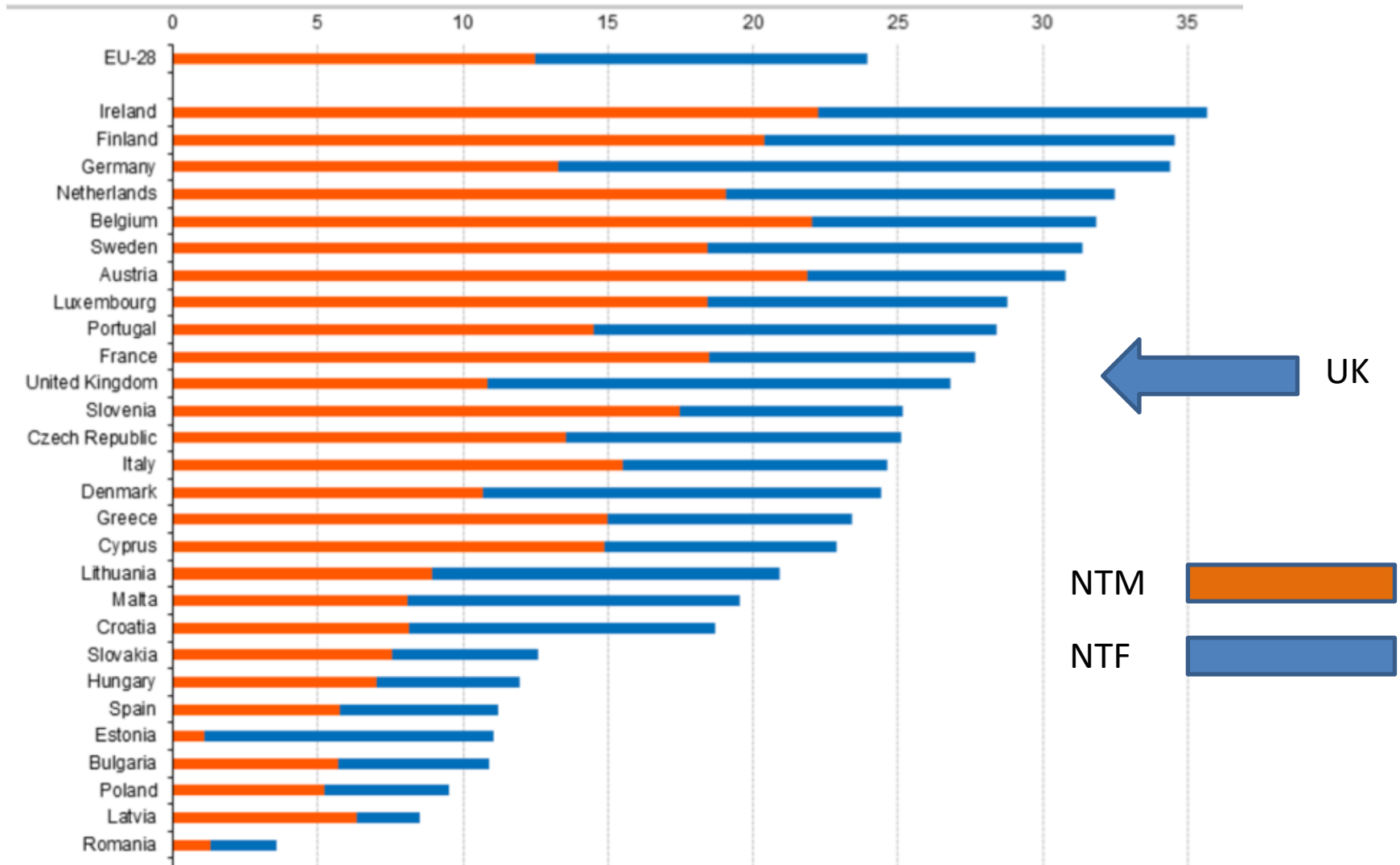


Public support for R&D and innovation in the UK: two different perspectives

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Innovation in the UK: EU context (% of innovating firms)



