

Venture capital Spice for European economies

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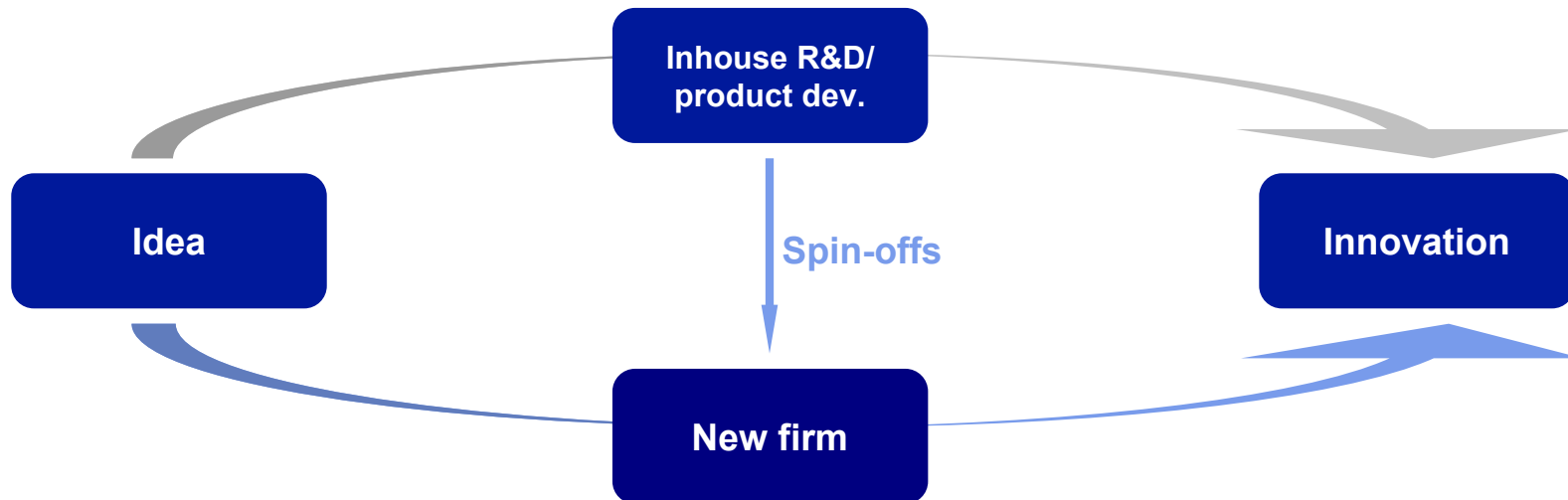
Our research on private equity, venture capital and the financing of innovation...

- Meyer, Thomas (2007). German private equity funds not capitalising on investment opportunities. Talking Point. DB Research. 2 March 2007.
- Meyer, Thomas (2006). Private Equity: Spice for European Economies. *Journal of Financial Transformation*. Vol 18. November. pp 61-69.
- Meyer, Thomas (2006). Venture capital in Europe: Spice for European Economies. E-conomics 60. DB Research.
- Schaaf, Jürgen (2005) Private equity in Europe: buy-outs driving growth; start-up financing drying up. E-conomics 49. DB Research.
- Hofmann, Jan (2003). Innovation in Germany: Windows of opportunity. Current Issues, More Growth for Germany. DB Research.

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Entrepreneurship needed to turn a new idea into a commercial product



New firms face financing problems

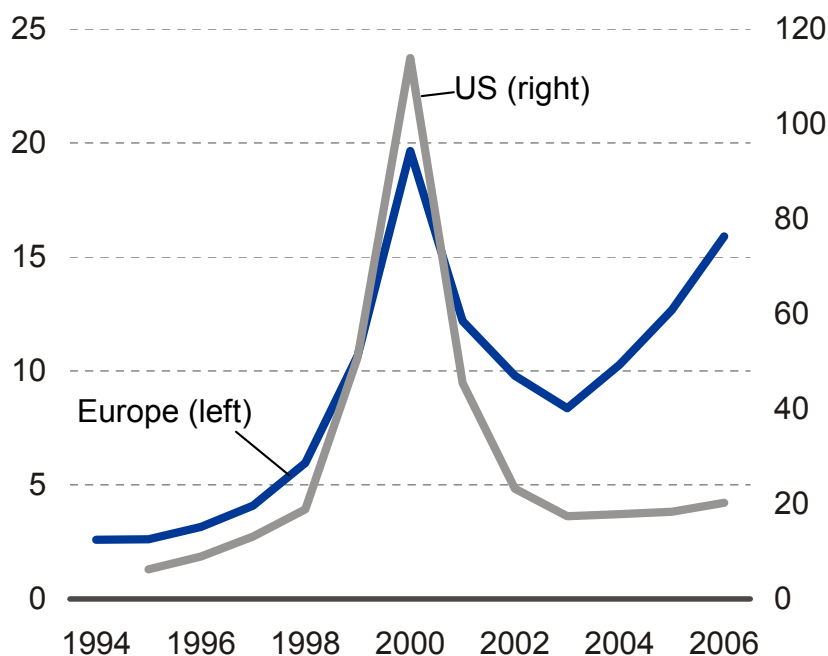
- High risk (personal, market, technical)
- Ideas are often owner-specific, hence they cannot serve as collateral
- Lack of management experience



