Intangible investment in France and Germany: Highlights and policy issues

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Content

- France and Germany: facts and figures

- Macro estimations

- Industry-level analysis

- Results and concluding remarks
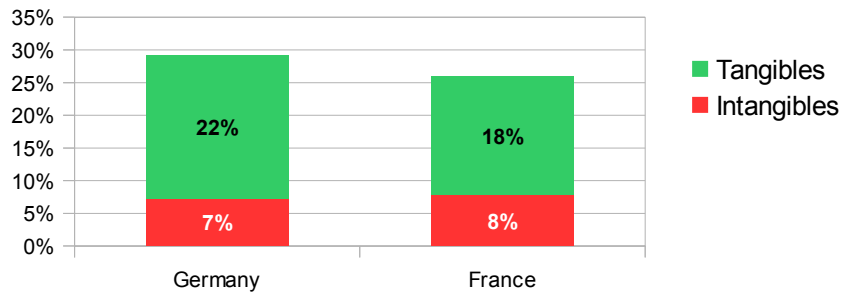
Methodology

List of intangibles

- Software & database
- R&D
- Artistic originals
- Architecture and engineering design
- Advertising
- Organisation
- Training

- Long time series
- Panel data analysis

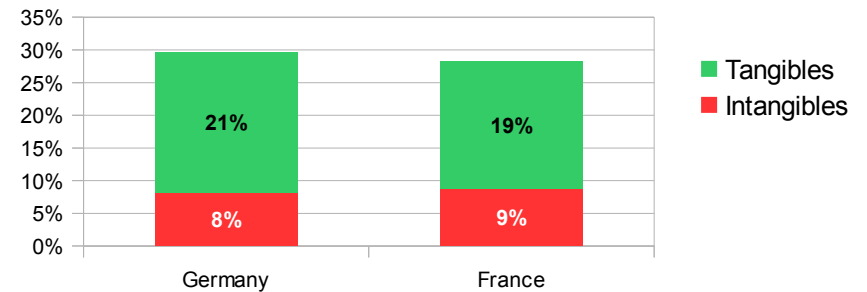# Tangible vs intangible investment
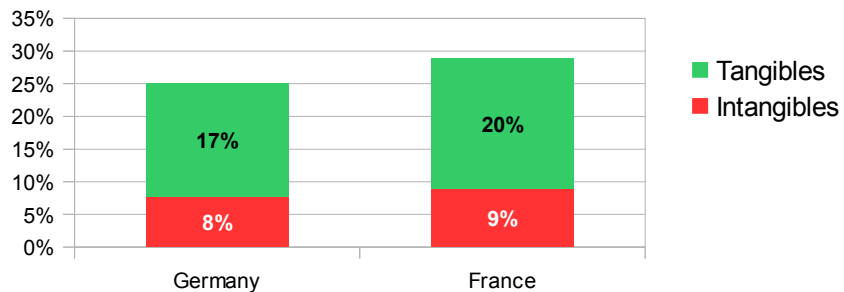
In share of GDP (real terms)

1995

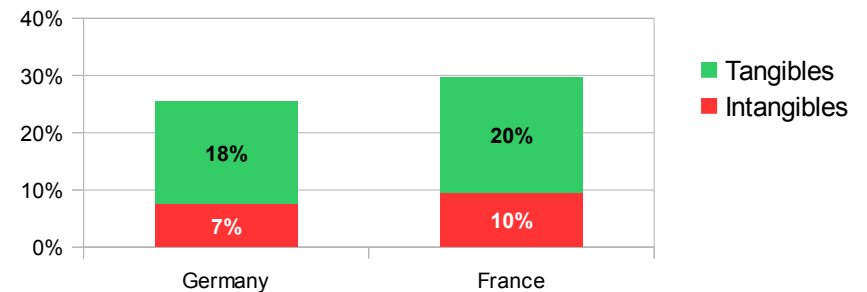In share of GDP (real terms)

