

Can innovation lead the economy out of the crisis?
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Who dare to innovate during the crisis: insights for policy

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Background

- Discussion about the effectiveness of public policy for recovery
- But what type of policy do we need?
- Insights about the role of innovation policies

Outline

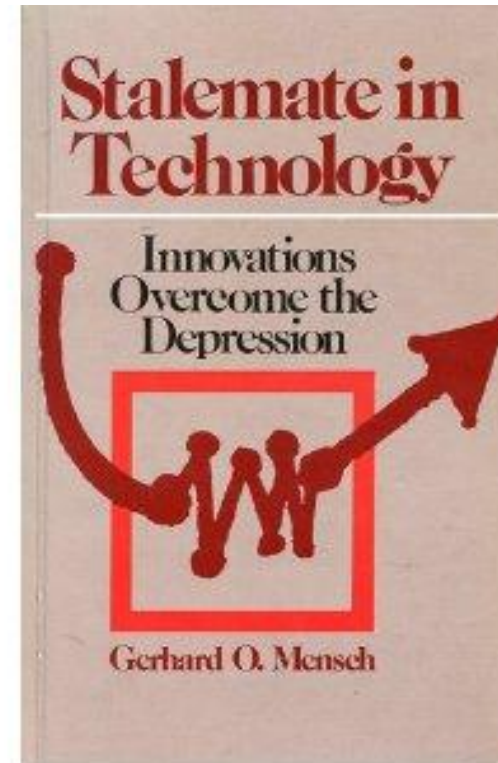
1. A forgiven scholar
2. Beyond the '*small is beautiful*' vs. '*large is bad*' debate
3. Some empirical evidence on the UK firms from a joint paper with Marion and Daniele
4. Some insights for policy

Gerhard O. Mensch

H-index=8



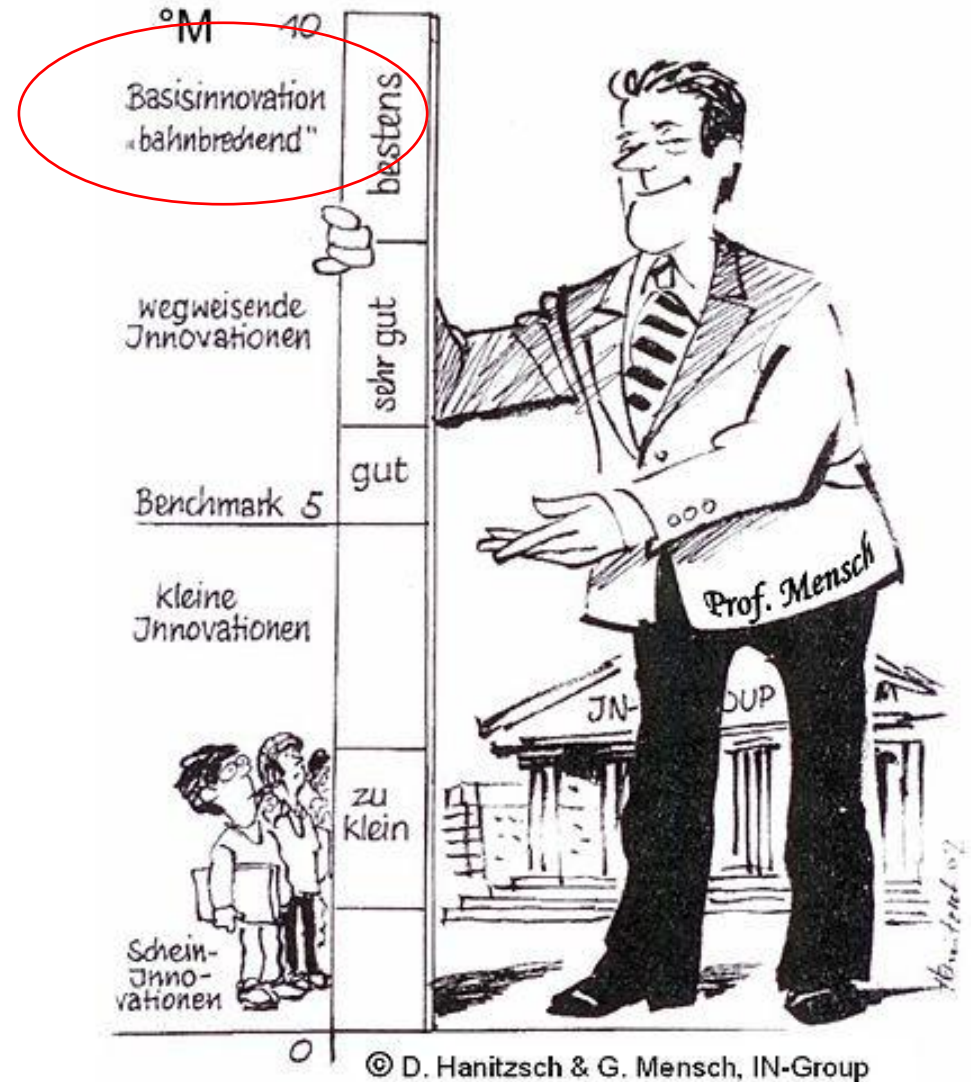
740 citations.....(29, 26...)



