE-IERARCH. AND TEAM-WORK

JOB ROTATION

WORKERS’ VALUE REDISTRIBUTION

PERFORMANCE EVALUATION, MOBILITY AND CAREER

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Jacopo Staccioli
Case-study firms

Cesab-Toyota  Japanese Toyotism
Ducati  mix of Taylorism and co-determination
Lamborghini  German ‘Mitbestimmung’
Field work activity

- 31 interviews to workers conducted within the firms’ headquarters
- 6 interviews to managers
- A focus group with firm-level union delegates
- A tour of all the production plants
- Collection of business documents and other publications that are relevant to the present research

*Spillover of a research project coordinated by Claudio Sabattini Foundation, commissioned by FIOM-CGIL (Bologna)
De-hierarchisation and team-work

structure of teams and team-work meetings
- widespread but high degree of heterogeneity within and between firms
- little say on the structure of the team
- little say on procedures and timing of meetings

role and functions of the team leader
- hybrid, non-hierarchical figure
- from high-skill worker (*primus inter pares*) to a motivator (soft skills)
- conflict between formal de-hierarchisation and *de facto* new hierarchisation
Job rotation

- widespread but high degree of heterogeneity within and between firms
- achievement of direct objectives
  - workers acknowledge JR is implemented to make lean the production system and to make them substitutable
- partial achievement of indirect objectives
  - workers only partially acknowledge JR as a mechanism to improve learning and ergonomics
- perceived conflict between an effective increase in learning and a low degree of participation in the decision process on JR structure and application
joint presence of different evaluation schemes
  - high degree of variability in terms of usage, criteria and authority
  - even when more formalised, lack of knowledge and ambiguity with respect to monetary awards

high degree of arbitrariness in monetary incentives

high degree of arbitrariness in career prospects
  - disciplinary usage
Finding I – misalignment between HPWPs

practices meant to **extract** value *from* the workforce

*vis-à-vis*

practices meant to **redistribute** value *to* the workforce
Finding II – hybrid increase in intervention authority

- opening up of worker awareness context
- increase in discretion characterized by within and between firms heterogeneity
- no increase in autonomy
Failure or success of the lean model?

...wrong question!

**institutional perspective:** conflicting organisational cultures

- **cultural delay**

**dynamic capabilities perspective:** tension between organisational routines in place and prospect of change

- **lean enough**
Thank you very much!

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…and props to the kind organisers of this Conference