2000

In share of GDP (real terms)

2005

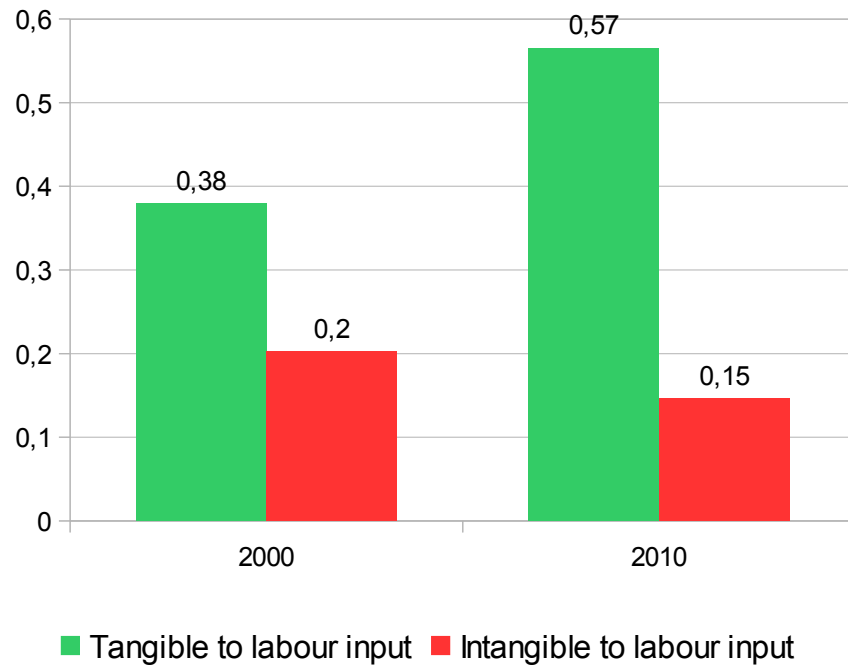In share of GDP (real terms)
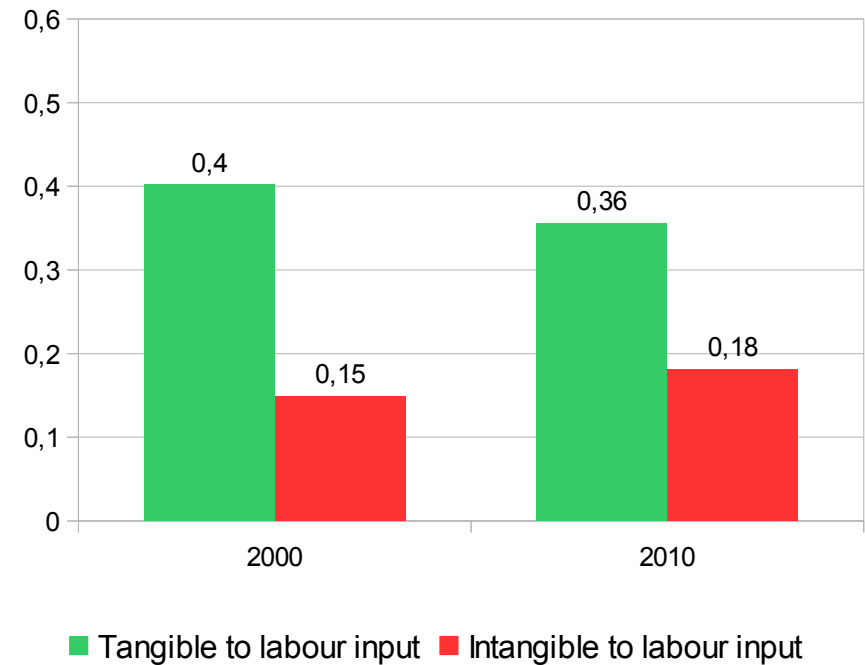
2010

