

Empirical Assessment of the Development of the Community Trade Mark System and its Relationship with National Trade Mark Systems

Report by INNO-tec

Georg von Graevenitz*, Silvia Appelt†

December 8, 2010

Abstract

This report provides an assessment of the functioning of the Community Trade Mark System. To do this the report draws mainly on register data provided by the Office of Harmonization for the Internal Market (OHIM) and on national register data. We also draw on the survey conducted for the broader study where appropriate.

This report addresses three main questions: i) How has demand for the CTM developed in the recent past?; ii) How is demand for CTMs affecting demand for national trade marks?; iii) What effects is applicants' behavior having on the way the CTM system functions?

We document throughout which data sources are used and which methods are applied to derive specific results.

*Georg von Graevenitz, Ludwig-Maximilians-Universität, LMU Munich School of Management, INNO-tec, Kaulbachstraße 45, D-80539, Munich, graevenitz@lmu.de

†Silvia Appelt, Ludwig-Maximilians-Universität, LMU Munich School of Management, INNO-tec, Kaulbachstraße 45, D-80539, Munich, silvia.appelt@lrz.uni-muenchen.de

1 Introduction

In this document we summarize findings on the development of the Community Trade Mark (CTM) and performance of the Office of Harmonization for the Internal Market (henceforth the Office) which administers this trade mark.

Over and above a description of how demand for CTMs has grown and how well the Office has been able to deal with demand the document delves into two additional questions:

- a) How is demand for CTMs affecting demand for national trade marks?
- b) What effects is applicants' behavior having on the way the CTM system functions?

This document is primarily intended to provide facts and to clarify how the facts presented were arrived at. The implications of the findings presented here are commented on only in as much as this is necessary for an understanding of the results presented.

The document reflects our analysis of the data. The main findings presented have been circulated in an interim report. We have received comments on this report from OHIM. These comments are noted in this text. We have adjusted the report where appropriate below.

Main Findings The analysis of the data received and analyzed by INNO-tec reveals the following findings:

1. Demand for the CTM is growing in line with demand for trade mark protection at national trade mark offices outside the European Community.
2. The proportion of trade mark applications at the Office coming from inside the European Community is increasing.
3. The Office have reduced the time it takes to register a trade mark substantially since 1996.
4. The Office have also reduced the time it takes for opposition cases to be settled or decided, but there remains a notable set of cases with longer durations.
5. Renewal rates for trade marks are decreasing since 2006 but this is not surprising. We anticipate that renewals will stabilize at a comparatively high level.

6. The 2005 fee reduction at the Office increased trade mark applications from within the Eurozone substantially. This effect will have counteracted the direct effect of lower fees on the Office's income from trade mark fees and would do so for any further fee reductions.
7. The number of oppositions based on CTMs is in some cases already greater than that based on national trade marks.
8. Demand for the CTM is affecting the composition and the level of trade mark applications at national trade mark offices within the European Community, in some cases substantially.
9. There is evidence that applicants insure themselves against failure to register by applying for multiple marks at the same time. Where all such marks are successfully registered it is likely that some trade marks remain unused. We can show evidence that these application strategies are being used increasingly.
10. The group of applicants for the CTM contains firms with increasingly larger portfolios of trade mark applications.
11. The probability that CTM applications will be registered has grown over time and has grown particularly for firms with more experience of trade mark application.
12. The probability that CTM applications will be opposed has fallen significantly in almost all Nice classes.

Two main implications follow from these results:

1. The Office has created an attractive supranational trade mark and has been successful in streamlining the administrative processes needed to allow this trade mark to function. Increases in demand for the Community Trade Mark after the recent fee reductions indicate that the Community Trade Mark system is likely to further expand in the future. Our results indicate that this is having an effect on the composition and sometimes the number of applicants at European national trade mark offices. This raises the question what role national offices are to play within the community trade mark system and how this role is to be financed if current trends persist.

2. The current size of the European trade mark pool, containing national rights and the CTM is very large and growing fast. This is making it difficult for applicants to compare new marks against existing marks to prevent undue similarity. In order to ensure registration of at least one trade mark applicants resort to multiple simultaneous applications. The more firms resort to multiple simultaneous applications the larger the problem of unused trade marks will become. Fee reductions also contribute to the growing externality of unused marks on the register. It is therefore important to understand which proportion of trade marks remains unused and how high the costs are this imposes on other users of the trade mark system.

Origin of the Data The majority of the results presented in this document are based on register data made available by the Office in January of 2010. From this data which encompasses all information available at the Office until the end of 2009 INNO-tec have compiled a number of data sets which are the basis for the findings presented below.

In order to analyze the effect of the CTM on registration of trade marks at national offices we also employ results based on data from the United Kingdom and Germany. Furthermore certain aggregate data from WIPO are employed. Obtaining high quality micro data about national trade mark registration is much more difficult than obtaining data from the Office. This is partly due to the older information technology structure in some offices and partly the consequence of legal restrictions.

In the case of the United Kingdom results were obtained from the a data set which has been created at the University of Oxford by Mark Rogers and Christine Greenhalgh. This data set contains firm level data on usage of intellectual property and allows a comparison of the use of UKIPO and the Office by UK firms.

In the case of Germany results are based on a data set made available by DPMA in 2007 and currently maintained by INNO-tec. This data set contains far less information than the data provided by OHIM which restricts the degree to which we are able to derive results from it considerably. We have merged this data set with data from the Office in order to further analyze substitution patterns between the Office and DPMA.

Finally we employ macro level data provided by WIPO about trade mark applications and registrations at various European trade mark offices. This data does not always overlap precisely with the data we have been able to obtain from national offices so far.

Quality of the Data and Scope of the Study An important result of this study is information about the kind of data that are available on trade marks and their effects in Europe. The quality of the data used in this study is highly variable. We therefore emphasize that a more reliable analysis of the functioning of the European trade mark system would require much more detailed data than are available presently.

The present report is quite comprehensive in its analysis of trade mark applications and registrations at the Office. The quality of the data received from the Office is very high. The Office have been most cooperative in providing access to these data. We have focused our analysis mainly on applications and registrations but also include opposition.

The quality of the data available from national offices is much more variable. While these offices are willing to provide data these generally contain less information than the data provided by the Office. For instance the data provided by DPMA contain virtually no procedural information. A comprehensive database containing data on trade mark applications at all trade mark offices in Europe is essential if there is to be serious evidence based governance of the European trade mark systems. Such a database could be modeled on the PATSTAT database provided by the European Patent Office.

The present report contains no analysis of trade mark litigation within the CTM system. This is due to the fact that data on this part of the system are not systematically collected to date. Most courts dealing with intellectual property do not keep electronic records of court proceedings and outcomes of cases. This is a major lacuna as arguably the value of intellectual property in general and trade marks in particular depends significantly on the probability that the rights may be enforced in court.

As this report hopefully demonstrates the collection and analysis of data on the functioning of the CTM system can provide important insights into the successes of the system and into its problem areas. The picture we are able to provide is highly incomplete. Better data are essential if we are to provide a more comprehensive analysis of the way in which the CTM system benefits consumers and firms throughout the European Community.

Structure of the Document The document is structured by the three questions we provide results on. In the following section we focus on demand for the CTM and performance of the Office in registering applications and dealing with oppositions. We also analyze the fee reductions in 2005 and 2009. Then in Section 3 we analyze competition between the Office

and national offices. Finally, in Section 4 we provide a descriptive analysis of applicants' strategies in applying for trade marks and analyze determinants of successful registrations.

