

# **The profile of use of industrial property by small and Medium Enterprises in Brazil in 1998-2005**



Industrial Property National Institute -INPI

Elizabeth Ferreira da Silva

Dirceu Yoshikazu Teruya

# Contents of presentation

- Theoretical approach concerning the technological innovation and the use industrial property by Small and Medium Enterprises
- Brazilian context of Brazilian SME
- The role of industrial property in Brazilian SME



# Structural Approach

## Economic rupture: Trade Openness – 1989

- ✓ Privatization of state companies
- ✓ Macroeconomic stabilization
- ✓ New regulation of intellectual property – TRIP's (1994)
- ✓ Technological innovation – redefinition of innovative process – competitiveness on trade



# Structural Approach

## Governmental Directives

- ✓ Industrial and technological Innovation

To increase the competitiveness of Brazilian products

- ✓ Industrial property

Mechanism of protection;

Transfer of technology;

Commercial diffusion and Cooperative actions.

**Generation and/or acquisition of technological knowledge – virtuous and sustainable cycle of growth in the firms**

# Economic Importance of SME

- ✓ Potential mechanism of the development of technology
- ✓ Diffusion of innovation
- ✓ Regional Economic Growth
- ✓ Insertion into new technological trajectories due to adaptation easiness

**Response towards sudden industrial process changes**

# Stylized facts of the Brazilian SME

- ✓ the high rate of creation of SME in Brazil.
- ✓ the high rate of mortality of small and medium enterprises.
- ✓ the insertion of economic activity.
- ✓ the generation of occupation in labour market.
- ✓ the importance on Brazilian export.

# Innovation rate in Extractive and Transformation Industry from 1998 to 2005

Period	Total	Small Firms	Medium firms
1998-2000	31.52	26.65	43.04
2001-2003	33.27	31.11	34.94
2003-2005	33.36	28.94	40.61

Source: PINTEC/IBGE



Percentage of Brazilian small firms that invest in innovative activities, Internal Activities of Research and Development, External Acquisition of Research and Development and Acquisition of other External Knowledge from 2003 to 2005.

### Small firms

Year	Total Investment of Innovative Activities		Internal Activities of R&D		External Acquisition of R&D		Acquisition of other External Knowledge	
	Rate of firms	Rate of value (net revenue)	Rate of firms	Rate of value (net revenue)	Rate of firms	Rate of value (net revenue)	Rate of firms	Rate of value (net revenue)
2003	26.35	2.53	6.74	0.27	1.26	0.02	2.56	0.05
2005	18.13	5.36	3.53	0.41	0.86	0.04	1.89	0.60 (12 x)
	- 31%	111%	- 47%	51%	- 31%	100%	- 26%	

Source: PINTEC/IBGE

Percentage of Brazilian medium firms that invest in innovative activities, Internal Activities of Research and Development, External Acquisition of Research and Development and Acquisition of other External Knowledge from 2003 to 2005.

### Medium Firm

Year	Total Investment of Innovative Activities		Internal Activities of R&D		External Acquisition of R&D		Acquisition of other External Knowledge	
	Rate of firms	Rate of value 15%	Rate of firms	Rate of value - 39%	Rate of firms	Rate of value - 57%	Rate of firms	Rate of value - 25%
2003	24.45	2.46	5.86	0.53	1,43	0,07	2,44	0,08
2005	26.75	2.85	6.39	0.32	1,14	0,03	2,88	0,06
	9%		9%		- 20%		18%	

Source: PINTEC/IBGE

# Rate in percentage of use of Methods of protection by Total, Small and Medium of Brazilian innovative firms of Extractive and Transformation Industry from 1998 to 2005

Period	Total of Implemented Innovation		Small Firms		Medium firms	
	Patents	Trademarks	Patents	Trademarks	Patents	Trademarks
2001-2003	12.34	21.76	5.33	22.92	7.64	12.03
2003-2005	6.69	23.52	3.96	20.80	8.28	22.46
	- 45%	8%	- 25%	- 9%	8%	86%

Source: PINTEC/IBGE

# Rate of patent filling and patent granted by Total, Small and Medium of Brazilian innovative firms in Extractive and Transformation Industry

from 1998 to 2005

Period	Total		Small Firms		Medium firms	
	Patent Filling	Patent Granted	Patent Filling	Patent Granted	Patent Filling	Patent Granted
1998-2000	8.05	8.50	4.65	4.55	10.78	10.73
2001-2003	6.14	4.99	4.06	3.30	6.45	4.75
2003-2005	6.12	11.41	2.96	8.29	7.74	12.25

Source: PINTEC/IBGE



Grade of importance of licensing, patents and know how as source of used information by Total, Small and Medium of Brazilian innovative firms in Extractive and Transformation

Industry from 1998 to 2003

Period	Small Firms			Medium firms		
	High	Medium	Low	High	Medium	Low
1998-2000	1.47	3.26	95.27	2.90	3.28	93.82
2001-2003	1.07	0.56	98.37	1.98	1.85	96.17

Source: PINTEC/IBGE

# Conclusions

- ✓ SME can be incorporated into intensive-based activities under subcontracting practices or under licensing of industrial property, that could increase the Rate of Technological Innovation
- ✓ Low rate of technological innovation in Brazilian SME
- ✓ Low rate of protection by industrial property for Brazilian SME
- ✓ Low importance of licensing, patents and know how as source of innovation for Brazilian SME
- ✓ Immature NSI in Brazil