Tangible vs intangible intensity

Amount of investment relative to labour cost (real terms)

France

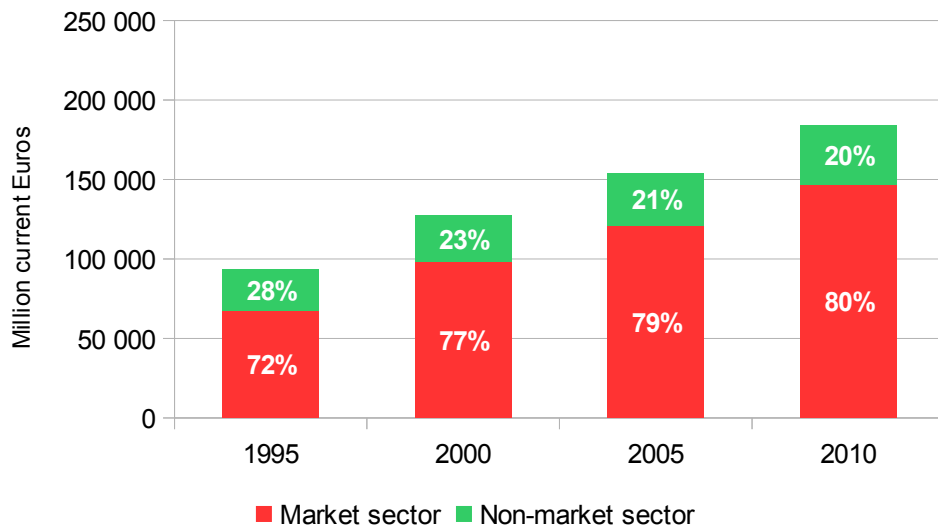Amount of investment relative to labour cost (real terms)
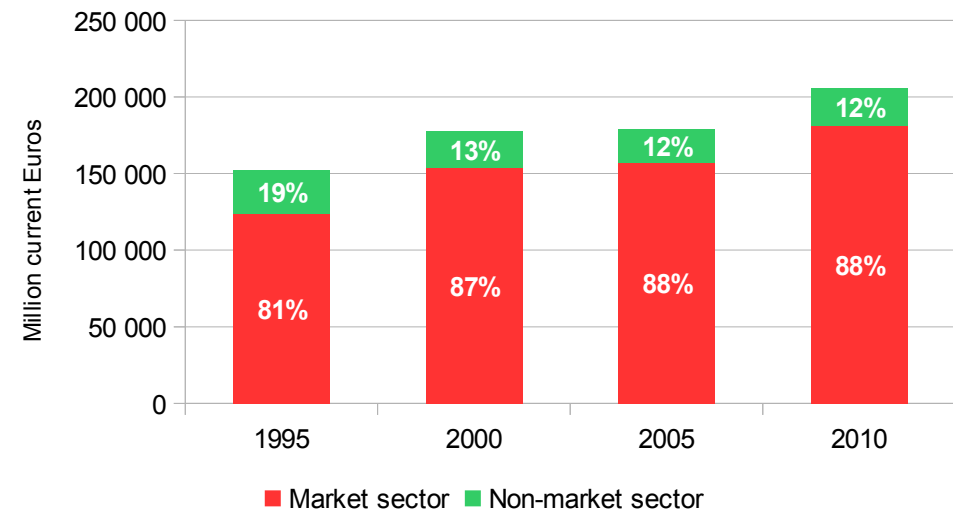
Germany

Source: COINVEST, EUKLEMS, own calculation

Market vs non-market sector

Source: COINVEST, EUROSTAT, own calculation

Estimation - panel data results (2)

Inputs	A	B	C	D	E	F	G
L	1.97***	1.32***	1.45***	1.70***	1.76***	1.41***	0.91***
K	0.42***	0.39***	0.48***	0.39***	0.35***	0.48***	0.65***
I		0.18***					
I_{Soft}			0.16***				0.24***
$I_{R\&D}$				0.05			-0.13***
I_{adv}					0.11**		-0.06
I_{org}						0.10***	0.15***
R^2	0.99	0.99	0.99	0.99	0.98	0.99	0.99

