

# **New organizational design and development of *key* competences**

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# Introduction/1

- **Where** do we learn?
- Heckman (1999): “*much learning takes places outside of schools: post-school learning is an important source of skill formation that accounts for as much as one third to one half of all skill formation in a modern economy*”

# Introduction/2

- Vergat (2002), *Vice President Managerial Development of FIAT Group*: “more than 80% of our leaning is informal and it happens through non organized modes”
- By which means we learn? Most likely by means of:
  - *learning-by-doing* [Arrow, 1962]
  - *learning-by-using* [Rosenberg, 1982]
  - *learning-by-interacting* [Lundvall, 1988]
  - *learning-by-searching* [Cohen and Levinthal, 1990]

# Introduction/3

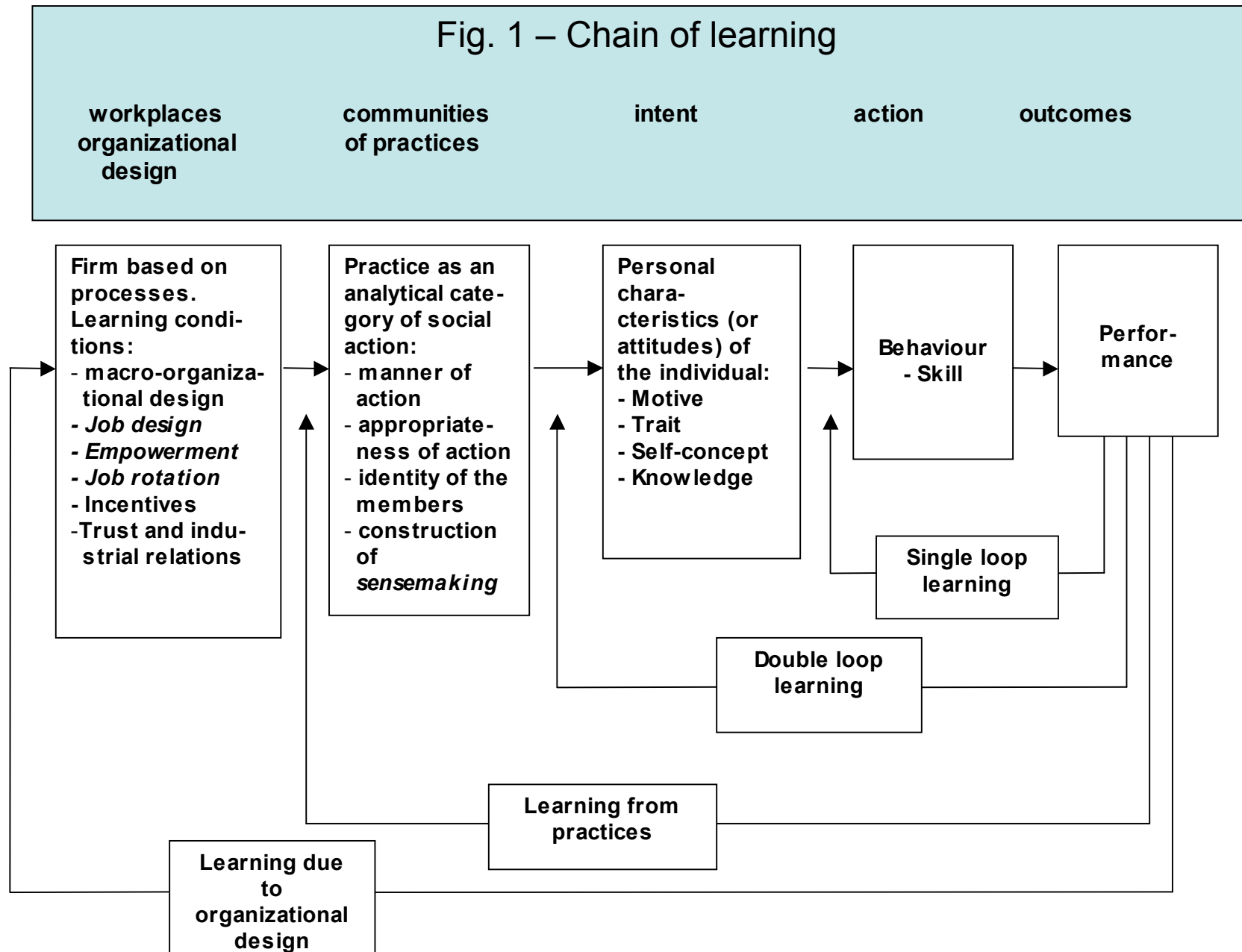
- But Bartel *et al.* (2004) speak and give evidence of “*workplace attitudes*” in shaping competences profile of individual worker, ascribable to:
  - Style of management, or
  - Work practices
- Anyway, why learning outside the school is more and more important nowadays?

