Internationalization strategy and performance of small and medium sized enterprises

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SME export

- Concentration: top 10% exporters = 85% of export
- Extensive margin (by new exporters) = 39% of total export growth between 1998 and 2005
- SMEs:
  - 30% of total increase in export
  - 70% of extensive margin
- Services gaining importance: mainly SMEs
- Exporting SMEs contribute positively to employment growth, large exporters negatively
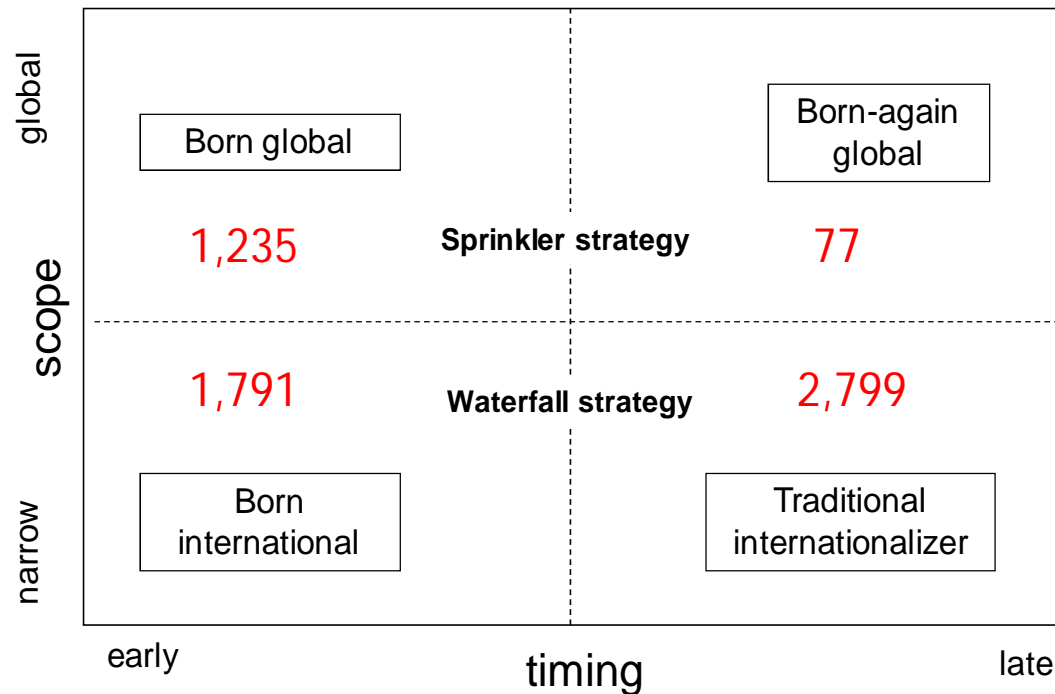
SME internationalization strategies

- Traditional internationalization models: in stages, after years of domestic growth (Johanson and Vahlne, 1977)

- International new ventures: rapid and early internationalization (Oviatt and McDougall, 1994)

- Simultaneous vs. sequential market entry (Kalish, Mahajan and Muller, 1995)

Staged internationalisation: Waterfall strategy

Simultaneous entry : Sprinkler strategy

Typology of SME internationalization strategies

5,818 SMEs started exporting between 1998 and 2005:
- Early internationalization: within 5 years after inception
- Late internationalization: after more than 5 years
- Global scope: at least 5 markets including one outside EU
- Narrow scope: fewer than 5 markets

Early internationalizers

- More common in global and high tech industries *($\chi^2 = 964$; p $<.0001$)*
- Stronger initial commitment, higher likelihood to continue exporting
- Rapid export growth
- Born Globals account for 60 % of SME export growth (1998-2005)