***,** and * denoting estimators significant at 1%, 5% and 10% level respectively
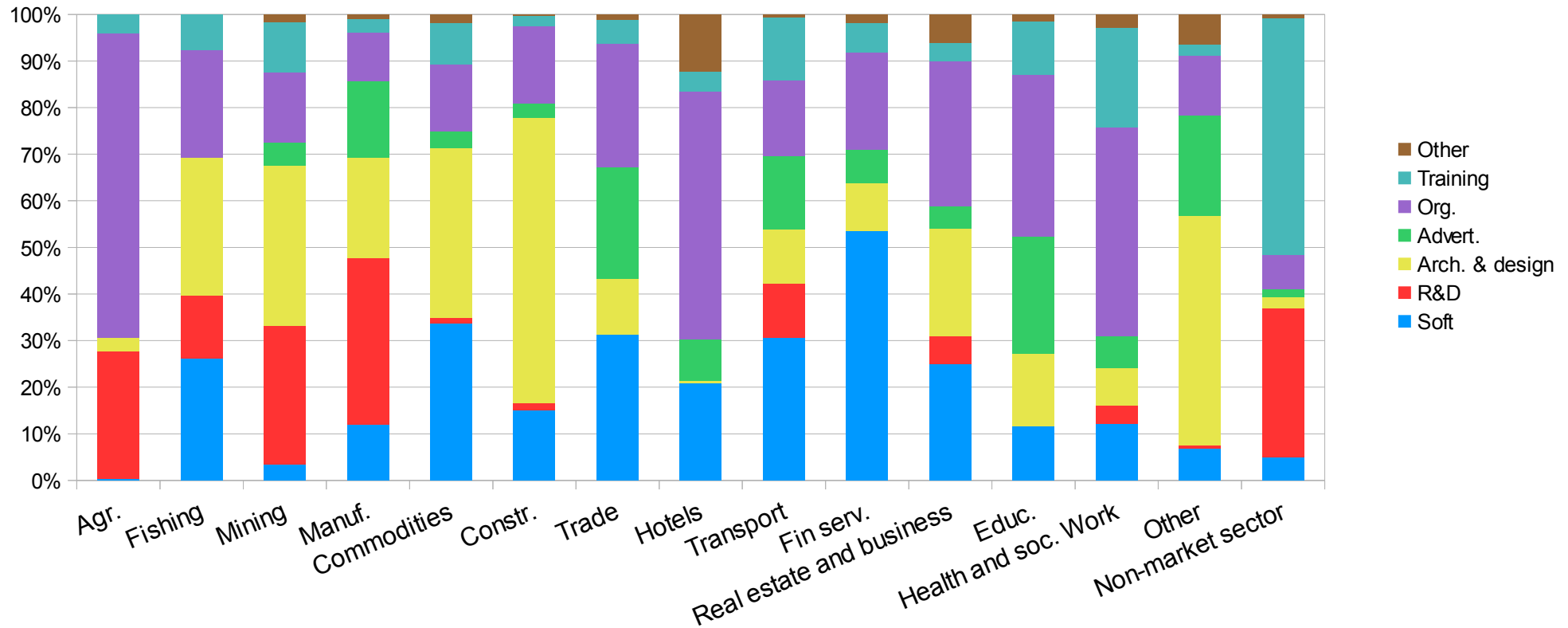
Estimation - panel data results (1)