New economy was a wake-up call to Europe

Wake up to venture capital

VC investments, EUR bn



Sources: DB Research, EVCA, PwC MoneyTree, 2007

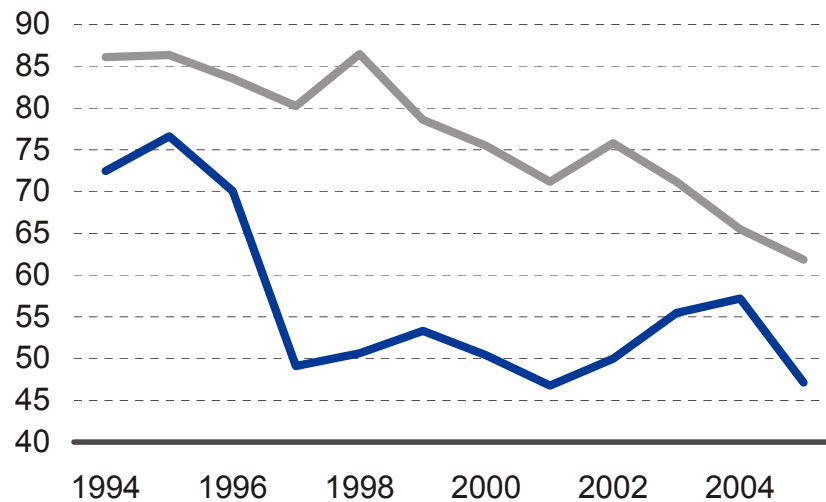
- Venture capital (VC) investments:
 - US: 0.19% of GDP
 - Europe: 0.14% of GDP
- Strong variation within Europe: Denmark, Sweden and the UK have higher shares of VC investments (in % of GDP) than the US.
- Since 2003, European VC investments grow stronger than US investments (also in USD-terms).



The idea of “German, French,...” private-equity investments is somewhat elusive

Financial integration

% of managed private-equity funds that are raised or invested domestically



Basis: Weighted European average

— Fundraising — Investment

Sources: DB Research, EVCA, 2006

- Domestic markets lose importance as source of funds and place of investments.
- Example: around 60% of all PE investments in Germany are managed by funds located abroad.



Empirical analysis to reveal structural relations

- Set of panel data for 20 European countries for a period between 1994 and 2005.
- Three different segments of private equity are being analysed:
 - Buyouts
 - Venture capital
 - Early-stage investments (Seed + Start-up)
- Fixed effects to cover country-specific characteristics (including, e.g. regulation, taxes, legal tradition).
- Stock-market development and unemployment to control for business cycle.
- Direction of causality remains an issue.



Private equity correlates positively with growth

Dependent variable: Real GDP growth
 Method: GLS (cross section weights)
 White heteroskedasticity-consistent standard errors and co-variances
 Standard errors in parentheses
 Fixed effects: Yes

Buyouts	2.057*** (0.752)	-	-	1.800*** (0.613)	-
Venture capital	-	4.375*** (1.042)	2.365 (1.910)	4.361*** 0.997	-
Early stage	-	-	-	-	10.237*** (3.054)
TEA	-	-	0.140*** (0.046)	-	-
GDP per capita	-0.00056*** (6.60E-5)	-0.00052*** (6.40E-5)	-7.98E-05 (0.0002)	-0.00054 (6.49E-5)	-0.00052*** (6.26E-5)
Stock market	2.359*** (0.246)	1.974*** (0.263)	2.781*** (0.491)	1.871*** (0.257)	2.060*** (0.250)
Unemployment	0.097 (0.071)	0.110* (0.070)	0.280*** (0.082)	0.110 (0.069)	0.112* (0.067)
AR(1)	0.189	0.213	-	0.204	0.184
Adjusted R ²	0.64	0.64	1	0.66	0.65
Panel observations	197	197	79	197	197