2 Performance of the Office

This section provides descriptive analysis of applications, registrations, renewals and oppositions of trade marks at the Office. There is also an econometric analysis of the fee reductions for trade mark application and registration in 2005 and in 2009.

The following findings are presented:

1. Demand for the CTM is growing in line with demand for trade mark protection at national trade mark offices outside the European Community.
2. The proportion of trade mark applications at the Office coming from inside the European Community is increasing.
3. The Office have reduced the time it takes to register a trade mark substantially since 1996.
4. The Office have also reduced the time it takes for opposition cases to be settled or decided, but there remains a notable set of cases with longer durations.
5. Renewal rates for trade marks are decreasing since 2006 but this is not surprising. We anticipate that renewals will stabilize at a comparatively high level.
6. The 2005 fee reduction at the Office increased trade mark applications from within the Eurozone substantially. This effect will counteract the effect of lower fees on the Office's income from trade mark fees.

2.1 Demand for the Community Trade Mark

The demand for trade mark protection has increased dramatically worldwide since 1984. As we show below this trend is unbroken at two national offices in Europe which are not part of the CTM system, namely in Switzerland and in Norway. When we analyze demand for the CTM we observe that on aggregate demand for the CTM has moved in parallel to demand at these two national offices.

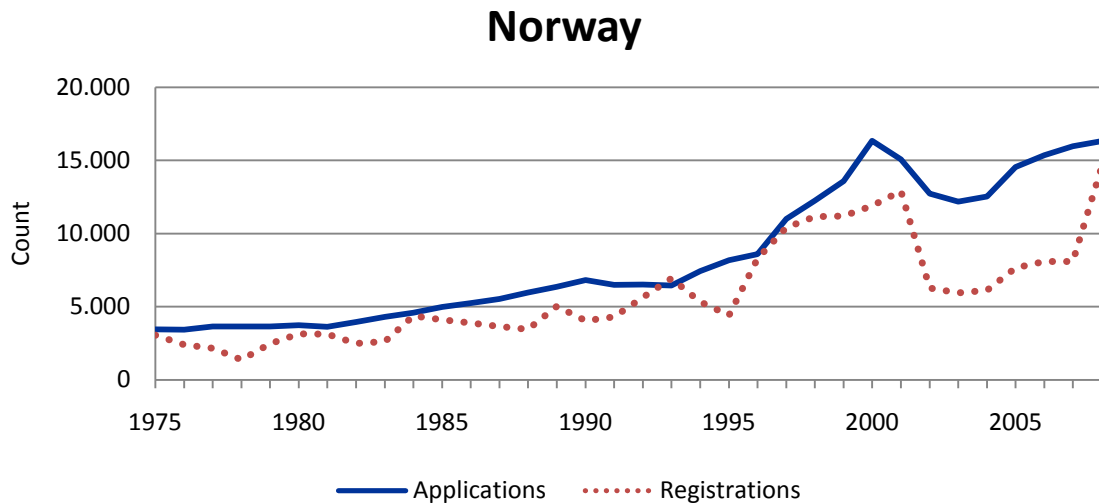


Figure 1: European Benchmark for Demand for Trade Mark Protection

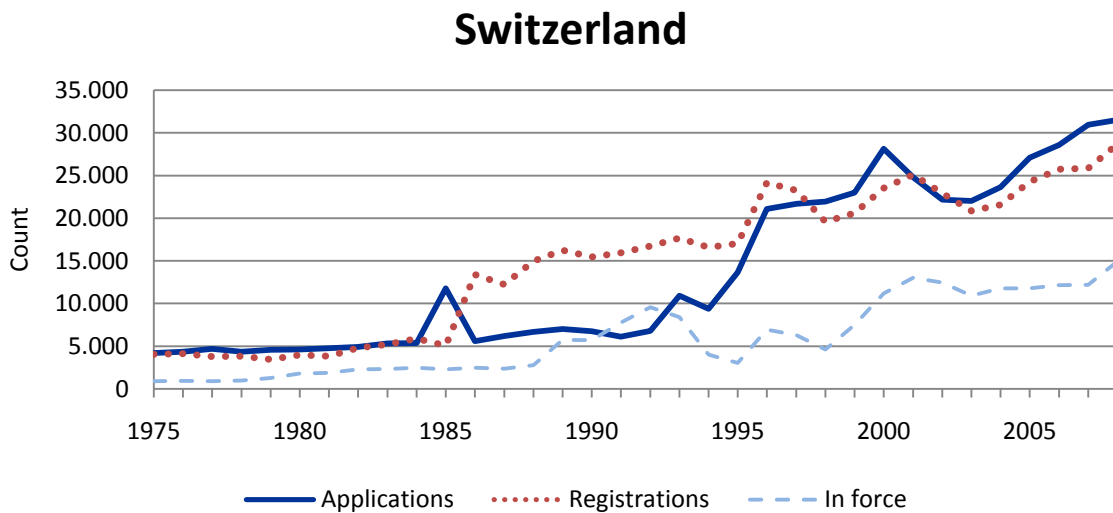


Figure 2: European Benchmark for Demand for Trade Mark Protection

The Office reduced their fees for trade mark application and registration in 2005 and 2009. We analyze these fee reductions and show how they affected demand for the CTM in this section using econometric techniques.

Benchmarks Figures 1 and 2 above present data provided by WIPO on their website. We have not been able to determine the accuracy of this data. In particular the data on the number of trade marks in force must be regarded with some caution as they do not coincide with information we have from some of the national trade mark offices.

These figures show that demand for trade marks in Norway and Switzerland has grown

substantially since the mid 1980's. Demand for trade marks was particularly strong during the dot-com bubble. The general trend of increased demand remains unbroken in spite of the reduced demand after the dot-com bubble burst in 2001.

Applications and Registrations at the Office Figure 3 shows that demand for the CTM has grown in a similar fashion to demand for trade marks in the two benchmark countries presented above. The figure also shows spikes in demand for the CTM at the inception of the system in 1996 and in the last quarter of 2003 before the enlargement of the European Community.