1979

Messlatte des Innovationsgrads °M nach Mensch: $0 < °M < 10$

**Basic innovations
tend to occur
during recessions**



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Messinstrument für IN-Group's Innovation Rating™

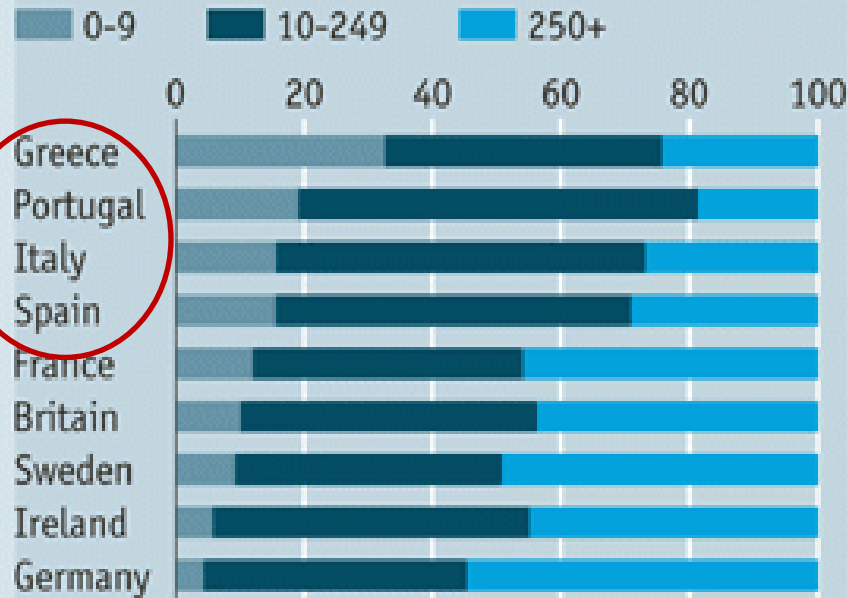
**WHO ARE THE INNOVATORS
DURING RECESSIONS?**

**The never- ending story on the
size of the company**

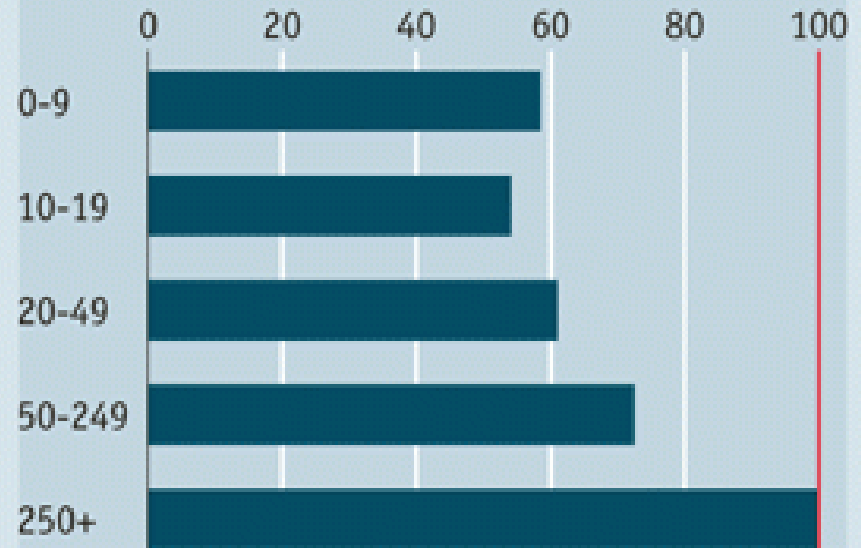
Small is beautiful: politics like to champion the little guy

At odds with economic reality?