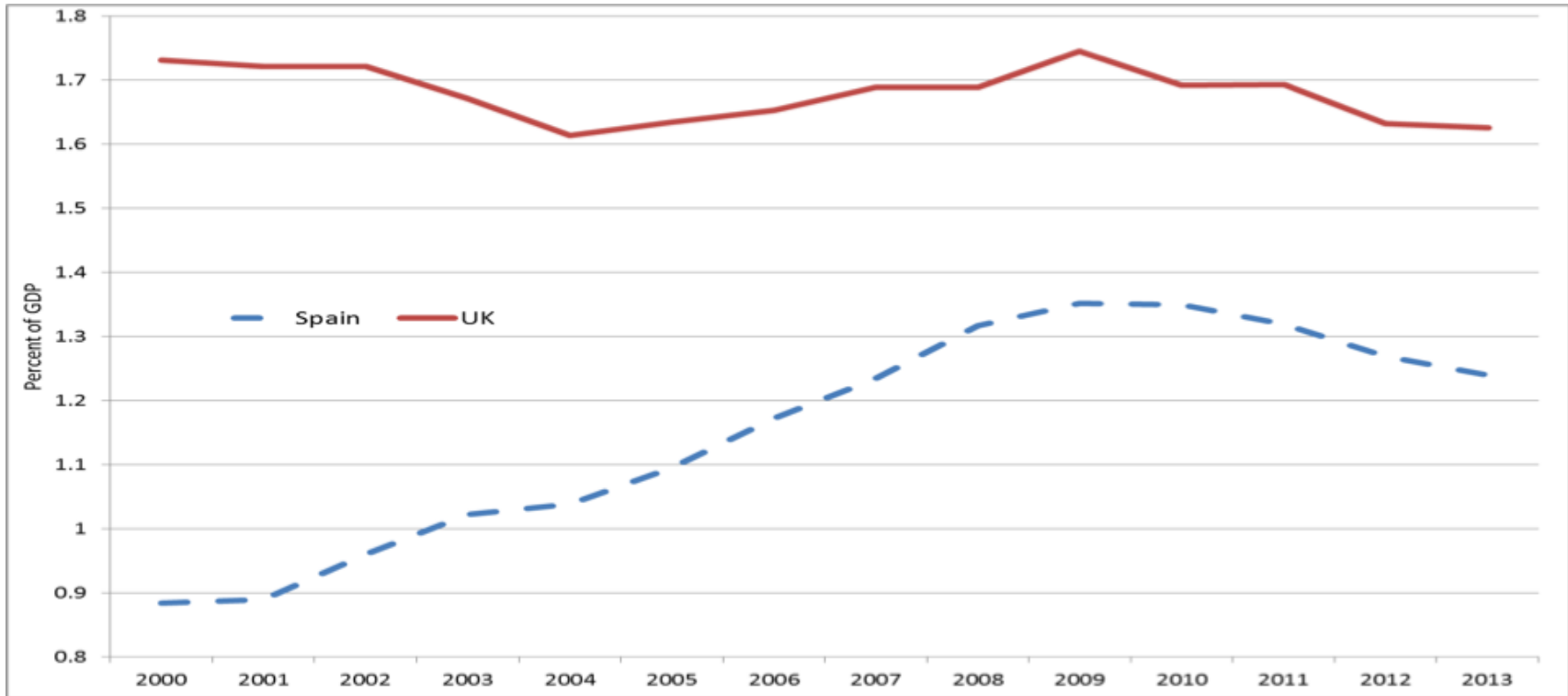
Benchmarking policy effectiveness: The UK v Spain

