Financing and Obstacles for High Growth Enterprises:
The European Case

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Outline of the presentation

- Motivation and definitions:
  - ➢ High Growth Enterprises
  - ➢ Financing Constraints and type of financing
  - ➢ Potential HGEs

- Main analysis and research questions:
  - ➢ Do the HGEs face more financing constraints?
  - ➢ What type of external financing is preferred by HGEs?
  - ➢ What hinders firms to become a HGEs and what are the main investment barriers of HGEs?

- Conclusion and policy implications

HGEs

Three alternative growth phases:

- *High growth enterprises (HGEs)*: 8%
  - ✓ annual growth of turnover >10% over a min. of 3 consecutive year;
  - ✓ AND 10 employees at the beginning of the growth period;
- *Stable enterprises*: 71%
  - ✓ annual turnover growth for three or more consecutive years <10%
  - ✓ OR increases in turnover >10% for a period of less than three consecutive years (possible declines but for less than 2 consecutive years;
- *Declining enterprises*: 21%
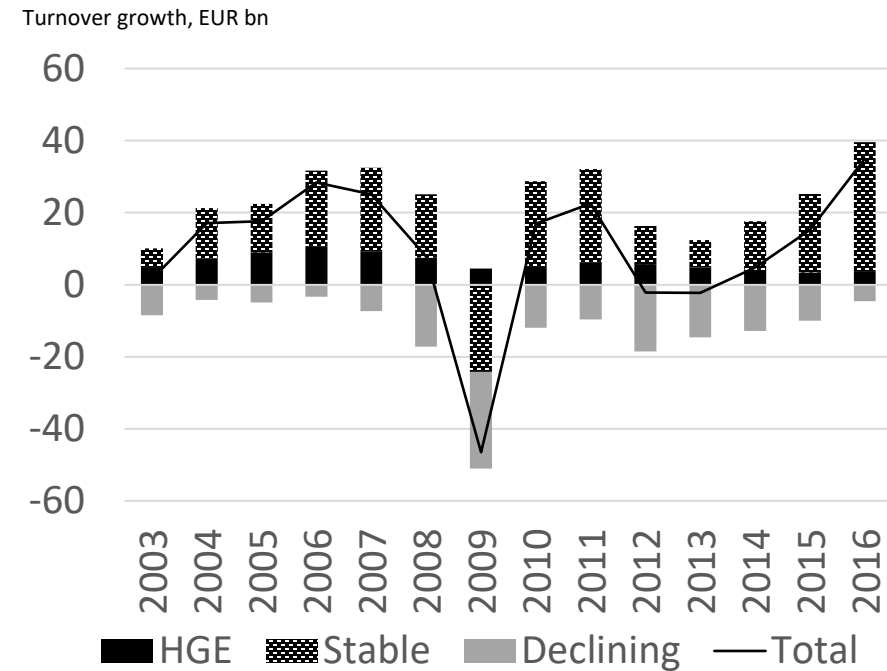 - ✓ decline in turnover for at least 3 consecutive years.

HGEs

Contribution to job creation
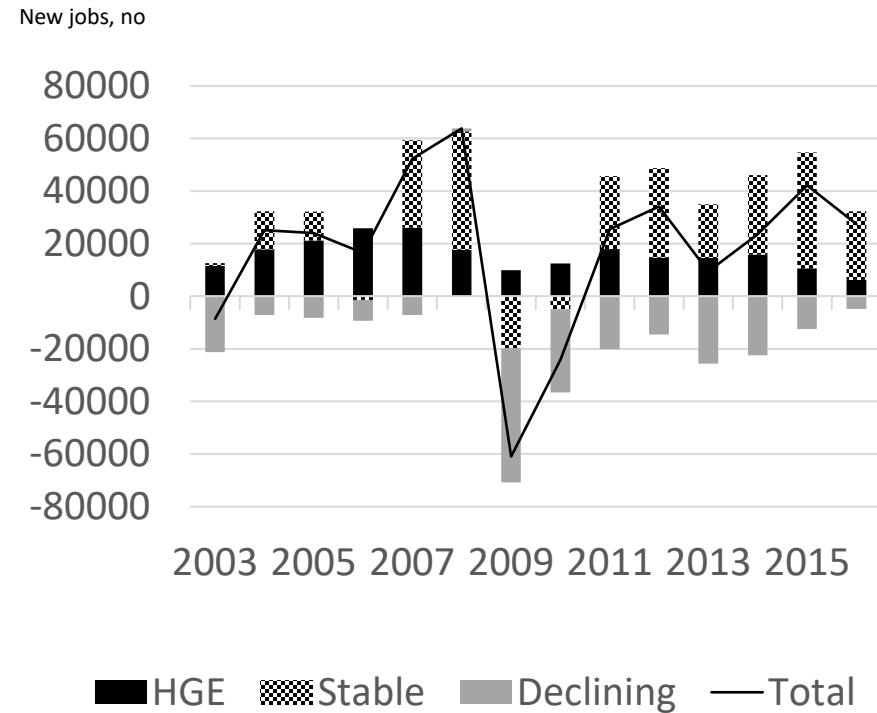
New jobs, no

Contribution to turnover growth

Turnover growth, EUR bn

Financing constraints

Financially constrained firms (2015-2016) :

✓ Firms that are dissatisfied with the amount of finance obtained (received less)

✓ OR they sought external finance but did not receive it (rejected)

✓ OR they did not seek external finance because they thought borrowing costs would be too high (too expensive)

✓ OR they thought they would be turned down (discouraged).