Inputs	A	B	C	D	E
L	1.97***	1.32***	1.14***	0.80***	1.36***
K	0.42***	0.39***	0.18**	0.38***	0.30***
I		0.18***			
$I_{activated}$			0.01		
$I_{not\ activated}$			0.36***		
Overall index				0.03***	
Training (+) vs Org (-)				-0.01	
Org-training (+) vs Soft-R&D (-)				0.01	
I_{proc}					0.39***
I_{prod}					-0.12*
R²	**0.99**	**0.99**	**0.99**	**0.99**	**0.99**

***,** and * denoting estimators significant at 1%, 5% and 10% level respectively

8

Industry heterogeneity

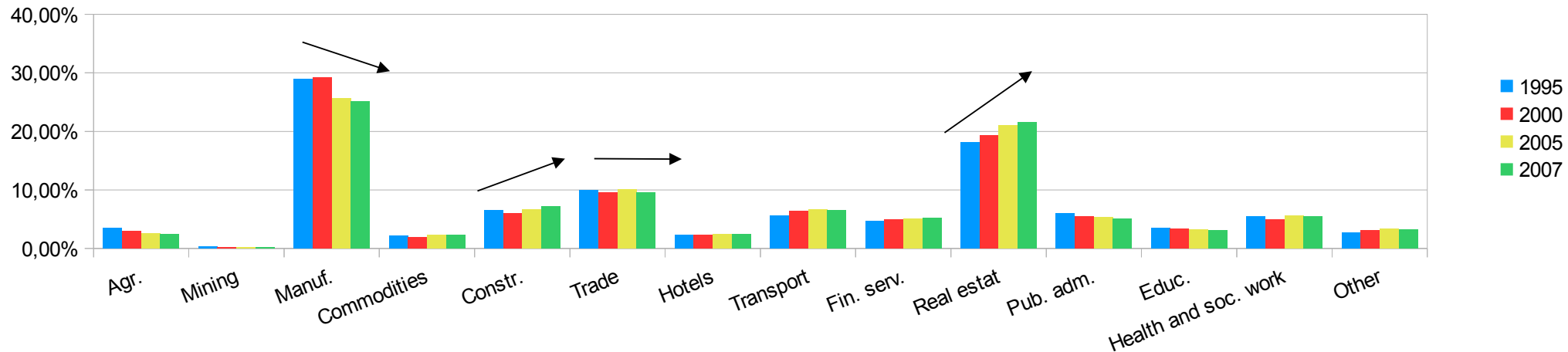Intangible items distribution by industry in France

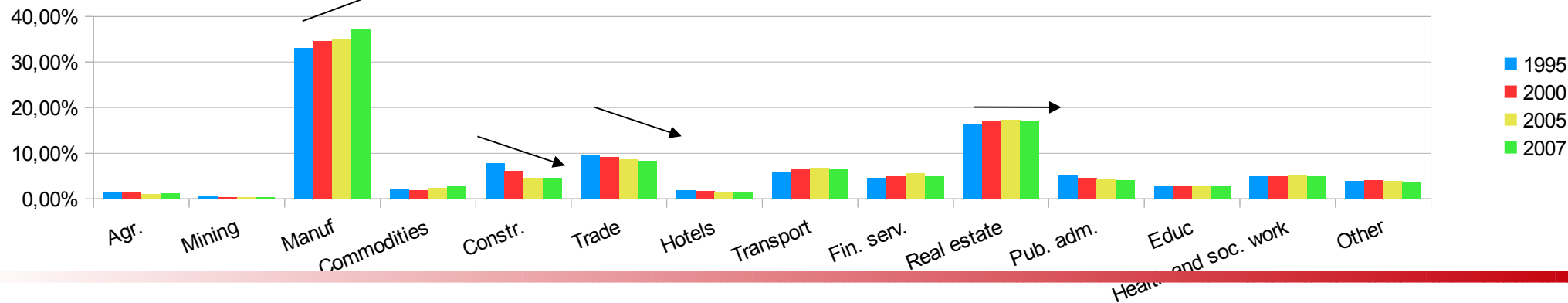NACE 17 - 2007

Country heterogeneity (1)

