INTELLECTUAL PROPERTY OFFICE

Trade Mark Incentives

Executive Summary

Christine Greenhalgh*, Mark Rogers, Philipp Schautschick***, Vania Sena******

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Christine Greenhalgh*, Mark Rogers**, Philipp Schautschick***, Vania Sena****

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Report for the UK Intellectual Property Office

* St Peter's College, Oxford University and Oxford Intellectual Property Research Centre

** Harris Manchester College, Oxford University and Aston Business School, Aston University

*** International Max Planck Research School for Innovation & Competition and Department of Economics, University of Munich

**** Aston Business School, Aston University

Contacts:

Christine Greenhalgh, St Peter's College, Oxford OX1 2DL christine.greenhalgh@spc.ox.ac.uk

Mark Rogers, Harris Manchester College, Mansfield Road, Oxford OX1 3TD mark.rogers@hmc.ox.ac.uk

Executive summary

What is this report about?

The research was commissioned by the UK Intellectual Property Office (IPO) to investigate potential links between trade marking and performance. Specifically, researchers were asked to:

(1) document an overview of corporate trade marking activity in Britain;

(2) analyse the role of trade marks in the innovation process for firms and their impact on households;

(3) explore possible links between trade marking and branding.

Within this document we draw on three views of trade marks:

(a) their unique nature guarantees a product's origin to the customer, so it acts as an information signal;

(b) the registration of a trade mark occurs when a new product is brought to market, so it acts as a signal of innovation;

(c) the registration of the product name signals the start of a process of building a strong new brand for the firm.

Overview of the data

Our starting point is the Office for National Statistics (ONS) Annual Respondent Database (ARD2) for the years 2000-2006. The ARD combines information from ONS business surveys over time, covering all large firms but with a sampling design for smaller firms. To this we have added data on each firm's UK and European Community trade marks and patents drawn from official records.

Our analysis shows that large firms are much more likely to trade mark (12.9%) than smaller firms, with micro firms the least likely (0.4%). Just 1.7% of small and 5.2% of medium sized firms trade mark their products and services. Trade marks are used in every sector of the economy, with manufacturing, wholesale/retail services, and business services the three sectors that use them most.

We calculate the ratio of UK trade marks to all trade marks, including European Union (or 'Community') trade marks, as an indicator of each sector's internationalisation. The most internationalised sector – that with the lowest ratio - is communications (0.439), followed by computer software (0.477) and manufacturing (0.505). The average for all firms was just above half (0.567), reflecting substantial use of the Community trade mark (CTM).

We also classify firms into high - and medium - tech manufacturing groups, along with other and non-manufacturing groups, mainly services. The proportions trade marking are: high-tech firms 9.8%, medium tech firms 7.2%, other manufacturing 7.0% and non-manufacturing 2.2%. However, within this last category there are some highly active sectors in absolute terms and some very international sectors.

Is trade marking associated with higher productivity?

An initial analysis, based on the augmented ARD data, suggests that trade marking firms are 21% more productive than those that do not trade mark. This analysis controls for variables such as workforce size, capital assets, export status and foreign ownership, but not for the extent or nature of innovation, which trade marking may proxy, nor for a wider range of characteristics of the firm that may underlie both its trade mark activity and its productivity performance. For example, when we control for the recent level of advertising expenditure in the firm, the productivity differential for trade marking falls to 7%.

We find that a higher intensity of trade marking (more trade marks per employee) is also associated with better productivity. However more advanced statistical analysis reduces the magnitude of these associations. For example, when we control for a 'time invariant, firm specific effect' (which controls for persistent differences between firms) we find that the rate of increase in productivity, as trade mark intensity rises, falls to about 1/6th of its original value.

We also investigate the impact of trade marking on productivity using the Community Innovation Survey (CIS4) data. On this much smaller sample, we can include variables reflecting reported innovation, R&D spending, marketing, management ability and employee human capital. This acts as a further robustness test. As might be expected, the inclusion of direct measures of innovation from the CIS, together with information about the quality of the workforce, removes the statistical significance of the trade marking-performance result (although it is still positive). Further analysis suggests it is only younger and smaller firms that improve their productivity from raising their trade mark intensity.

