

Comments to Evangelista and Vezzani

Alessandro Sembenelli
(Università di Torino)



Authors' questions

- Technological (tech) and organizational (org) innovation: complements or substitutes?
- Are tech and org innovations associated to firm performance? Do they cause firm performance?
- Differences between manufacturing (man) and services (ser): Are services special?

Data

- 2001-04 Italian Community Innovation Survey (CIS4)
- Large sample of firms operating both in manufacturing and in services
- Measures:
 - Tech innovation (product/process)
 - Org innovation (organization/marketing)
 - Performance (rate of growth in sales)

Finding 1: Innovation Modes

- Four clusters of innovative firms
 - Product oriented (product + marketing)
 - Process oriented (process + organization and marketing)
 - Organizational (organization)
 - Complex (product and process + organizational and marketing)
- Some (not big) differences between man and ser

Finding 2: Innovation and Performance

$$\Delta y_i = \alpha + \beta_1 PD_i + \beta_2 PS_i + \beta_3 OR_i + \beta_4 CM_i + x_i' \gamma + \varepsilon_i$$

- Point estimates suggest
 - The relationship between innovation and performance is positive and more so when “substantial” organizational activities are involved
 - This is more the case in service industries where parameters on PD and PS are not even significantly different from zero at conventional statistical levels

My answers

- Technological (tech) and organizational (org) innovation: complements or substitutes?
Unclear
- Are tech and org innovations associated to firm performance? **Yes**. Do they cause firm performance? **To be discussed**
- Differences between manufacturing (man) and services (ser): Are services special?
Qualified yes

Comment 1: Good Paper with usual caveats

- Useful contribution. It provides some very interesting facts
- Some of them are more novel than others
- No role for innovation inputs
- Usual criticism to the way innovation outputs are measured
- Most innovative aspect is the joint analysis of two relevant dimensions
 - Technology versus Organization
 - Manufacturing versus Services

Comment 2: What is the Econometrics About?

- Statement 1 (p. 9): “Starting from this assumption our estimated beta coefficients are assumed to capture - ... - persistent asymmetries in the innovation capabilities of firms...” (structural association/viscosity assumption)
- Statement 2 (p. 11): “The next and final step consists of assessing the impact that these different innovation modes *have* on firms performances.”
- Are we in the statistical association or in the causal/structural effect business?

Comment 2: What is the Econometrics About?

- Exogeneity of innovation modes
 - Innovation modes are very imperfectly measured
 - Unobserved heterogeneity problems (managerial quality)
- Good managers are better in exploiting both market (the dependent variable) and tech/org opportunities (the explanatory variables)
- No obvious policy implications! These results cannot be taken as support to policies aimed at reducing the cost of “organizational innovation” inputs

Other comments

- Better proxies for innovation activities?
- Missing descriptive statistics
- What is the role of Table 3? Ex-post cluster rationalization?
- Are the “effects” economically relevant?
- Are the differences in the “effects” statistically significant and economically relevant?