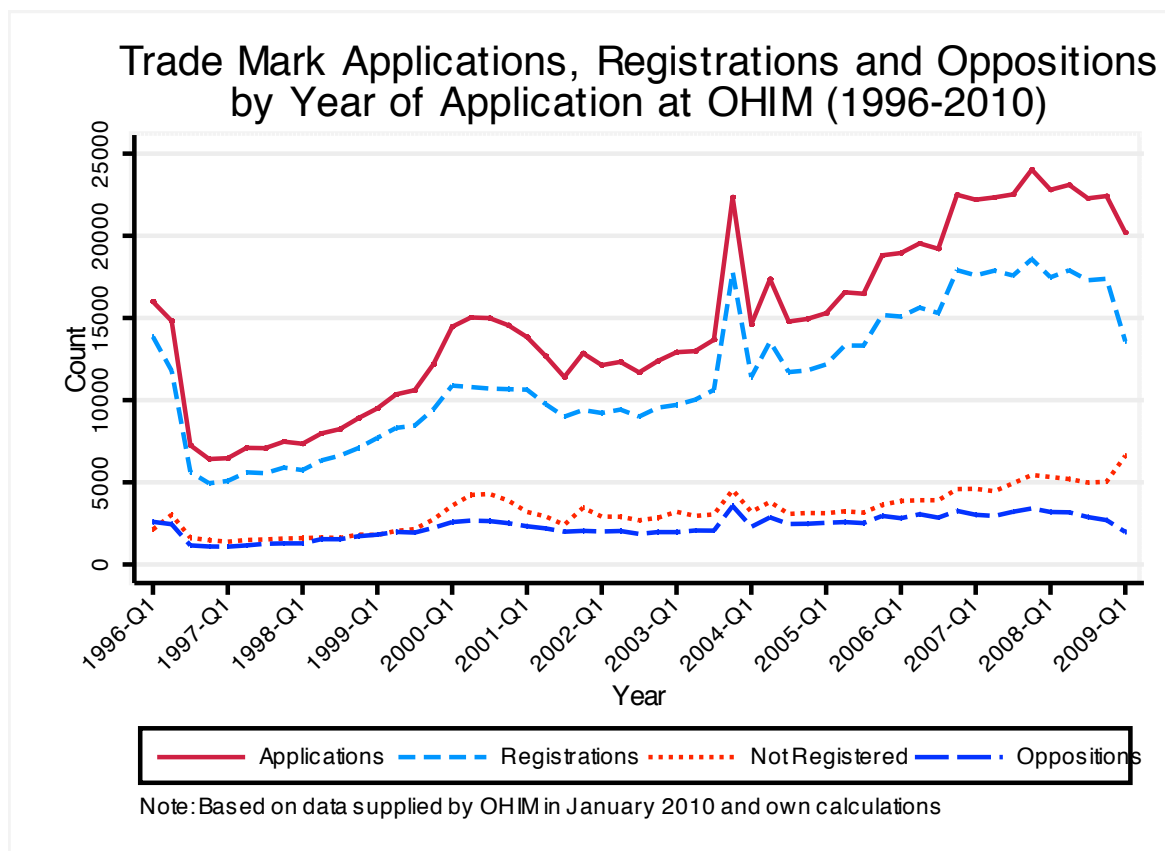


Figure 3: Demand for the Community Trade Mark

Technical note: This figure provides information on applications, registrations and oppositions at OHIM at a quarterly frequency. Applications are plotted by quarter in which applications were received by the Office. Registrations and oppositions are plotted relative to the quarter in which the underlying applications were received by the Office. The category Not Registered refers to all marks that were not registered out of the cohort that applied.

Figure 3 shows that quarterly trade mark applications at the Office have increased by a factor of three in almost fifteen years.

In spite of this very large increase in demand for the CTM the Office has been able to

reduce the length of time it takes to register a CTM considerably as Figure 4 shows.

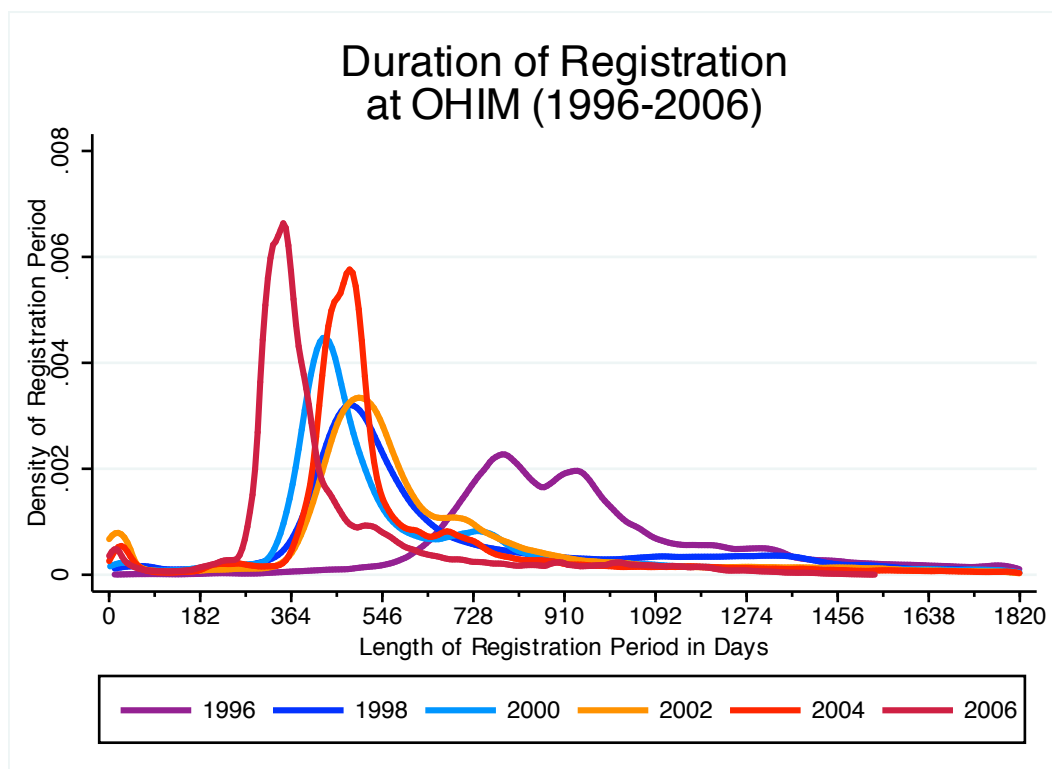


Figure 4: Improvements in Handling Applications

Technical note: This figure provides information on the distribution of the number of days that elapsed between the application for a CTM and a decision on its registration at the Office. We do not present data for cohorts after 2006 as more than 5% of applications for those cohorts are still being processed by the Office.

Renewals Since 2006 it has been possible for firms to renew Community Trade Marks. In this section we provide some insight into the proportion of trade marks that are extended. Tables 1 and 2 below show the proportion of the cohorts 1996-1998 that have been renewed. Table 1 provides data for the entire cohort while Table 2 focuses only on the proportion of marks that were not associated with a seniority claim.

Table 1: **Renewals at the Office by Application Year**

Year	Not renewed		Renewed		Total Registered
	N	%	N	%	N
1996	10,176	28	26,037	72	36,213
1997	8,342	38	13,796	62	22,138
1998	10,511	41	15,277	59	25,788
1999	7,153	45	8,860	55	16,013
Total	36,182	36	63,970	64	100,152

Here N stands for the number of observations and % is the percentage of the total represented by that number.

In Table 2 we focus on trade marks that were not associated with a seniority claim as this group will include a higher proportion of new trade marks that may have a higher likelihood of not being extended. A comparison of the tables demonstrates this is true, but the difference is not very significant.

Table 2: Renewals by Application Year Excluding Seniorities

Year	Not renewed		Renewed		Total Registered
	N	%	N	%	N
1996	7,799	34	15,112	66	22,911
1997	7,450	41	10,871	59	18,321
1998	9,661	43	12,601	57	22,262
1999	6,635	47	7,426	53	14,061
Total	31,545	41	46,010	59	77,555

Here **N** stands for the number of observations and % is the percentage of the total represented by that number.

Both tables demonstrate that the proportion of marks that is not renewed has increased substantially since 2006. The rate of renewal of trade marks at USPTO and at the DPMA has been between 20% – 29% and 30% – 36% historically. We expect that renewal rates at the Office have been much higher than this mainly because applicants initially sought protection for very valuable marks which they are more likely to seek to extend than the marks that were applied for later.

Effects of the 2005 and 2009 Fee Reductions

In this section we study the effects of the fee reductions which took effect on the of October 2005 and on the first of May 2009. Using the data supplied by the Office we have created a panel data set containing the monthly number of trade mark applications by country. This data set runs from April 1996 until December 2009. It covers 188 different applicant nations.

To study the effects of the fee reduction at the Office we create three variables: first, we create a variable (D_EUROZONE) indicating whether a country was a member of the Eurozone in a given month; second, we create variables (D_OCT05 and D_MAY09) indicating whether the fees at the Office had been reduced (e.g. D_OCT05 = 1 after September 2005) or not in a given month. We have then interacted (D_OCT05_XX where XX abbreviates the country) the fee reduction indicator for a given year with indicator variables for each country that is a member of the Eurozone.