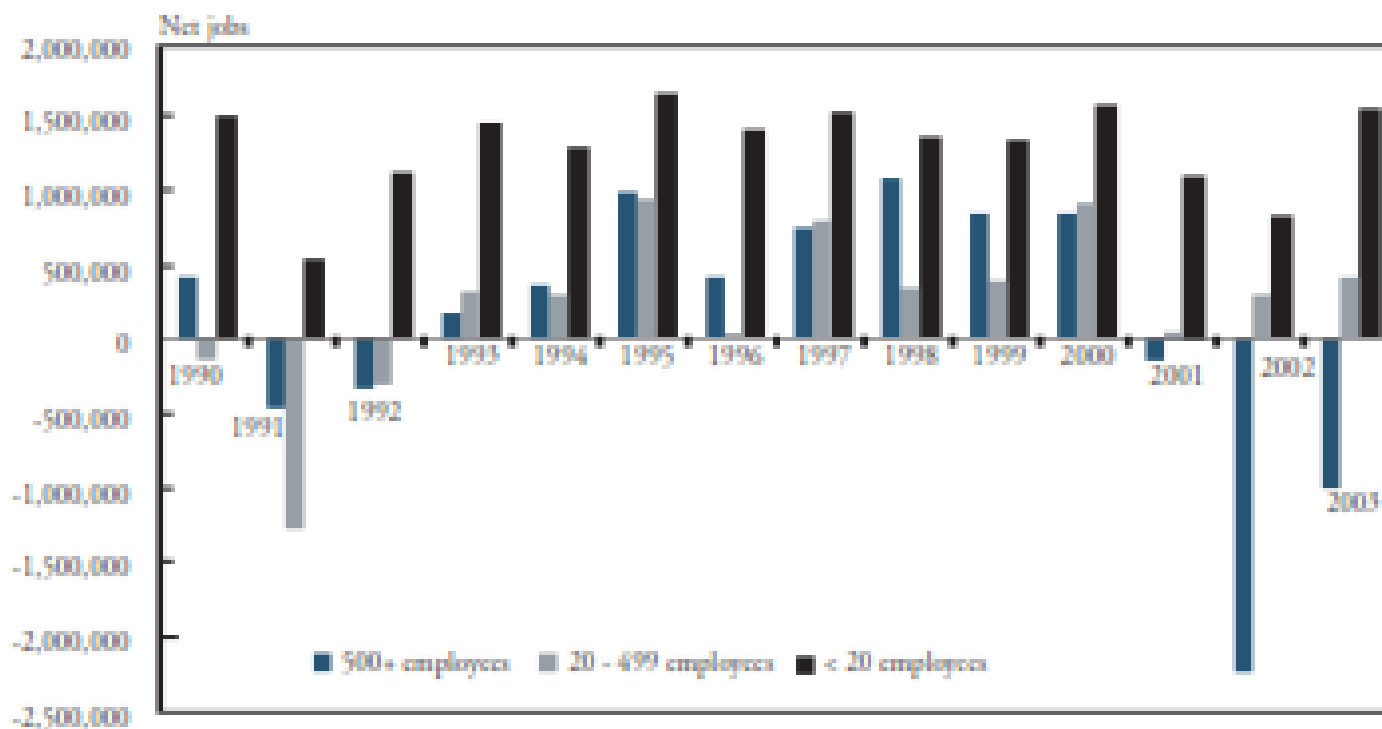
Distribution of employees by size of firm
% of total manufacturing, 2009



Average productivity by size of manufacturing firm*, 2009
(250+ workers=100)