Continuing SME traders

	log employ-ment	log value added	log VA per employee	log fixed assets	log fixed assets per employee	log intangible assets	log intangible assets per employee	log R&D	log R&D per employee
	FTE05	VA05	prod05	FA05	FA_em05	IA05	IA_em05	RD05	RD_em05
intercept (no_trade)	2.712***	13.339***	10.701***	12.135***	9.425***	9.734***	6.872***	11.126***	7.884***
	(0,010)	(0,010)	(0,010)	(0,020)	(0,020)	(0,050)	(0,040)	(0,200)	(0,210)
Born global	0.722***	1.326***	0.532***	1.237***	0.518***	1.035***	0,256	1.783***	1.065***
	(0,040)	(0,050)	(0,030)	(0,080)	(0,080)	(0,160)	(0,160)	(0,330)	(0,340)
Born international	0.401***	0.897***	0.419***	1.047***	0.614***	0,33	0,023	0,557	0,138
	(0,060)	(0,070)	(0,040)	(0,110)	(0,100)	(0,230)	(0,220)	(0,540)	(0,540)
Traditional internationalizer	0.411***	0.776***	0.301***	1.119***	0.700***	0.591*	0,199	0,847	-0,083
	(0,070)	(0,090)	(0,050)	(0,140)	(0,130)	(0,310)	(0,300)	(0,850)	(0,850)
other_trader	0.754***	1.252***	0.428***	1.348***	0.587***	0.779***	-0,096	0.908***	0,138
	(0,020)	(0,030)	(0,010)	(0,040)	(0,040)	(0,090)	(0,080)	(0,250)	(0,250)
number of observations	18.188	18.479	17.997	18.136	17.674	5.974	5.932	775	771
R²	0,14	0,25	0,21	0,20	0,16	0,09	0,08	0,18	0,15

Export growth

	export growth b/se
ln_export1998	-0.0552***
	(0.000)
ln_M98/FTE	0.0160***
	(0.000)
Born global	0.0720***
	(0.000)
Born international	.0444**
	(0.033)
Traditional internationalizer	0.0415
	(0.219)
industry dummies included	yes

* p<0.1, ** p<0.05, *** p<0.01

Number of obs.	=	4986
F(5, 4930)	=	220.17
Prob. > F	=	0.0000
R-squared	=	0.1915
Adj. R-squared	=	0.1825
Root MSE	=	.25357

Heckman two stage estimation

	avg_ln_X05-ln_X98 yearly growth		select probit export
ln_export1998	-0.0452***	ln_export1998	0.0876***
	(0.000)		(0.000)
ln_M98/FTE	0.0184***	ln_M98/FTE	0.0296***
	(0.000)		(0.002)
Born global	0.0550***	Born global	-0.1149***
	(0.000)		(0.055)
Born international	0.0028***	Born international	-0.3607
	(0.000)		(0.000)
Traditional internationalizer	-0.0262	Traditional internationalizer	-0.5672***
	(0.600)		(0.000)
		ln_TFP98	0.1503***
			(0.000)
Inverse Mills	0.1923*		
	(0.059)		
industry dummies included	yes	industry dummies included	yes

* p<0.1, ** p<0.05, *** p<0.01

Number of obs.	=	7,118
Censored obs.	=	2,166
Uncensored obs.	=	4,952
Wald chi2(55)	=	524.28
Prob > chi2	=	0.0000

Marginal effects: continue export

variable	dy/dx	Std. Err.	z
ln_export1998	0.03014	0.002	12.3
ln_M98/FTE	0.01019	0.003	3.1
Born global	-0.04050	0.022	-1.87
Born international	-0.13326	0.029	-4.54
Traditional internationalizer	-0.21528	0.043	-5.02
TFP	0.05172	0.011	4.82

industry dummies included

- SMEs that stopped exporting within first five years:

    - Born Globals: 30%

    - Born Again Globals: 44%

    - Born Internationals: 57%

    - Traditional Internationalizers: 72%

Marginal effects

variable	Heckman conditional marginal effect	Heckman unconditional marginal effect	OLS Marginal effect
ln_export1998	-0.05374	-0.03641	-0.0552
ln_M98/FTE	0.01556	0.01153	0.0160
Born global	0.06639	0.04255	0.0720
Born international	0.04061	0.01679	0.0444
Traditional internationalizer	0.03608	0.00683	0.0415

industry dummies included

Export/sales

	export_1998 b/se		export_2005 b/se
ln_import/sales98	0.224*** (0.000)	ln_import/sales05	0.280*** (0.000)
ln_N_p_98	0.235*** (0.000)	ln_N_p_05	0.226*** (0.000)
ln_N_c_98	1.029*** (0.000)	ln_N_c_05	1.046*** (0.000)
Born global	0.256*** (0.001)	Born global	0.253*** (0.000)
Born international	0.180 (0.121)	Born international	0.119 (0.207)
Traditional internationalizer	-0.438*** (0.004)	Traditional internationalizer	-0.028 (0.801)
industry dummies included	yes	industry dummies included	yes