In a fixed effects panel regression we then regress the number of monthly trade mark ap-

plications by country on these indicator variables as well as month and year fixed effects. If the reduction in the fees at the Office had a positive effect on the level of trade mark applications at the Office we would expect the coefficients of the interaction terms between the country indicator variables and the fee reform indicator (e.g. D_OCT05_XX) to be positive and significant. The level of the coefficient would tell us by how much monthly applications have increased at the Office.

The fixed effects panel regression is a statistical method that allows to control for unobservable characteristics of the applying countries that are fixed in time. In a simpler regression approach, such as Ordinary Least Squares (OLS), such unobserved characteristics might bias the coefficients of the regression.

The regression equation we estimate is the following:

$$\begin{aligned}
 APPLICATIONS_{Country,Month} = & \\
 & \beta_{INT} + \beta_{OCT05}D_OCT05 + \beta_{MAY09}D_MAY09 + \beta_{EUROZONE}D_EUROZONE \\
 & + \sum_{XX} \beta_{OCT05_XX}D_OCT05_XX + \sum_{XX} \beta_{MAY09_XX}D_OCT05_XX \\
 & + \beta_{MONTH}D_MONTH + \beta_{YEAR}D_YEAR + \theta_{COUNTRY} + \epsilon \quad (1)
 \end{aligned}$$

The fixed effects estimator has the effect of eliminating the country fixed effects ($\theta_{COUNTRY}$) from the regression equation. An example for a factor contributing to the country fixed effects could be the level of fees at the national offices if these do not vary over the period we consider here.

In Table 3 we provide the results of three fixed effects regressions. Regression ONE only controls for month and year fixed effects. In this regression we are simply controlling for variation in demand for trade marks due to seasonal (month fixed effects) and one off annual events (year fixed effects) as well as the fixed national characteristics and institutions that affect demand for trade marks.

Regression TWO adds the effect of the fee reduction across all countries and the effect of membership in the Eurozone. Table 3 shows that membership in the Eurozone has a strong positive effect on the number of monthly trade mark applications. Additionally, the fee reduction parameter for the fee reduction in October of 2005 is significant. This shows that on average the fee reduction in 2005 had a statistically significant and positive effect on demand

Table 3: Effect of the 2005 and 2009 Fee Reductions at the Office

	ONE	TWO	THREE
D_OCT05		12.474** (4.071)	1.840 (3.377)
D_MAY09		20.493 (21.323)	25.381 (25.750)
D_EUROZONE		84.158* (32.367)	66.329** (25.006)
D_OCT05_DE			391.545*** (8.148)
D_OCT05_ES			241.459*** (8.148)
D_OCT05_IT			122.352*** (8.148)
D_OCT05_FR			171.037*** (8.148)
D_OCT05_NL			-10.202 (8.148)
D_OCT05_SK			-9.568* (4.281)
D_OCT05_SV			-45.695** (16.411)
D_OCT05_MA			-32.532** (10.297)
D_OCT05_CY			-27.851** (10.426)
D_OCT05_IE			-10.632 (7.715)
D_OCT05_GR			42.617*** (8.148)
D_OCT05_AU			67.522*** (8.148)
D_OCT05_BE			3.778 (8.148)
D_OCT05_PT			26.090** (8.006)
D_OCT05_FI			-15.145 (8.148)
Interactions for 2009	NO	NO	YES
Month fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Constant	31.358** (9.808)	36.728*** (6.773)	37.180*** (6.523)
R-squared	0.037	0.055	0.060
N	12308	12308	12308

Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

for trade marks every month. The fee reduction in 2009 does not have a statistically significant effect but this is most likely due to the limited number of observations after the fee reduction that are contained in the dataset.

In regression THREE we add country specific effects of the fee reduction for all countries in the Eurozone. We report only the interaction effects for the fee reduction in 2005 as those for 2009 are statistically not significant. The coefficient for *D.OCT05* provides us with the effect of the fee reduction on all countries outside of the Eurozone. Since the estimated coefficient is not significantly different from zero we can see that on average the fee reduction did not affect the level of trade mark applications at the Office from these countries.

In contrast the effects for the countries in the Eurozone are sometimes very significant. Thus we can see that applicants in Germany, Spain, Italy, France and the Netherlands significantly increased their trade mark applications at the Office in response to the fee reduction in 2005.

The effects for all large European applicant countries are significant and large. These increases in demand will have significantly affected both the income of the Office and its costs as they are very large. Without more detailed information on the operating costs of the Office it is difficult to determine how the changes are likely to impact on the Office's surplus.

2.2 Opposition

The level of trade mark opposition at the Office is high by comparison to national offices such as DPMA or USPTO. This may be partly due to differences in the process of trade mark opposition and partly due to the fact that the Office covers a multilingual jurisdiction in which there is greater scope for conflict of interest between applicants.

To understand how opposition has developed and how the office have dealt with it we analyze the overall incidence of opposition cases and their outcomes in Table 4. The table shows that on average 16% of each cohort of trade mark applications at the Office face at least one case of opposition. Of these opposed trade marks just under two-thirds will survive opposition and just over one third will not. The table suggests that these proportions change after 2004 but this is due to the lag in dealing with trade mark opposition cases. Pending opposition cases are subsumed in the not registered column of Table 4 below.

The absolute number of opposition cases lodged with the Office increased substantially in

2005. Three factors explain this increase: *i*) the extension of coverage of the CTM system in 2004 which led to a larger basis of national trade marks that could act as the basis of an opposition, *ii*) the spike in trade mark applications that occurred at the end of 2003 in anticipation of enlargement and *iii*) the significant reduction in the duration of trade mark registration between 2004 and 2006 as indicated in Figure 4. Table 4 shows that proportionately the number of oppositions between 2002 and 2005 is stable at 16% so that the absolute increase in oppositions in 2005 is probably a reflection of the number of applications in 2003 and 2004.

Table 4: Proportion of Oppositions and Outcomes by Year of Application

Year	Not opposed		Opposed		Total N	Registered	
	N	%	N	%		% No	% Yes
1996	36,780	83	7,297	17	44,077	27	73
1997	23,233	83	4,791	17	28,024	33	67
1998	26,330	81	6,081	19	32,411	34	66
1999	34,634	81	7,967	19	42,601	35	65
2000	48,584	82	10,406	18	58,990	41	59
2001	42,051	83	8,562	17	50,613	37	63
2002	40,205	84	7,871	16	48,076	34	66
2003	51,440	84	9,657	16	61,097	34	66
2004	51,183	84	10,101	16	61,284	37	63
2005	56,227	84	10,590	16	66,817	42	58
2006	67,810	85	11,983	15	79,793	50	50
2007	77,916	86	12,599	14	90,515	64	36
2008	78,038	87	11,952	13	89,990	75	25
2009	93,127	95	4,574	5	97,701	92	8
Total	727,558	85	124,431	15	851,989	46	54

Here N stands for the number of observations and % is the percentage of the total represented by that number.

The duration of opposition proceedings is presented in Figure 5 below. This figure shows that the Office has succeeded in reducing the duration of opposition proceedings significantly between the 1998 and the 2004 cohorts. Nonetheless a significant proportion of opposition cases last more than two years. The most recent cohorts (2002, 2004) display a noticeable proportion of oppositions lasting between two and three years. It is not clear whether these durations arise because of higher incidence of protracted negotiations between the parties or whether there has been an effect arising from the notable increase in opposition cases in 2005.

