



The role of government
backed venture capital in
funding growth and
innovation –
The case of Hungarian
government backed venture
capital agendas

PATRÍCIA BECSKY-NAGY & BALÁZS FAZEKAS

UNIVERSITY OF DEBRECEN, INSTITUTE OF
ACCOUNTING AND FINANCE

Topics

- Research - The role of government backed venture capital in funding
- Education – How to utilize research in education?



THE ROLE OF GOVERNMENT BACKED VENTURE CAPITAL FUNDING

Grounds for government intervention on VC market

Economic impact of targeted firms in

- innovation,
- growth,
- employment.

Market imperfections

- spillovers of innovation
- asymmetric information
- adverse selection
- economies of scale

Funding gaps and welfare loss

Goal of government intervention

LONG RUN

Government VC funding cannot replace private VC investments, it might complement it.

SHORT RUN

Government funding lessens funding gaps and in infant industries it might have a catalyst role in development.

Data and methods

Hungarian VC investments made in 2010-2016 by JEREMIE funds and by Széchenyi Capital Fund (SCF).

340 JEREMIE and 86 SCF investments.

Hand collected unique database covering hybrid and purely government backed VC investments financial data in 2010-2020 period -> panel database

Using random effect panel regression, we compared the performance of hybrid (HGVC) and purely government backed (GVC) investments

Random effect regression models investigating the growth of revenues, number of employees, income and total assets of Hungarian hybrid and purely government backed venture capital investments in 2010-2016

	Generalized Least Squares			
Dependent variables	GrowthInSale	GrowthInEmployment	GrowthIncome	GrowthInAssets
Investor-related variables				
HGVC	-0.6200***	-0.1367**	-32794***	-0.2694***
Ownership	-0.8984**	-0.3865****	41683**	-0.4902****
Syndicated	0.2234	0.0242	-39859***	0.2889**
InvestmentYear	Yes	Yes	Yes	Yes
Firm-related variables				
Ln(assets)	0.6205****	0.1233****	18130**	-
Ln(capital)	-0.1740	0.0086	-40451****	0.4012****
Ln(age)	-0.7721****	-0.2214****	-2086	-0.1244*
IntangiblesIntensity	-0.1997	-0.0851	12890	0.1468
FinancialAssetsIntensity	-1.1829****	-0.4079****	25704**	0.2112*
Ln(Sale _{t-1})	-0.3233****	-	-	-
Ln(Employment _{t-1})	-	-0.2856****	-	-
Income _{t-1}	-	-	-0.7359****	-
Ln(assets _{t-1})	-	-	-	-0.4247****
Industry	Yes	Yes	Yes	Yes
Constant	0.5821	-0.3689	307705****	1.0282*
	[1.1238]	[0.2635]	[48771]	[0.4966]
Summary statistics				
Number of observations	1669	1669	1684	1669
Number of groups	406	406	406	406
Average observation per group	4.1	4.1	4.1	4.1
Wald Chi ² Test	0.0000	0.0000	0.0000	0.0000
R ² overall	0.1917	0.1038	0.2090	0.1338
within	0.3627	0.3628	0.3297	0.4295
between	0.1369	0.0249	0.0217	0.0009

Source: own calculations

Findings

- Private participation in hybrid schemes does not lead inevitably to better performance, GVC outperformed hybrid funds.
- In hybrid schemes there is a greater exposure to moral hazard issues compared to pure government funding.
- On the long run hybrid schemes play a crucial role as a catalyst in the venture capital market as it boosts the industry level knowledge.
- To achieve commercial success there are certain points in the implementation of hybrid agendas, that could lead to a more efficient use of capital.



TRANSLATING RESEARCH INTO LEARNING MATERIALS

How VC is built into study plans?

- Venture capital course for finance specialization (Business Administration)
- Investment decision (Business Administration)
- Corporate finance (Finance and Accounting, Business Administration)
- Thesis case studies

Challenges

- Interdisciplinary field
 - finance, corporate economics, information economics, innovation economics, government funding, market imperfections, etc.
- Connecting theoretical and empirical findings.
- Who do we target?
 - Economists or possible entrepreneurs without business knowledge.
- Teaching methods (teamwork, case study analysis, independent research, corporate experts)

Possibilities

- Introducing VC as a funding form (supply perspective)
- How to make a firm ready to receive VC funding (demand perspective)
- How to present a pitch?
- Co-operation in empirical research with students
 - Students analyzing VC investments through guided bullet points.
 - Case-study collection.
 - Success stories and failures show the real dynamics of the market.

Thank You for Your Attention!

becsky.nagy.patricia@econ.unideb.hu

fazekas.balazs@econ.unideb.hu