Discussion of

Identifying Financing Constraints from Production Behavior

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Comparison of focus areas

- Kolev, Maurin, Segol: focus on firms' and banks' financial health; distinguish between core and peripheral European countries
- Carluccio, Mazet-Sonilhac, Mesonnier: cost of equity / WACC, France
- De Socio, Sette: effect of leverage, Italy

- Cherchye et al.: novel indicator of financing constraints, Spain, Italy, Germany, France, and Belgium

Outline of the paper

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- Background: SMEs' financing constraints as economic issue – adequate measurement and assessment is critical.
- Overarching idea: To develop and test a novel indicator of financing constraints for SMEs in Europe.
- Firms maximise their profits given a commonly defined production function and a firm-specific mix of production inputs.
- Financing constraints: modelled as the average profitability that firms forego due to constraints on input costs, prohibiting them to use the optimal level of inputs and technology (financing constraints as constraints on profit maximisation).
- Foregone profitability (revenues over cost): difference between observed profitability and expected (benchmark) profitability, given a certain input combination.

Methodology (1/2)
Approach

Paper follows Cherchye et al. (2018)

- Technological heterogeneity is treated as unobserved productivity factor that is endogenous to the firm's production function.
- The model of a profit maximising firm (McFadden, 1978) is adjusted by introducing a latent, unobserved capital component, representing technological heterogeneity in the firms' production functions.
- Intuitive definition of latent capital: managerial input, IT, R&D, but also external drivers of productivity variation.
- No form of the production function is assumed ► hence the model is non-parametric.
- Model is solved by means of linear optimisation techniques applied to firm- and sector-level data.

Methodology (2/2)
Four empirical tests

Correlation test regarding …

- observable atf characteristics and the advocated indicator.
- the advocated indicator and self reported financing constraints (based on SAFE).
- the advocated measure and investment behavior (change in tangible fixed assets).

Causality test analysing shift in financing constraints during sovereign debt crisis (2012/2013) for Spanish and Italian firms vs control firms from Germany, France, and Belgium.

Data

- Micro-economic foundation of the model.
- Firm level dataset (balance sheet and P&L) from BvD Amadeus.
- A subset of firms within this dataset (randomly selected) provides firms' subjective statements regarding their atf constraints (from ECB SAFE).
- Analysis restricted to manufacturing firms from Belgium, France, Germany, Italy, and Spain.
- Firms with less than 10 employees are excluded (due to high heterogeneity).

- Final sample: 57,294 firms of which 1,303 participated in SAFE.

Limitations

Assumption: expenditure constraints = bank financing constraints

- Very strict ► role of bank financing overemphasized
- Extension to other types of financing restrictions possible?

Latent capital (managerial input, IT, R&D, …)

- It is assumed that firms are in perfect competition and price takers for the purchase of this capital ► might be too strict.
- Regional factors might play a role ► Consideration possible?

Latest estimation period is 2013 ► data availability could allow for more recent estimation.

Policy implications & conclusion

The new model could be used to

- ... timely assess atf issues of European SMEs; this could help to tailor policy measures,
- … evaluate the impact of policy measures,
- … analyse the impact of financing constraints on firms' investment behavior.

Overall - a very good paper,

potentially paving the way for a very relevant and fruitful

new strand of research.

Thank you …

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… for your attention!

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