Estimated probability of being financially constrained (2003-2016):

$$Fin.\,Constr. = \hat{\alpha} + \beta_1 * Fin.\,Lev. + \beta_2 * Cash + \beta_3 * Cash\,Flow + \beta_4 * Size\,Asset + \beta_5(Sector) + \beta_6(Country) + \varepsilon$$

Financing constraints

Dynamics over time of the estimated financing constraints index
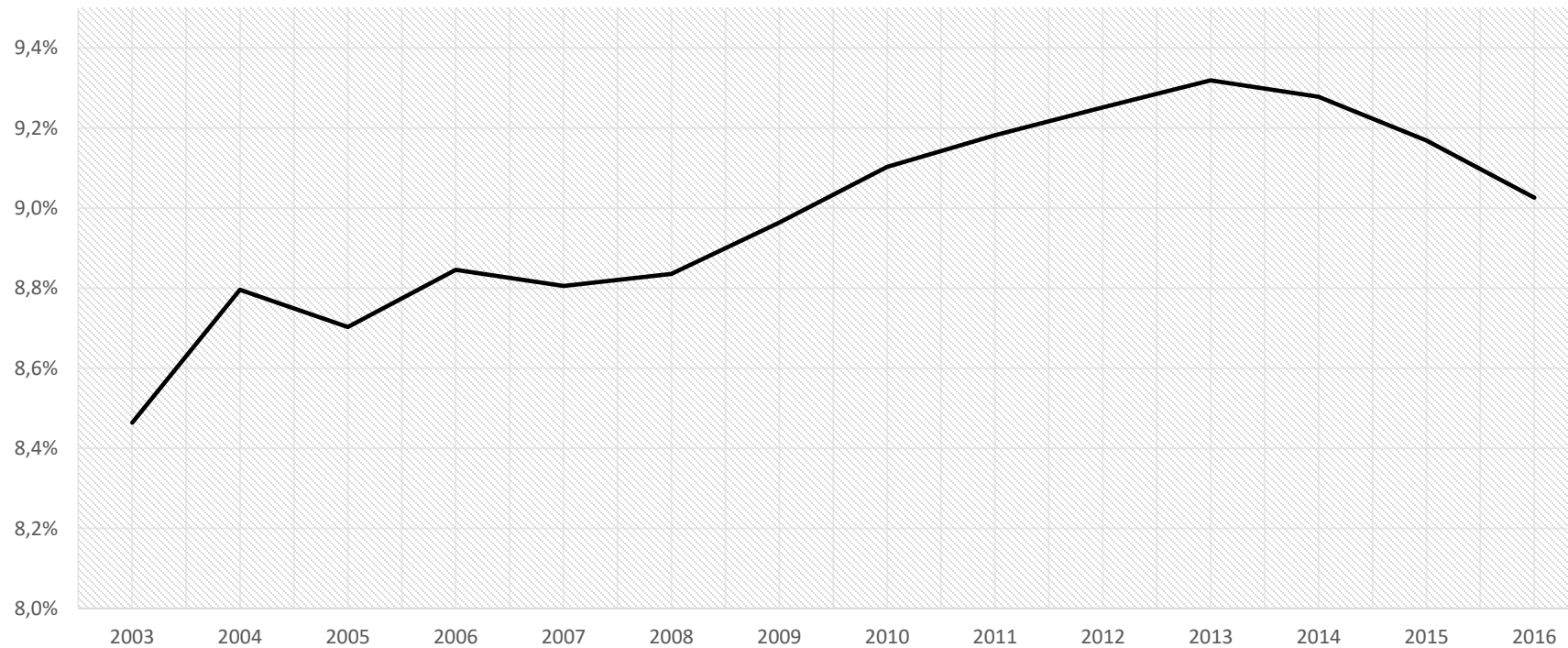
Source: authors' calculation. EIB calculations based on EIBIS and Bureau Van Dijk's Orbis database (2003-2016). Total sample: 169,938
Note: Pseudo R2 = 0.0458.

