Trade Marks and Performance in UK Firms: Evidence of Schumpeterian Competition through Innovation *

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Trade marks and patents as indicators of innovation

- Innovation types: *process v. product*; and within product: increasing *product variety* v. increasing *product quality*
- Patent requires 'novelty, non-obviousness, capability of industrial application' (EU excludes software and business methods unless technical)
- Trade mark technically reserves only the right to the name, sign or logo as a guarantee of origin
- Establishment of new brands and their support via advertising is integral to business competition
- Thus trade mark role widens to signal either or both new quality and new variety

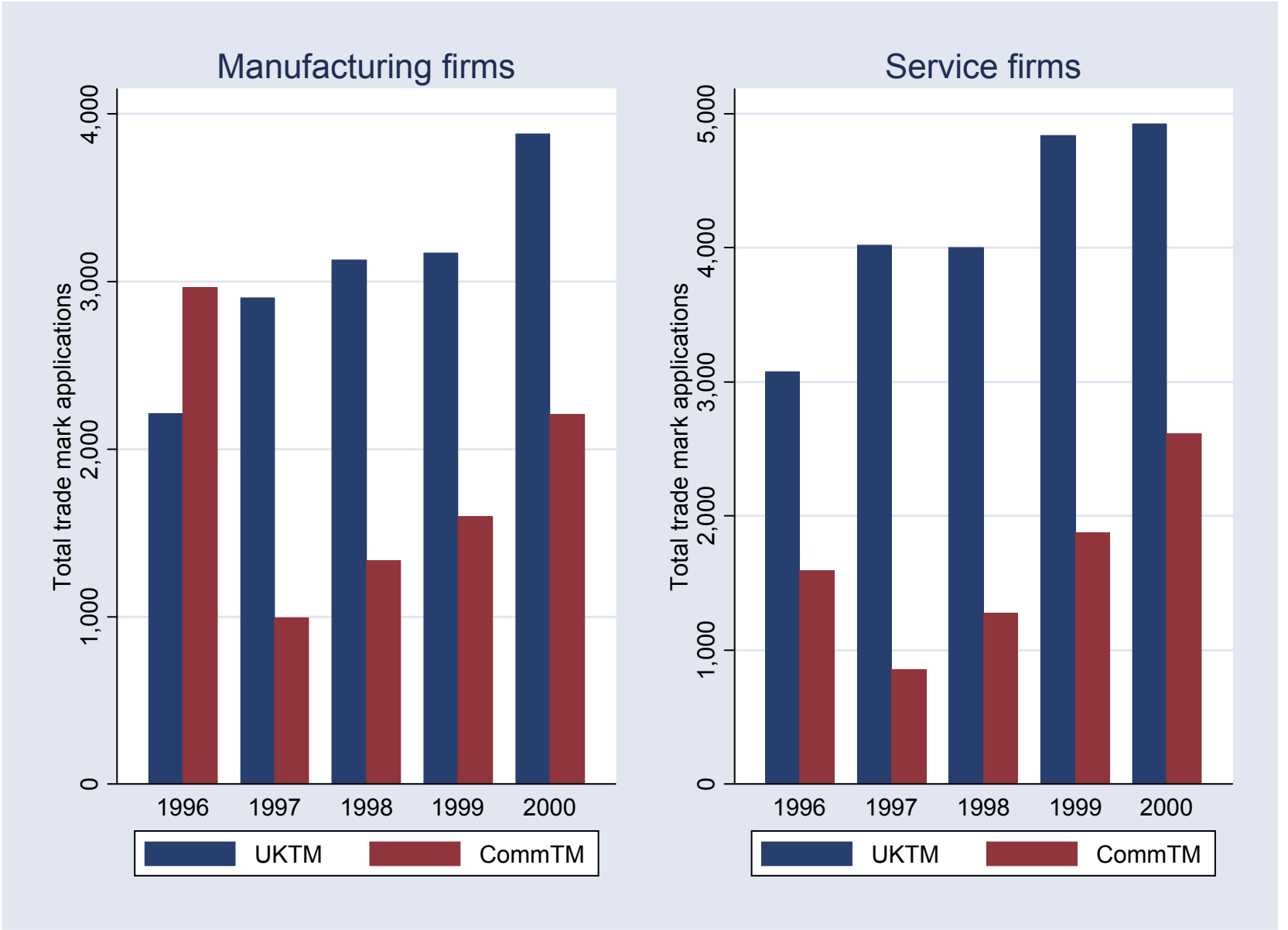
Our database - basic features

- Around 1200 major UK services firms
  Comparison group: around 800 firms,
  mostly in manufacturing (640)
- Panel obs. 1996-2000; in 2000 these firms made:
- 30% of national output (value added)
- £12.3bn of R&D (at home or abroad)
- 30% of EC trade mark applications (from the UK)
- 20% of UK trade mark applications
- 45% of EPO patents (from UK) and
- 18% of UK patents

IP activity across whole sample

IP asset	% firms active per year	IP per firm per year (mean)	Maximum value observed
UK trade marks	30	4.7	487
EC trade marks	18	2.2	624
UK patents	9	0.4	58
EPO patents	8	0.8	355

Total trade mark applications



Note: for firms in productivity regression sample

Does the stock market value this trade mark activity?