# Introduction/4

*Three hypotheses can be invoked:*

- *Changing nature of the work* (Cainarca and Zollo, 2001)
- *Lean production* (Womack et al, 1990) and *communities of practices* (Lange and Wenger, 1991; Wenger, 1998)
- *The acquisition that:*
  - ❑ *organizational knowing is not an objective process rather a subjective one, and*
  - ❑ *knowledge is not something transmissible in a classroom but rather .....it is constructed from within.....* (Piaget, Polanyi, Nonaka and Takeuchi, ect).

Fig. 1 – Chain of learning



# Aim of tests

$$ICE_{it} = \alpha_1 SCH_{it} + \alpha_2 WBL_{it} + \alpha_3 Z_i + u_{it}$$

$$t = 1, ..n$$

where:

- ICE = index of individual competences of a worker occupying a position i at time t;
- SCH= vector of schooling;
- WBL = vector of index of work-base learning;
- Z = vector of firm's organizational characteristics
- u = stochastic term

Empirical model  
(Green et al., 2001 – Leoni and Gaj, 2007)

$$\begin{aligned} ICE_{it} = & \alpha_0 + \alpha_1 G_{it} + \alpha_2 ES_{it} + \alpha_3 TC_{it} + \alpha_4 PT_{it} \\ & + \alpha_5 SCH_{it} + \alpha_6 SCH_{it}^2 + \alpha_7 WEXP_{it} + \alpha_8 WEXP_{it}^2 + \alpha_9 SCH_{it} * WEXP_{it} \\ & + \alpha_{10} HLT_{it} + \alpha_{11} LLT_{it} + \alpha_{12} TR\_CE_{it} + \alpha_{13} TR\_PE_{it} + \alpha_{14} TE \\ & + \alpha_{15} QC_{it} + \alpha_{16} SS_{it} + \alpha_{17} APP_{it} + \alpha_{18} INF_{it} + \alpha_{19} CONS_{it} \end{aligned}$$