Potential HGEs

Table 3: Propensity score equation: Probit model of HGEs relying on firm characteristics

VARIABLES	(1) HGEs
Profitability	0.275***
	(0.014)
Productivity	0.061***
	(0.014)
medium	0.516***
	(0.018)
small	0.635***
	(0.018)
High-tech service	0.278***
	(0.039)
Constant	-1.977***
	(0.017)
Observations	74,347
Pseudo R2	0.0475

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Potential HGEs: firms similar to HGEs in terms of the chosen firm characteristics but they do not achieve high growth (15%)

Treatment group: the one of actual HGEs
Control group: potential HGEs

Stratification matching used to separate potential from non-potential HGEs; first nine bands of probability is selected: 40th percentile of the treated sample.

Do the HGEs face more financing constraints?

$$y^*_{it} = \alpha + \beta_0 \text{FC}_{i,t-1} + \beta_1 \text{Crisis} * \text{FC}_{i,t-1} + \gamma ControlVariables_{i,t-1} + \varepsilon_{it}$$

Table 1: Probit model on financing constraints of HGEs, Stable and Declining enterprises. Marginal Effects at mean

VARIABLES	(1) HGEs	(2) Stable	(3) Declining
FC	0.58***	0.14**	-0.89***
	(0.03)	(0.07)	(0.06)
FC X Crisis Dummy (09-10)	-0.21***	-0.47***	0.64***
	(0.02)	(0.04)	(0.03)
Observations	100,352	100,352	100,352
Pseudo R2	0.0476	0.0096	0.0117

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.10.
As control variables we use the size, country and sector fixed effects.

What types of external financing are preferred by HGEs?

Table 2: Probit model on alternative financing sources for HGEs, Stable and Declining enterprises, marginal effects at means.

VARIABLES	(1) HGEs	(2) Stable	(3) Declining
Bank loans	0.07*	0.11	-0.11**
	(0.04)	(0.07)	(0.05)
Other terms of bank finance (overdrafts, credit lines)	0.06	0.16**	-0.13***
	(0.04)	(0.07)	(0.05)
Newly issued bonds	0.05	0.26**	-0.14*
	(0.06)	(0.12)	(0.08)
Newly issued equity	0.12**	0.11	-0.13
	(0.05)	(0.12)	(0.08)
Leasing	0.08*	0.13*	-0.11**
	(0.04)	(0.07)	(0.05)
Factoring	0.08*	0.009	-0.08
	(0.04)	(0.08)	(0.06)
Loans from family/friends/business partner	0.08*	0.11	-0.12**
	(0.04)	(0.08)	(0.06)
Grants	0.06	0.15**	-0.10**
	(0.04)	(0.07)	(0.05)
Observations	5,948	6,439	6,383
Pseudo R2	0.0397	0.0284	0.0375

Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.10$. As control variables we use the size, country and sector fixed effects.

What blocks firms to become a HGEs and what are the main investment barriers of HGEs?

Table 6: Probit model: Obstacles for investments, marginal effects at means

VARIABLES	(1) HGEs versus all other firms	(2) Potential HGEs versus all other firms	(3) Potential HGEs Versus HGEs
Demand for products or services	-0.006**	-0.001	0.028
	(0.003)	(0.004)	(0.021)
Availability of staff with the right skills	0.008***	-0.001	-0.036
	(0.003)	(0.004)	(0.023)
Energy cost	-0.002	-0.003	0.006
	(0.003)	(0.004)	(0.021)
Access to digital infrastructure	-0.001	0.0040	0.008
	(0.003)	(0.004)	(0.022)
Labour market regulation	0.001	-0.008**	-0.022
	(0.003)	(0.004)	(0.022)
Business regulations (e.g. licences, permits, bankruptcy) and taxation	0.007**	-0.001	-0.051**
	(0.003)	(0.004)	(0.022)
Availability of adequate transport infrastructure	0.005*	-0.003	-0.038*
	(0.003)	(0.004)	(0.021)
Availability of finance	0.002	-0.005	-0.007
	(0.003)	(0.004)	(0.021)
Uncertainty about the future	-0.011***	0.009**	0.093***
	(0.003)	(0.004)	(0.024)
Observations	16,848	16,848	2,622
Pseudo R2	0.0647	0.1986	0.1733

Standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
As control variables we use the size, country and sector fixed effects.

Conclusion and policy implications

- HGEs (only 8%) contributed to new jobs creation (43%) and total production (30%) between 2003 and 2016.

- HGEs are more often financially constrained compared to stable or declining firms.

- HGEs financing needs go beyond bank loans - they are more likely to apply for equity financing.

  ➢ HGEs would benefit the most from the development of equity markets and private equity funds.

- Availability of skilled labour force and business regulations are particularly binding for HGEs.

  ➢ Policies to boost economic growth might support HGEs in developing skills/trainings and in attracting qualified personnel

- Potential HGEs are blocked in their investment activities by the perceived higher uncertainties that probably lift risks above their expected returns.