- Analyse the market value of firms quoted on London stock exchange (reduces sample)
- Tobin's *q* is the ratio of the market value of the firm to the book value of its tangible assets
- We expect Tobin's *q* to be higher for firms with valuable intangible assets, such as trade marks

Predicted difference in market value between trade mark active and inactive firms (from regression analysis including many controls)

	EC trade mark only	UK trade mark only	Both types of marks
All Firms	37%	25%	49%
Manufacturing	(7%)	(12%)	23%
Services	68%	32%	65%

Comparison of services with manufacturing

- For full sample, and for services sub-group, trade mark activity of any type contributes to higher stock market valuation
- For manufacturing, being active in both types of marks gives some extra market value, but the two other options are not significant
- For services, bigger effects are found than for the full sample or for manufacturing and Community marks are important with or without UK marks
- Considerable variation arises when separate service groups are analysed (results not shown)

Productivity and trade marking

- Stock market values may be over- or under-optimistic
- Total Factor Productivity is rise in value added not accounted for by inputs – driven by innovation
- Can trade marking be used to proxy innovation?
- Do we observe any correspondence between productivity differences and stock market valuation of intangible assets?
- Remember – stock market differential reflects the net present value of future stream of extra profit
- In contrast – productivity is just one year effect and some part of this may be creamed off by workers

Predicted difference in productivity between trade mark active and inactive firms (from regression analysis including many controls)

	EC trade mark only	UK trade mark only	Both types of marks
All Firms	9%	11%	32%
Manufacturing	11%	(0%)	16%
Services	(6%)	19%	47%

Interpretation

- Large productivity premiums associated with firms that trade mark, especially those that apply for both UK and Community marks
- Considerable degree of consistency with stock market valuation effects
- Trade mark variable picks up other unobserved factors, including investment in innovation, good management/strategy, high skills
- A range of other factors drive TFP productivity differences, but trade mark activity is a useful proxy for innovation

Is there a process of ‘Creative Destruction’?

- Our final exercise is to investigate the interaction between innovations in different firms
- Schumpeterian model is one of dynamic competition through innovation
- Individual gainers and losers within competitive innovation process that is beneficial for society
- What is the impact of other firms’ activities on any single firm in given industry?
- For short run effect we look at value added
- For long run effects we look at productivity growth and stock market value

Findings on interactive effects

- Effect of other firms innovations (trade marks) are *negative* on current value added, reflecting inability of firm to maintain customer loyalty in short run due to innovative activity by competitors
- Effects of other firms innovations are *positive* (or at worst zero*)* on the productivity growth and market value of each firm in the industry
- Implies competition through innovation raises sector's ability to compete in world markets for traded goods and services
- And satisfies a growing domestic customer base for expanding range of products

Conclusions (1)

Stock market value and trade marks:

- Higher stock market valuations for listed firms that are trade mark active compared to inactive
- Further returns to raising IP intensity of the firm in both manufacturing and services, but these effects diminish with time trend
- Bigger returns for Community trade marks than UK mark

Productivity and trade marks:

- Substantial productivity differences between trade mark active v. inactive firms
- Both UK and Community trade mark activity are important, but highest returns if use both
- Higher UK trade mark intensity raises prod. levels in manufacturing and raises prod. growth rates in services

Conclusions (2)

Main messages:

- Trade marks have value to firms and are not just a management fad
- Stock market evaluation of trade marks (reflecting expected current and future returns) is supported by evidence of current productivity differences
- For services, it is critical to do some trade marking, but doing more in one year doesn't have a much larger impact on share price or productivity
- For manufacturing, market value and productivity differences between firms active or inactive in a given year are mostly lower than for services

Conclusions (3)

- In the short run, greater IP activity by other firms in the industry reduces the value added of the firm
- This same competitive pressure has later benefits via productivity growth and this is reflected in higher stock market value
- This precisely describes the Schumpeterian process of competition through innovation
- Creates some redundant products and restrains profit margins through competing innovations, but increases product variety and quality through time