**Bettina Becker, Stephen Roper,
James H Love**

Aims of analysis

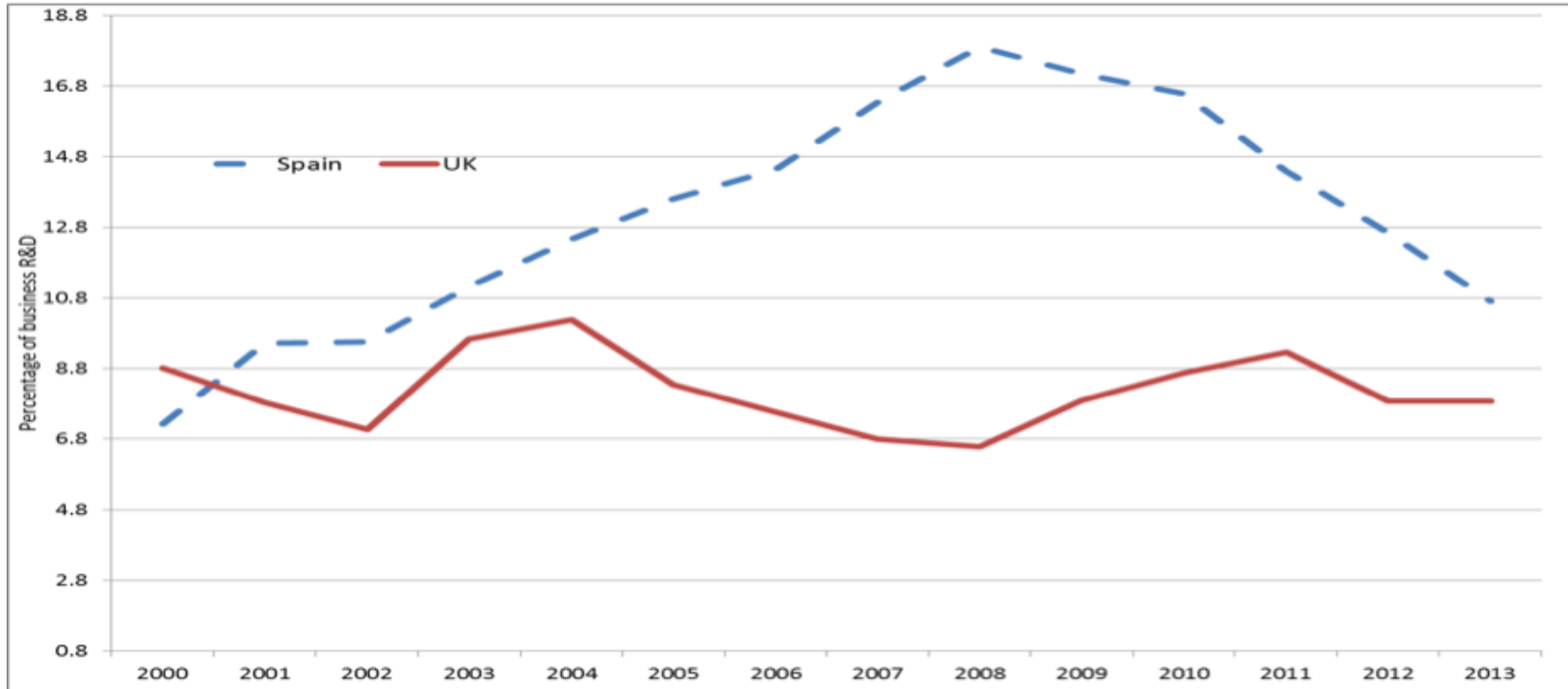
- Our aim here is to explore the effectiveness of **regional, national and EU** innovation support in promoting the extent of innovation activity, its novelty, and market success.
- We use data from the national innovation panel surveys in the UK and Spain over the 2004 to 2012 period
- The comparison of the UK and Spain is particularly interesting given:
 - The very different levels of engagement of the public sector in the innovation system in the two countries,
 - The greater regionalisation of innovation support in Spain (Mate-Sanchez-Val and Harris 2014),
 - Other differences in the business environment in the two countries such as regulation (Capelleras et al. 2008).