Earlier Rights Enforced in Opposition Cases Now we pursue the question which national marks are most frequently cited in trade mark opposition cases at the Office. First we show

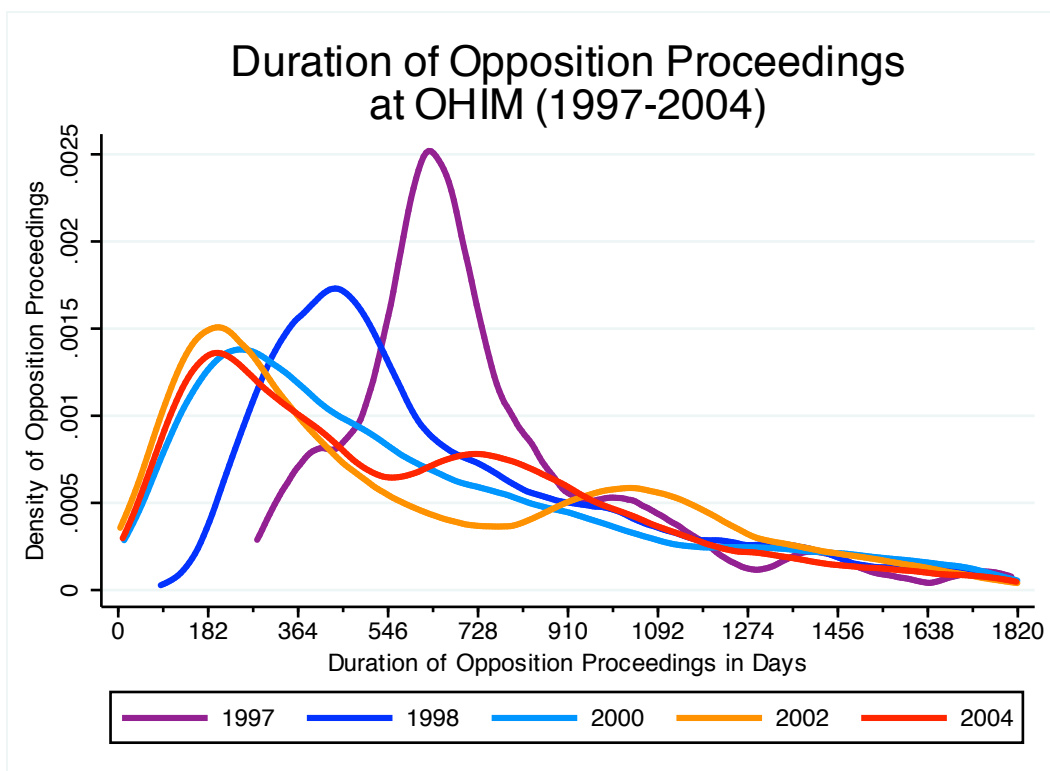


Figure 5: Improvements in Handling Applications

Technical note: This figure provides information on the distribution of the number of days that elapsed between the lodging of opposition to the registration of a CTM and a resolution of opposition at the Office. We do not present data for cohorts after 2004 as more than 10% of oppositions for those cohorts are still open.

that slightly more than half of all opposition cases to date have been based on just one earlier right: in 65,130 of 124,939 instances of trade mark opposition (52%) a single earlier right was invoked. Therefore we analyze both the entire set of earlier rights that are cited in opposition cases at the Office (Figure 6) and those earlier rights that are the sole basis for opposition cases there (Figure 7). In each case we distinguish between the larger and the smaller national offices in order not to clutter the figures too much. We include the two largest offices in both the left and the right hand figures to provide a point of comparison.

Figure 6 shows that trade marks registered at two national offices are most frequently cited in all opposition cases: these are DPMA and the Spanish trade mark office. Overall the levels of reference to all offices follow the same path over time which reflects macroeconomic shocks and changes in the coverage of the CTM system. The differences in the degree of reference to most large and medium sized national offices within the CTM system are slight. This presumably reflects the practice of large applicants to seek trade mark protection in multiple national jurisdictions.

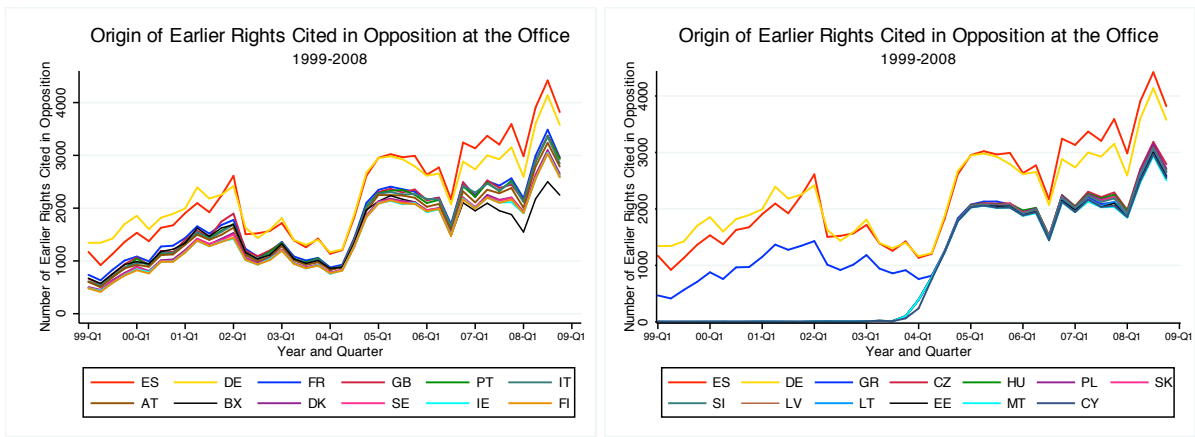


Figure 6: Basis of Opposition Procedures in Earlier Rights - Multiple Earlier Rights

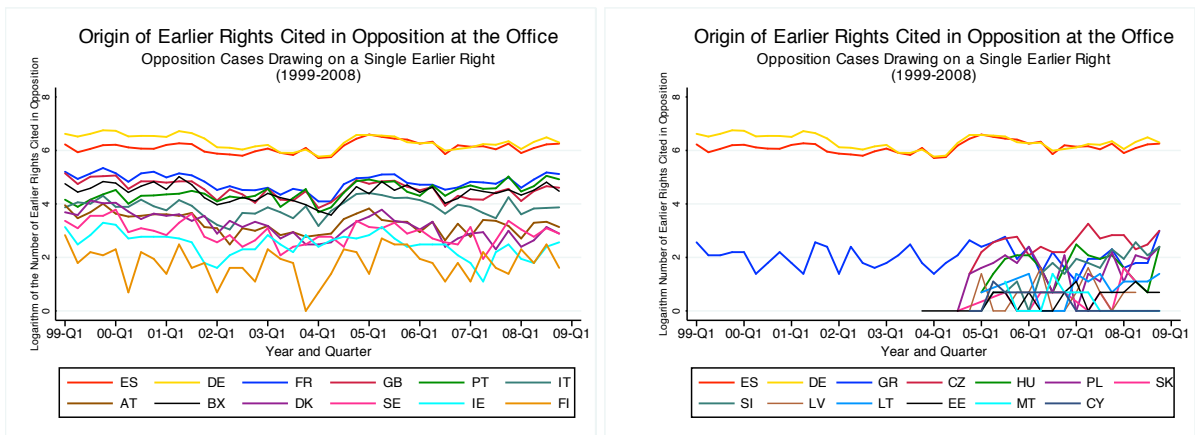


Figure 7: Basis of Opposition Procedures in Earlier Rights - Single Earlier Rights

In Figure 7 below we focus on cases of opposition in which just a single earlier right is invoked. Here we can see that DPMA and the Spanish trade mark office are once more most frequently cited. However, it is also apparent that there is a greater heterogeneity amongst the other national offices. Thus trade marks from France, Great Britain, Portugal, Italy and the Benelux office are also frequently cited in opposition cases based on single earlier rights. Of the new accession countries it is trade marks from the Czech trade mark office that appear most frequently in such opposition cases. Note that in this figure we make use of a logarithmic scale in order to make the figure clearer. This distorts the relatively large gap between the two most frequently cited offices and the remainder, making it seem smaller than it really is.