* p<0.10, ** p<0.05, *** p<0.01

Number of obs	= 5,537	Number of obs	= 5,006
F(7, 5478)	= 670.68	F(7, 4950)	= 682.15
Prob > F	= 0.0000	Prob > F	= 0.0000
R-squared	= 0.5460	R-squared	= 0.5600
Adj R-squared	= 0.5412	Adj R-squared	= 0.5551
Root MSE	= 1.5707	Root MSE	= 1.6031

Drop out

- Among SMEs that discontinued export, 15 % exited from the industry
  - Born globals: 22%
  - Born internationals: 15%
  - Traditional internationalizers: 7%

Firm exit

- Traders have a higher chance of survival
- Among traders, traditional internationalizers have the lowest exit rate, born globals the highest
- Early internationalization does not decrease survival rates (controlling for age)
- Broader initial scope does not affect survival rate (exit born globals = born internationals)

Firm exit: types of (non-) traders

	exit rate	Δ old traders	Δ old non-traders	Δ young non-traders	Δ BG	Δ BI	Δ TI
old traders	0.10030		-0.07649	-0.10836	-0.09120	-0.06535	0.01882
(SE)	.0086991		0.023	0.031	0.046	0.028	0.019
t			-3.3794***	-3.4986***	-1.9819*	-2.3020**	0.966
old non-traders	0.17367	0.07649		-0.01757	-0.00762	0.00127	0.08223
(SE)	0.023	0.023		0.018	0.050	0.028	0.026
t		3.3794***		-0.995	-0.1525	0.0458	3.1706**
young non-traders	0.20855	0.10836	0.01757		0.02690	0.03018	0.11746
(SE)	0.033	0.031	0.018		0.052	0.036	0.034
t		3.4986***	0.995		0.5128	0.8268	3.4920***
BG	0.19775	0.09120	0.00762	-0.02690		0.03265	0.10660
(SE)	0.044	0.046	0.050	0.052		0.058	0.041
t		1.9819*	0.1525	-0.5128		0.5676	2.5688**
BI	0.16017	0.06535	-0.00127	-0.03018	-0.03265		0.06109
(SE)	0.028	0.028	0.028	0.036	0.058		0.025
t		2.3020**	-0.0458	-0.8268	-0.5676		2.3971**
TI	0.08643	-0.01882	-0.08223	-0.11746	-0.10660	-0.06109	
(SE)	0.014	0.019	0.026	0.034	0.041	0.025	
t		-0.966	-3.1706	-3.492	-2.5688**	-2.3971**	

* p<0.10, ** p<0.05, *** p<0.01

Dynamics of SME trade

- Many firms make transition towards two-way trade
- SMEs making this transition grow faster

		2005				
1998	# firms	exit	no trade	import only	export only	two way trade
no trade	17,003	12%	76%	5%	4%	3%
import only	3,164	11%	18%	39%	3%	20%
export only	2,100	10%	28%	6%	29%	17%
two way trade	7,208	11%	4%	7%	4%	65%
total	29,475	11%	49%	10%	6%	21%

Transition from import ⇔ export

- Greater probability to start exporting (importing) to (from) a country after prior experience in that country
- More prominent for institutionally and geographically distant countries

	import to export	other country trade to export	Δ other country trade to export	no trade to export	Δ no trade to export
main EU trading partners	0.1713	0.0950	0.0763	0.0345	0.1368
(SE)	(.010)	(.009)	(.004)	(.003)	(.007)
t			21.40***		19.01***
non-EU trading partners	0.124	0.041	0.083	0.018	0.106
(SE)	(.014)	(.006)	(.009)	(.002)	(.012)
t			9.3784***		9.192***
paired t test; *** p<.01					

	export to import	other country trade to export	Δ other country trade to export	no trade to import	Δ no trade to import
main EU trading partners	0.265	0.123	0.143	0.051	0.215
(SE)	(.012)	(.012)	(.006)	(.005)	(.008)
t			23.68***		26.48***
non-EU trading partners	0.132	0.039	0.094	0.018	0.115
(SE)	(.020)	(.007)	(.013)	(.003)	(.016)
t			7.43***		7.01***
paired t test; *** p<.01					

Conclusions

- Born globals:
  - fastest export growth (27% of all export growth)
  - strongest commitment to export markets
  - highest probability to continue exporting
- Among newly internationalizing SMEs, born globals have the highest failure rate, traditional internationalizers the lowest
- Prior trade experience is important for development of new export, import