R&D investment as % of GDP



.. the UK is a 'liberal market economy' with innovation driven by market mechanisms and innovation policy is either corrective or creative. Spain is a 'mixed market economy' or 'Mediterranean economy where policy is also compensatory (offsetting shocks or weaknesses)

Govt. funding of business R&D (%)



... 'in Spain, public support is more important in promoting innovation activities; whereas linkages with international markets are more important for companies in the UK' (Mate-Sanchez-Val and Harris, 2014, p. 452)

Data

- Data from five waves of the UK Innovation Survey and PITEC. Both based on Oslo Manual
- For each firm we know about their innovation activity, other controls and whether they received innovation support:
 - From local or regional agencies
 - National bodies
 - EU (Spain), EU and international organisations (UK)
- But note these are only binary measures not amounts so we have no idea (here) of the scale of support

Percentage of firms receiving innovation support : 2004-12		
	UK	Spain
Regional	5.9	19.4
National	5.0	18.3
EU	1.7	5.1

Modelling approach

- Two-stage, recursive approach
 - Stage 1 – model probability of receiving regional, national or EU support
 - Stage 2 – innovation equation including three binary treatment terms (regarded as endogenous)
- Estimated using CMP estimator as allows us to use multiple (three) treatments and also various dependent variables depending on innovation indicator (probit, tobit)

Key findings

	UK			Spain		
	Regional	National	EU	Regional	National	EU
Probability of innovation						
Product/service		+		+	+	
Process	+		-			
Organisational	+			+		
Strategic	+				+	+
Managerial	+			+		+
Marketing	+			+		
Novelty of innovation		+		-	+	+
Innovation sales	+				+	+

Key findings...

1. Regional support seems most influential in both the UK and Spain in increasing the probability of process and organisational innovation.
2. For both the UK and Spain - and by contrast with other types of innovation – national innovation support is associated with a higher probability of product or service innovation.
3. Only national (and in Spain EU support) prove important in positively shaping the novelty of product or service innovations.
4. In the UK only regional support is associated with increased innovative sales; while, in Spain, innovative sales are influenced by both regional, national and EU support measures.