Industry distribution

France - % of total output

Legend: 1995, 2000, 2005, 2007

Categories: Agr., Mining, Manuf., Commodities, Constr., Trade, Hotels, Transport, Fin. serv., Real estat, Pub. adm., Educ., Health and soc. work, Other

Industry distribution

Germany - % of total output

Legend: 1995, 2000, 2005, 2007

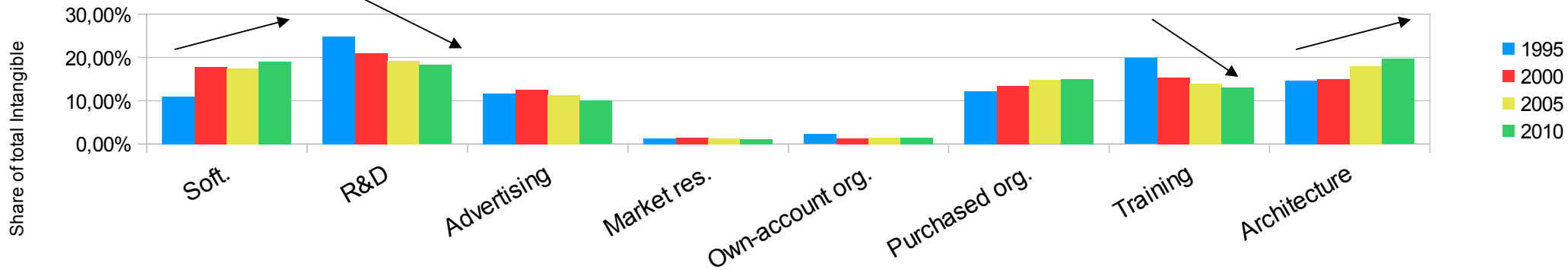Categories: Agr., Mining, Manuf, Commodities, Constr., Trade, Hotels, Transport, Fin. serv., Real estate, Pub. adm., Educ, Health and soc. work, Other
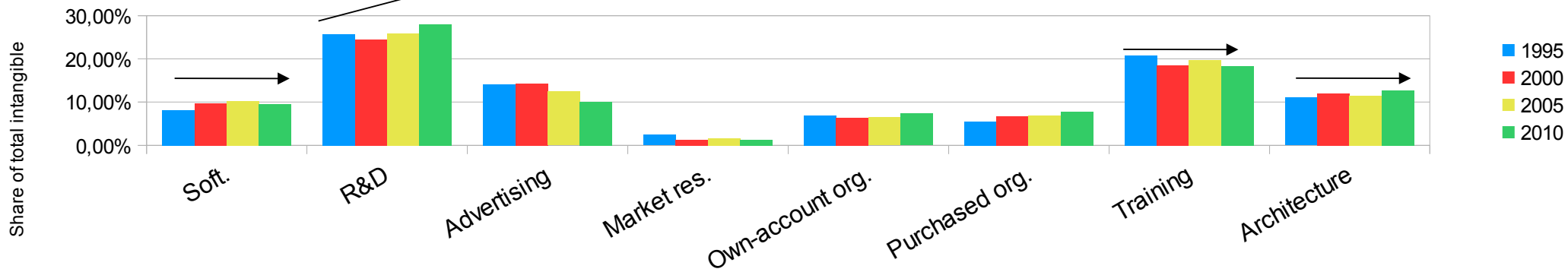
Country heterogeneity (2)

Intangible investment distribution

France - in share of total intangible investment

Intangible investment distribution

Germany - in share of total intangible investment

Main findings and conclusion

- Intangible investment differs in trend an structure between France and Germany

- Intangible investment is country- and industry-specific

- No "one-fits-all" policy

- Intangible capital has a positive impact on growth. Process innovation is more important than product innovation

- Opportunity for a cross-industry analysis between France and Germany => Advanced innovation policy research through joint analyses

Thank you for your attention