2.3 Countries and Industries using the Office

In this section we provide some evidence on the relationship between the national offices within the CTM system and the Office itself. First we show where applicants at the Office

come from. Then we investigate how opposition at the Office depends on earlier rights applied for at national offices. Finally, we focus on the different NICE classes within the CTM system to show which NICE classes attract the most applications.

Countries Figure 8 below provides information on the number of applications received by the Office from the largest applicant countries. The figure demonstrates that the United States has long been the origin of most trade mark applications at the Office. Only between 2005 and 2008 did Germany overtake the United States as the origin of most applications at the Office.

Overall the figure shows that applications from all large European countries are increasing since 1996. The figure also shows that applications from Poland have increased markedly since accession of that country.

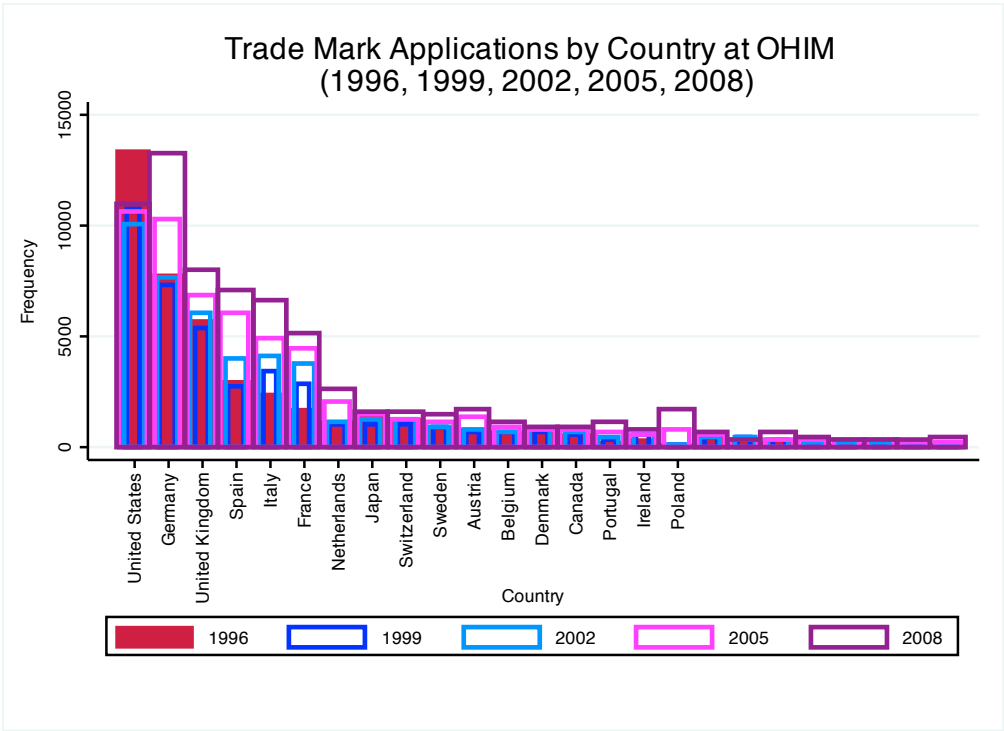


Figure 8: Distribution of Demand for Community Trade Marks by Country

Technical note: This graph superimposes four histograms, each from a separate year. Each bar represents a single country. The height of the bar represents the proportion of applications received from that country in a year.

As we show in Section 3 below the increased use of the Office by European applicants is having effects on the number and composition of trade mark applications at national offices within the CTM system.

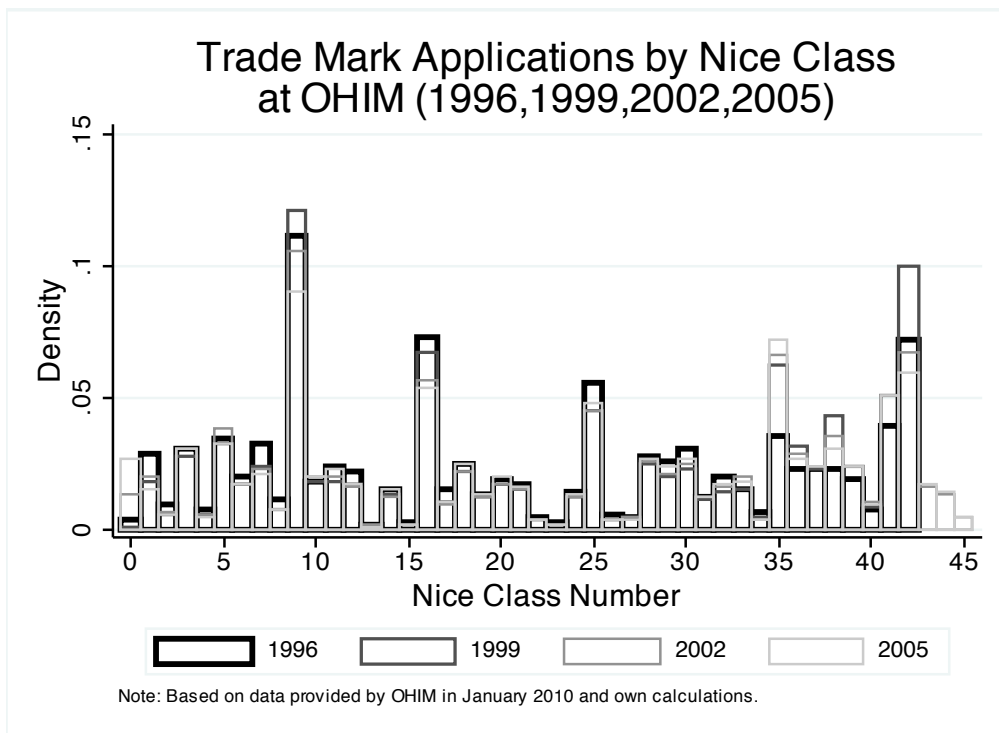


Figure 9: Distribution of Demand for Community Trade Marks by Nice Class

Technical note: This graph superimposes four histograms, each from a separate year. Each bar represents a Nice class. The height of the bar represents the proportion of applications requesting protection in that Nice class.

Industries Figure 9 provides information on the demand for CTMS broken down by Nice class and year. The figure shows that classes 9, 16, 25, 35 and 42 attracted most applications. Also, the proportion of applications attracted by class 35 (Advertising; business management; business administration; office functions) has been growing very significantly. All other large classes are becoming proportionately less important.

3 Competition between OHIM and National Offices

In this section we analyze how the existence of the community trade mark is affecting national trade mark systems within the CTM system. We focus on two outcomes: the number of oppositions at national offices that are based on the community trade mark and the number of applications for national trade marks.

One might expect that the number of trade mark applications at national offices has fallen in response to the availability of a community trade mark. We show below that the real effect is somewhat more complex; however it is without doubt that the national offices are being affected by the community trade mark.