Do trade mark active firms have higher employment?

We demonstrate that employment is significantly higher in firms that are trade mark active (even when controlling for the size of firms). The strength of the association is such that a firm that regularly trade marks has a workforce that is 20% larger than a similar firm which does not. This suggests that the activity of developing and offering new products and brands to the marketplace requires more employees.

Do trade mark active firms pay higher wages?

When we analyse average wages, we find that trade marking firms pay slightly more on average to their employees – a 0.7% premium. We are unable to determine whether this reflects higher hourly wage rates, longer working weeks or higher levels of skills.

However, the findings for employment and wages taken together suggest that firms that regularly trademark support more ‘good jobs’, with employees who are producing and marketing new products and developing new production techniques.

The benefits for households

In reporting the gains to firms we have suggested that regular trade marking often signals innovation. Much of this innovation is likely to be incremental, although some will involve the introduction of radically new products, adapting new process technology to deliver genuinely new goods and services. Such innovation leads to lower prices, higher quality and a greater variety of products in the marketplace.

Consumers will benefit from all three – lower prices increase their real purchasing power; higher product quality at similar prices to earlier inferior varieties gives the customer more value for money; and the increased variety of goods and services is more likely to satisfy customer needs. All these features of innovation can thus increase consumer satisfaction.

Is trade marking associated with higher growth?

The analysis calculates growth of employment and turnover over the period 2003-2006. We then use trade marking and advertising data from 2000 to 2003 to construct for each firm both a trade mark dummy variable (indicating some activity in this period) and its stock of trade marks and advertising in 2003 (the initial year of the growth period).

The analysis shows that firms that were trade marking from 2000 to 2003 saw their employment and turnover both growing at a rate of 6% per annum faster than other firms during 2003-2006. For both the growth of employment and turnover, the regression analysis controls for firm age, industry levels of trade mark and patent intensity, exporter status and foreign ownership. When we add the stocks of advertising and trade marking to this regression in place of the simple trade mark dummy, the differences in growth and turnover are also significant.

However, when we add a measure of interaction between the stock of each firm's trade marks and its advertising stock to both growth models the coefficient is negative, although not significantly so. What interpretation should we place on this finding? It is contrary to our expectations: we expected that joint trade marking and advertising activity might indicate brand building and, if so, these stocks would be complementary and further strengthen a firm's growth.

Having only four years of data for the calculation of stocks may be too short for such synergies to be uncovered. Furthermore, money spent on trade marks cannot be spent on advertising; hence there is an inherent substitution between these activities. However, there is some good news, as it suggests that trade marks are less likely to support anti-competitive brand building by incumbent firms.

Conclusion

In this report we have investigated the statistical relationship between trade mark activity and the performance of firms in productivity, employment, wages and growth rates. In all these dimensions, our analysis has shown positive correlations between being trade mark active and delivering better performance. In some dimensions, there were further positive correlations between increasing the trade mark intensity of the firm and performance.

We are cautious about assigning direct causality from trade marks to performance, as many of the results were obtained using a pooled dataset of observations both across firms and through time. As the regression data covered only six years, we found that more rigorous panel data methods reduced the strength of the positive relationships. This is likely to be due to less year to year variation in trade mark activity within firms than between firms. We do not know whether data covering a longer time span would restore the size and significance of the correlations.

Nevertheless the positive associations that we have uncovered indicate that trade mark active firms are different in important and valuable ways from other firms. This should reassure policymakers, who design innovation policy to encourage domestic producers to compete on product quality and variety, not just cost and price, and to use trade marks to signal their innovations.

Concept House
Cardiff Road
Newport
NP10 8QQ

Tel: 0300 300 2000
Minicom: 0300 0200 015
Fax: 01633 817 777

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