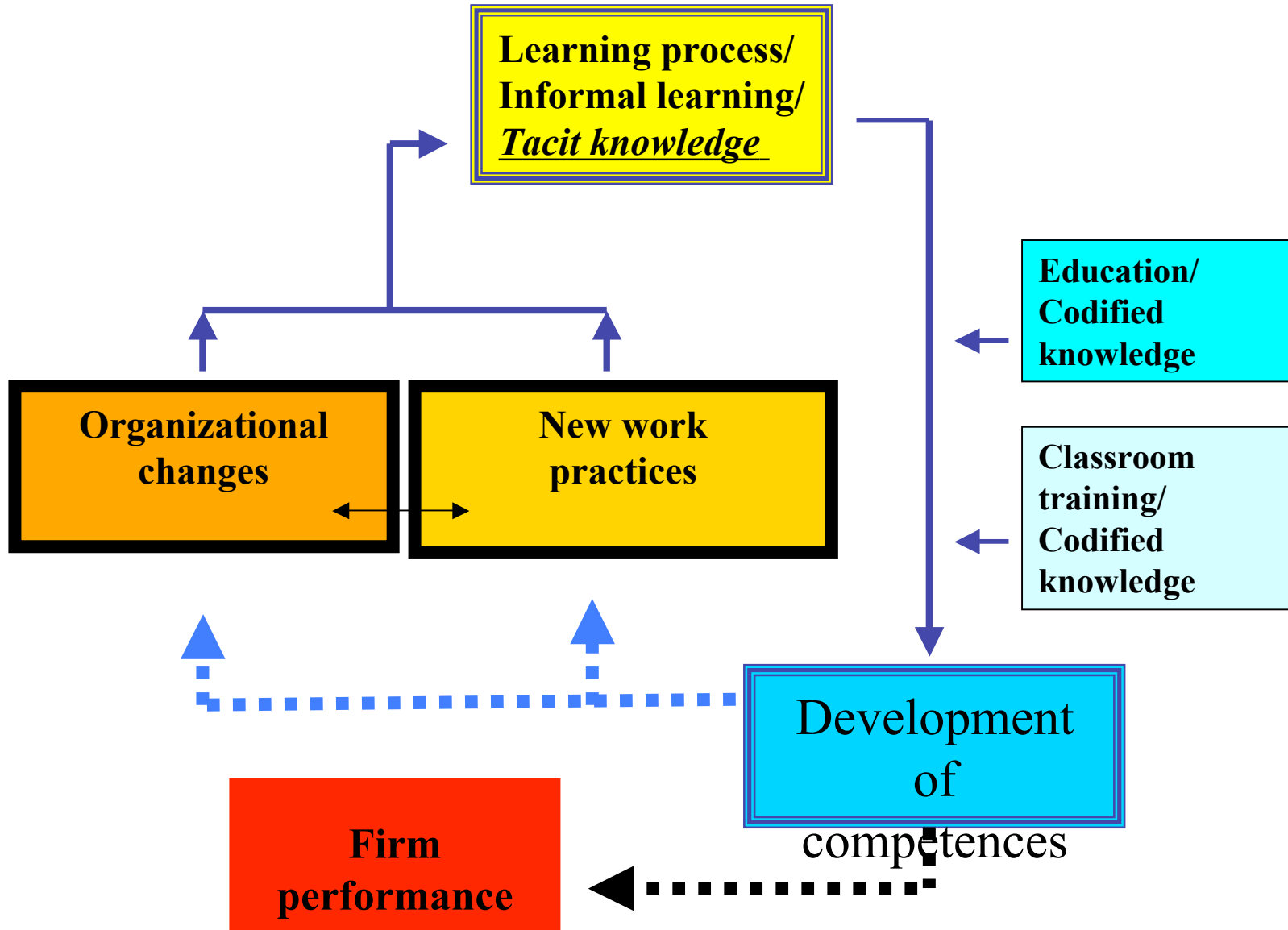
Expected signs

$$\begin{aligned} \alpha_{1,F} &> 0, \alpha_2 \geq \leq 0, \alpha_3 < 0, \alpha_4 < 0, \\ \alpha_5 &> 0, \alpha_6 < 0, \alpha_7 > 0, \alpha_8 < 0, \alpha_9 > 0 \\ \alpha_{10} &> 0, \alpha_{11} < 0, \alpha_{12} > 0, \alpha_{13} = 0, +\alpha_{14} > 0 \\ \alpha_{15} &> 0, \alpha_{16} > 0, \alpha_{17} > 0, \alpha_{18} > 0, \alpha_{19} > 0 \end{aligned}$$



# Dep. Var.: ICE as level of competences expressed (or acted)

- Competences refer to **key or core** competences (*compétences transversales*)
  - Problem solving
  - Team working
  - Communication clients
  - Communication with collaborators
  - **TOTAL KEY COMPETENCES**



# Main results

- ICE<sub>j</sub> (level of competences expressed) depends - *ceteris paribus* – on:
  - **Quality circle (or group of improvements)**
  - **Suggestion system**
  - **Information**
  - **Consultation**
  - **Appraisal**
  - **Increase in discretionary power**

THESE ORGANIZATIONAL CHARACTERISTICS ARE CONSISTENT WITH A LEAN PRODUCTION FIRM, BASED ON:

- PROCESSES
- CONTINUOUS LEARNING

# Three problems are taken into account:

- Endogeneity:
  - Organizational characteristics *versus* personality traits
  - tenure (instrumented: TSLQ)
- Selectivity: argued
- Heteroskedasticity: controlled by Robust Standard Error

# Policy implication

1. A firm redesign would allow to make explicit a consistent informal learning (efficient, costless, and evolving)
2. Contracts at firm level – between the social parties (trade union and management) – in order to stimulate organizational changes (i.e. to redesign workplaces) according to the results of the paper, which are in line with ‘lean production’ model
3. Social pact at national level, between social parties (Industrial Confederation, Trade Unions and Government), in order to create:
  1. conditions (in economic terms) for organizational changes
  2. a benchmark of the virtuous organizational design of a ideal-type of firm enabling to develop workers’ competences

**By the way, such a policy have already been implemented in several Northern European countries, following indications of the UE-Green paper “Partnership for a new work organization” (1997) followed by (1998) and (2000).**

**FLEXIBLE WORKPLACES rather than FLEXIBLE CONTRACTS**

**LEARNING IS THE NEW WAY OF WORKING (Zuboff, 1988)**