Due to problems of data availability and the high cost of constructing databases of trade mark applications at the level of individual trade marks we are currently restricted to an in depth analysis of data from the United Kingdom and Germany. While analysis of data from further European jurisdictions would clearly be germane, this goes beyond what may be achieved in the current project.

We also make use of aggregated data which present trends on trade mark applications at all national offices. This data is obtained from WIPO and may be somewhat inaccurate.

In case of opposition we provide some evidence that the existence of CTMs is making it more difficult for applicants to obtain national trade marks, however this evidence is based on much less information than would be desirable for a firm conclusion.

In this section we provide the following findings:

7. The number of oppositions based on CTMs is in some cases already greater than that based on national trade marks.
8. Demand for the CTM is affecting the composition and the level of trade mark applications at national trade mark offices within the European Community, in some cases substantially.

3.1 Oppositions based on Community Trade Mark Applications

We begin by discussing trade mark opposition at the national offices. Since there is much less information than would be desirable we discuss what little there is here.

Table 5: **Proportion of Opposition Cases Based on CTMs**

Country	%	Remark
France	36	
Portugal	30	
Benelux	48	Increased from 43% to 54% (2005-2009)
Finland	28	Increased from 21% to 42% (2005-2009)
Denmark	56	Stable 2007 and 2008

The survey of the national offices conducted by the Max Planck Institute are the only source of information we currently have on trade mark opposition at the national offices. These surveys reveal that several national offices (DPMA, UKIPO, Spain, Sweden, Hungary, Czech Republic) were unable to provide any information about this question. Others had to provide

data based on estimates as there are no digital records of opposition cases (e.g. Lithuania, Czech Republic). In the case of DPMA the office has information digitally, but is normally not required to publish such data, therefore they were unable to provide the information.

Overall this reveals that there is a serious lack of information in this area. This is important because some have argued that the payments made by the Office to the national offices could reflect the work load imposed by the existence of the community trade mark. At present it seems we are unable to properly quantify the work load! The evidence we do have suggests that the community trade mark is a significant source of opposition cases at national offices.

3.2 Results on Applications from Micro Data

We are able to draw on two data sets which contain information on trade mark applications and registrations and applicants. These data sets cover the United Kingdom and Germany.

The United Kingdom Here we present results based on a data set assembled by Mark Rogers and Christine Greenhalgh at Oxford University.¹

Figures 10 and 11 provide a break down of trade mark applications by large, small and medium sized and very small firms. At present we only have data for the period 2001-2005. We anticipate to receive additional information for the years 2006 and 2007 in the near future.

Figures 10 and 11 show that all three types of firms are increasingly turning to the Office to apply for trade marks. In contrast, only the number of very small applicants is also increasing at UKIPO. The number of large and small and medium sized firms that register trade marks at UKIPO is constant or receding. Similarly the number of CTM applications from the United Kingdom is increasing in all three firm segments but the number of applications at UKIPO is only increasing in the Micro segment.

This means that UKIPO is increasingly dealing with smaller applicants.

Germany In case of Germany we have information in a separate data set on trade mark applicants at DPMA. This data set ends in 2006. We have used the data set to determine how the distribution of the size of trade mark portfolios has changed between 1996 and 2005 at DPMA.

¹ We are very grateful for their support!

UK Trade Mark Applicants at UKIPO and OHIM by Type of Firm (2001-2005)

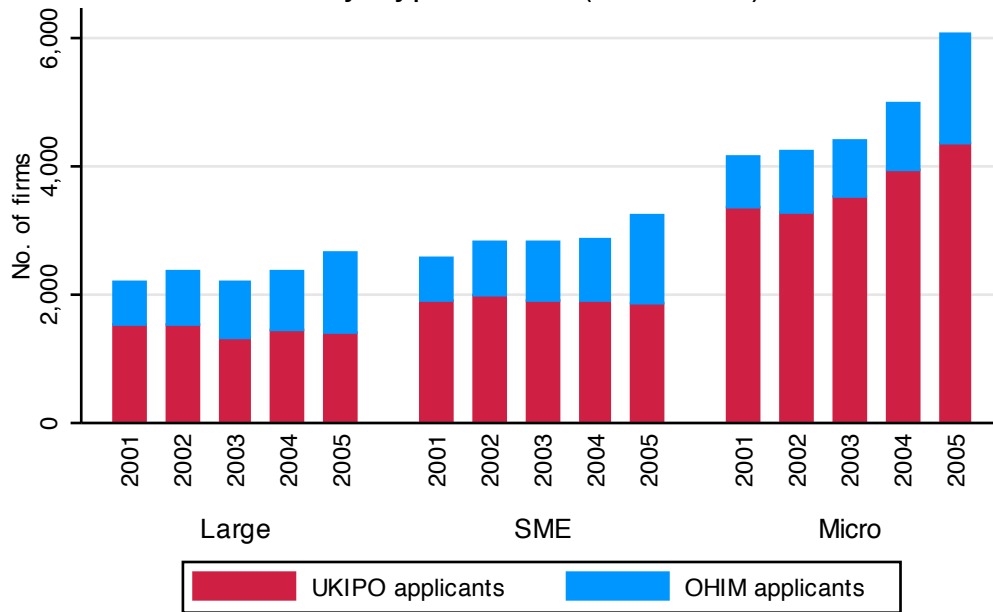


Figure 10: Competition Between the Office and UKIPO

Technical note: Data and analysis provided by Mark Rogers.

UK Trade Mark Applications at UKIPO and OHIM by Type of Firm (2001-2005)

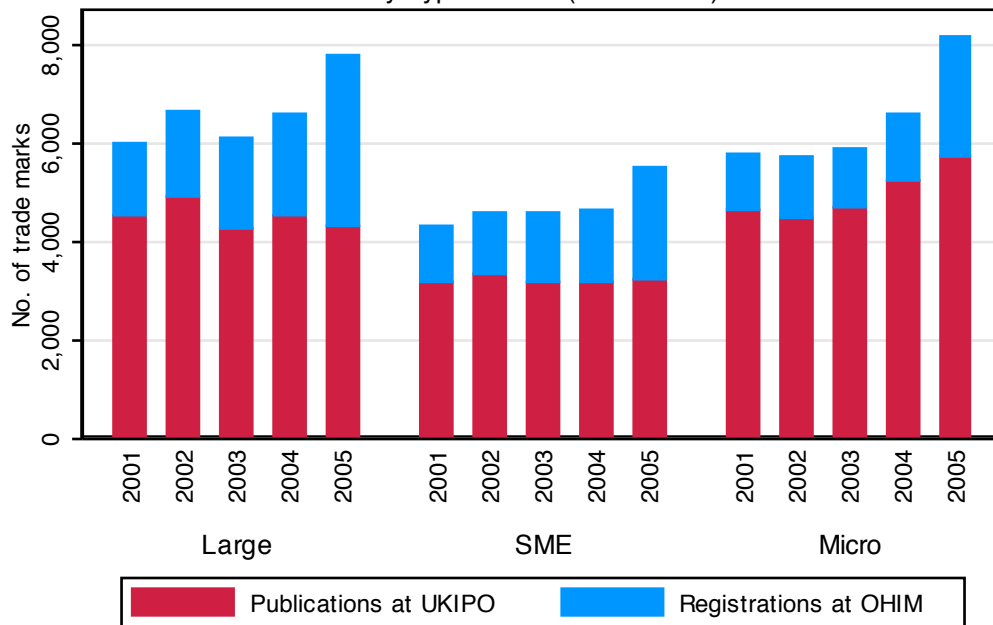


Figure 11: Competition Between the Office and UKIPO

Technical note: Data and analysis provided by Mark Rogers.