UK policy impacts – a closer (if partial) look

Enrico Vanino, Stephen Roper and
Bettina Becker

Some new evidence on UK policy effectiveness

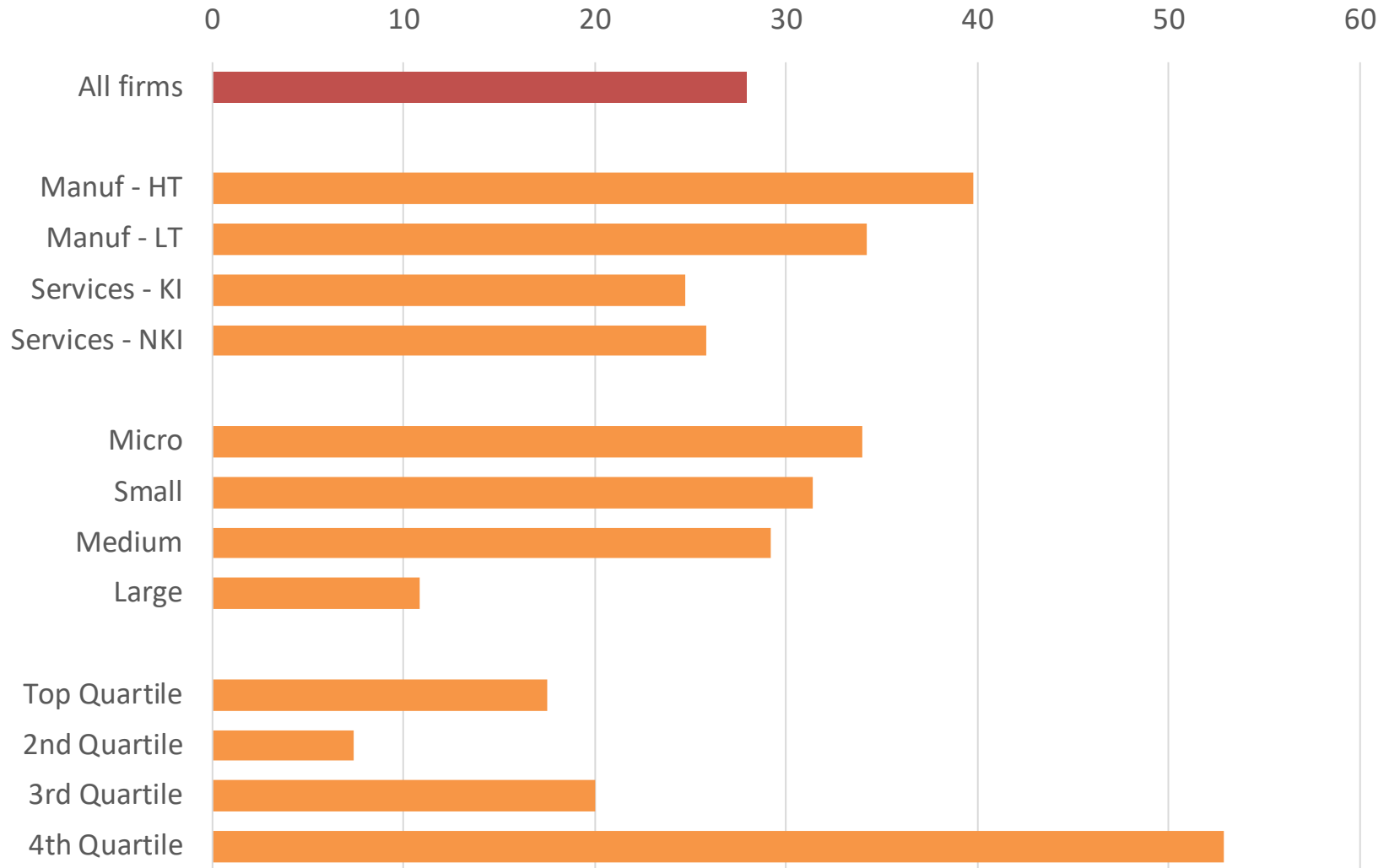
- UK policy delivered through InnovateUK and the other research councils (particularly EPSRC) focuses on ‘supporting excellence’, i.e. primarily supporting NTM innovation
- Key instruments are grants for R&D and innovation along with R&D tax credits. But do they work in stimulating growth and productivity?
- For the first time we have been able to match data on all projects with data on business performance over the 2006-16 period
- This covers projects in which 15,000 firms participated and we compare the performance of these firms to a closely matched control group
- So what do we find?

UK innovation policy: does it work?

- The headline result is very positive:
- Firms in participating in projects funded by UK Research Councils (including Innovate UK)
 - grew their turnover and employment 5.8-6.0 per cent faster in the three years after the grant than similar firms which did not receive support.
 - and 22.5-28.0 per cent faster in the six years after the grant.
- The net effect is a 6.2 per cent productivity boost after 6 years.
- The size of these growth effects is very similar whether support is for more basic research (EPSRC) or more applied R&D (Innovate UK)

And, where are the impacts greatest

(Medium-term, turnover growth effects, %)



Final reflections

- We need to do more: the UK's innovation performance remains only middling
- Both studies suggest that in the UK we have some effective national policy instruments for supporting NTM innovation but we face challenges around:
 - (a) Maximising additionality from our NTM support – target more at smaller firms? Less productive enterprises?
 - (b) Think about what we can do to promote productivity improving innovation (NTF perhaps) through diffusion. This was the preserve of regional agencies and we need to reinvent support mechanisms here.

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