NET JOB CREATION BY FIRM SIZE, 1990-2003

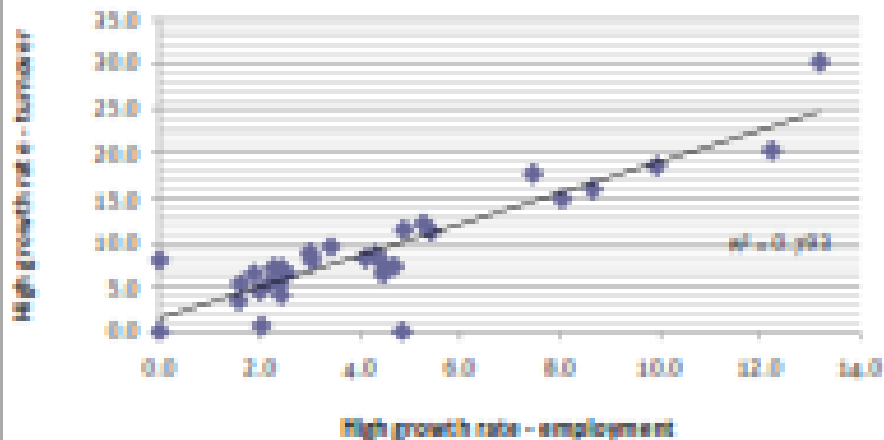


Source: U.S. Census Bureau Statistics of U.S. Business

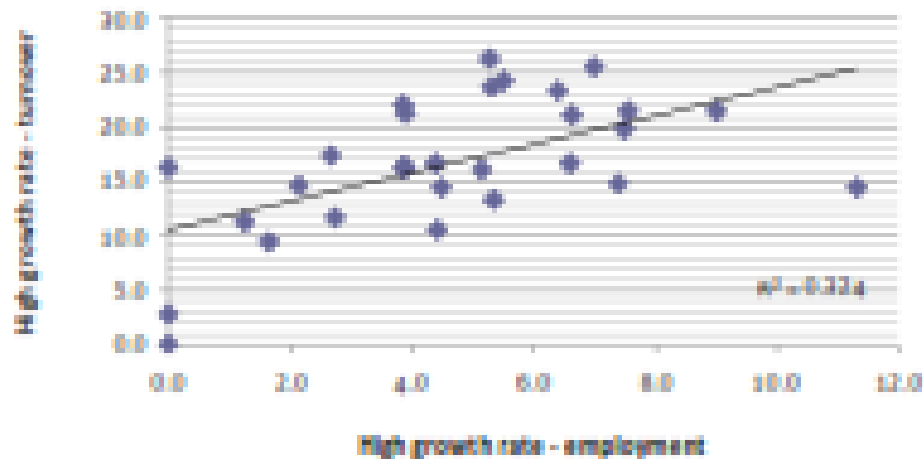
UK evidence: approximately 4% of small firms create approximately 4% of new jobs in the group over a decade

Beyond small and large: *the hi-growth firms*

Denmark 2000-03



Latvia, 2002-05



Who are the innovators during recessions? Evidence from a paper (Archibugi, Filippetti, Frenz)

Hypothesis 1. *During a crisis innovation investment concentrates further in those firms that were already highly innovative before the crisis*

Hypothesis 2.

Increased investment in innovation during the crisis is more strongly correlated with two groups of firms – (a) the great innovators and (b) the new growing firms

Data: *The UK Innovation Surveys*

- under 2,500 enterprises that responded to the latest three waves of the UK version of the CIS (2004, 2006 and 2008)
- we analyse a balanced panel with observations at three points in time ($T=3$).

The dependent variables

Variables	N. of firms	Mean
Total innovation expenditure per employee in 2006 in £000s	2,479	2.44
Total innovation expenditure per employee in 2008 in £000s	2,485	2.04

we require a measure of the change in innovation related investment before and during the crisis

DV1. We compute the change in 2008 compared with 2006 and use this as the change in innovation expenditure during the crisis.

DV2. Before the crisis is the change in innovation investment in 2006 compared with 2008.

Dependent variables and key explanatory variables

	Variable Name	Description	Hypothesis
1	Log change in innovation expenditure in 2006 and 2008	Log of innovation related investment compared to previous period	Dependent variable
2	Log total innovation expenditure in 2004 and 2006	Log of innovation expenditure in the previous period	Control variable
3	Great innovators in 2004	Dummy variable. Great innovators are enterprises that introduced new-to-the-market goods and services in 2004	Testing H1 and H2 - Great innovators increase innovation expenditure during the crisis
4	Newly established 2000	Dummy variable. Enterprises established between 2000 and 2004, value 1, others 0	Control variable
5	Growth of newly established firms in 2006 and 2008	Log of the change in turnover compared to previous period for new firms as defined in (4). This variable takes a value of zero for firms established before 2000	Testing H2 – Fast growing new enterprises increase innovation expenditure during the crisis

Innovation expenditure of great innovators and other firms, 2006 and 2008

	n. of firms	Per.	Share of innovation exp. 2006	Share of innovation exp. 2008	Average innovation exp. 2006 in £000s	Average innovation exp. 2008 in £000s	Change in average innovation exp. 2006-2008
All other firms	2,161	87	0.79	0.63	563	413	-0.27
Great innovators	324	13	0.21	0.37	981	1,599	0.63
Total	2,485	100	1.00	1.00	618	568	-0.08

Hypothesis 1. During a crisis innovation investment concentrates further in those firms that were already highly innovative before the crisis

Regression results

Innovation behaviour before and during the crisis.

DV: change in innovation expenditure before and during the crisis

	before the crisis (2006)	during the crisis (2008)
Great Innovators 2004	not significant	+ (**)
Newly established 2000	- (***)	- (*)
Fast grow. new firms t	not significant	+ (**)
In-house R&D t-1	not significant	+ (**)
Log employees t-1	+ (**)	+ (**)
Availability finance t-1	not significant	not significant
Sales per employee t-1	+ (**)	+ (**)
Industry dummies	yes	yes
Set of control variables	yes	yes

Conclusions:

- Firms reduce innovation expenditure in 2008 by 8 percent compared to 2006
- Firms identified as the great innovators in 2004 are responsible for a larger share of innovation expenditure in 2008
- another category of firms which is gaining momentum during the crisis: they are the fast growing new firms

Implications for recovery policy

- Avoid the cross-section bias
- Size does not play an important role
- Look over time

Back to Mensch: innovators during recession

The great innovators

Fast-growing new firms

What are the firms in new industries and markets that will lead the economic system out of the crisis?

What are the firm in which new labour opportunities will be created?

Thank you for your attention...