Asterisks indicate the coefficients that are significant at a *10%, **5% and ***1% probability threshold.
 Data sources: Eurostat, EVCA, Global Entrepreneurship Monitor, Global Insight, OECD

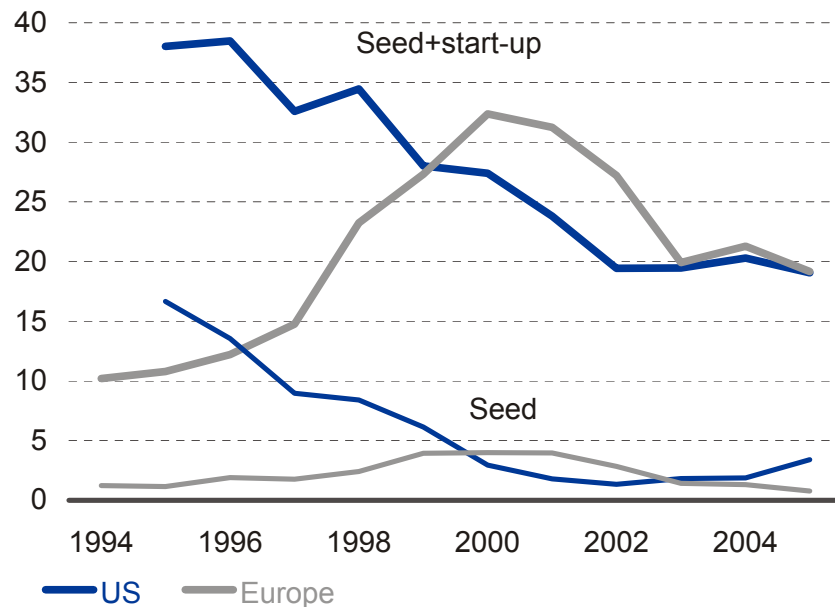
Source: Meyer, Thomas (2006). Private equity – spice for European economies. *The Journal of Financial Transformation*. Vol. 18. London. pp 61-69. Update for 2006.



Allocation of venture-capital investments is biased towards expansion stage

VC down for early stages

Trends in VC stages, % of investments



Sources: EVCA, PwC MoneyTree, 2007

- Early-stage investments have the strongest correlation to growth.
- 81% of VC investment volume is allocation towards expansion stage, and 56% of deals.
- Seed receives 1% of volume and 5% of deals.



R&D expenditures drive venture capital – not buyouts

Dependent variable: Investments in % of GDP
 Method: GLS (cross section weights)
 White heteroskedasticity-consistent standard errors and co-variances
 Standard errors in parentheses
 Fixed Effects: Yes

	Stage	
	Venture capital	Buyouts
Real GDP growth	-0,0018 -0,0018	0.0007 0.0007
GDP per capita	-1.02E-5*** -2,14E-06	2.22E-05*** 3.54E-06
Stock market	0.057*** -0,007	0.015*** 0.0043
Exit via PO	0.00018*** -1,81E-05	0.00025*** 5.91E-05
Write-offs	-0.0087** -0,0039	-0.017*** 0.0032
Funds by government agencies	0.0019*** -0,0002	-0.036*** 0.0092
R&D expenditures	0.107*** -0,028	-0.00094 0.0184
Unemployment	-0.020*** -0,0016	0.00023 0.0009
Adjusted R ²	0.9	0.56
Y2000 Dummy	Yes	No
Panel observations	107	116

Asterisks indicate the coefficients that are significant at a *10%, **5% and ***1% probability threshold.
 Data sources: Eurostat, EVCA, Global Entrepreneurship Monitor, Global Insight, OECD

Source: Meyer, Thomas (2006).
 Private equity – spice for European
 economies. *The Journal of Financial
 Transformation*. Vol. 18. London. pp
 61-69. Update for 2006.



Some conclusions

- Positive correlation between all segments of private equity and real economic growth – after (partly) controlling for cyclical influences.
- Highest impact with early-stage investments.
- Entrepreneurial activity appears to be a key transmission channel between venture capital and growth.
- Research expenditures and public funds supports venture-capital investments.
- Ongoing research: do venture-capital investments explain differences in the transformation of ideas into products?



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