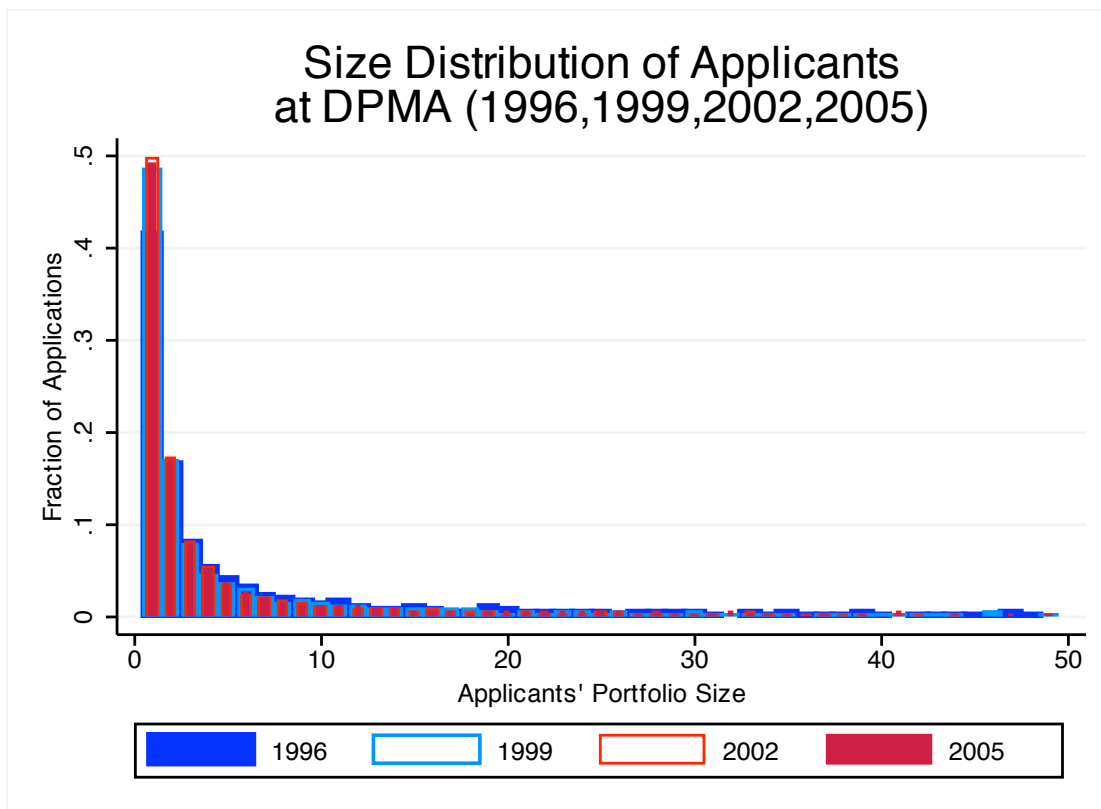


Figure 12: Competition Between the Office and DPMA

Technical note: This graph superimposes four histograms, each from a separate year. Each bar represents applicants with a portfolio of applications of a given size. The height of the bar represents the proportion of applicants with that number of trade mark applications in that year.

As Figure 12 shows the proportion of applicants at DPMA who applied for only one trade mark in each year increased from just over 40% to just under 50% between 1996 and 2005. In the previous decade (not shown here) the trend was exactly reversed.

This indicates that larger applicants are not applying to DPMA at all or they are reducing the number of trade mark applications they make at DPMA.

Figure 13 below provides a direct comparison of the size of the largest trade mark portfolios applied for in a given year by German applicants at DPMA and at the Office.

This figure demonstrates that after 2000 the size of the largest portfolios applied for at DPMA has fallen steadily, whereas the opposite is true for the portfolios of German applicants at the Office.

These results are somewhat weaker than those provided for the United Kingdom above as we do not have direct information on firm sizes and must infer the firm size from the number of firms' trade mark applications in a given year. Nonetheless the results reported here are commensurate with the phenomenon already identified for the United Kingdom: larger appli-

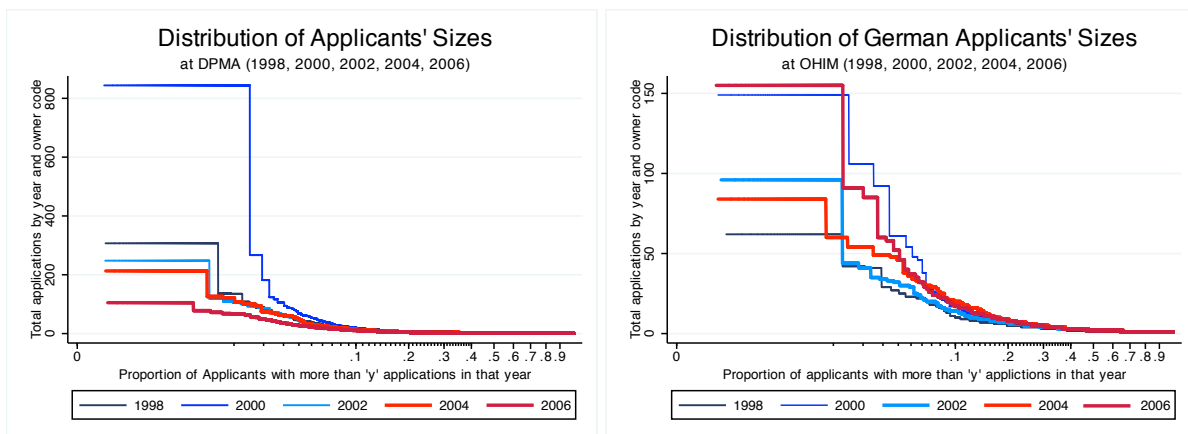


Figure 13: Large German Applicants at DPMA and at the Office

Technical note: This graph superimposes four quantile plots of the number of applications each applicant made for four different years. The graph shows which proportion of applicants trade mark portfolios falls into each size category. In order to make the plot clear for the upper tail of the distribution the scale on the x-axis has been transformed. Applicants are identified using the owner-code supplied by OHIM. No effort has been made to aggregate the owner-code using additional information on conglomerates. Therefore the graph will tend to understate the degree of concentration.

cants increasingly apply for CTMs and apply for fewer national trade marks. The proportion of small applicants at the national offices increases.

Case Study of Competition Between DPMA and the Office

In this section we provide the results of a firm level analysis of applications for trade marks at DPMA and at the Office. This analysis is interesting because DPMA is the largest national trade mark office within the CTM system and its trade marks protect firm names and logos within the largest national economy² within the CTM system. Therefore one can think of the DPMA as the most important and most attractive national competitor to the Office within the CTM system.

Our analysis in this section must be interpreted with some caution as we have most likely not been able to identify all firms that have applied simultaneously to both offices. To undertake the analysis we have sought to identify all applicants at the Office who have also applied for the **same** trade marks at DPMA. We identify such pairs of an applicant and a trade mark, if the names of the applicants recorded by the Office are spelled in the same way as the names of applicants recorded by DPMA and if the marks registered at both offices are spelled in an identical way. We then investigate the application behavior of these applicants taking into

² Approximately 20% of EU 27 GDP is generated within the German economy.

account their entire portfolio at DPMA and at the Office. Thus, our analysis covers all marks registered by these firms at DPMA and the Office between 1997 and the end of 2006.

This procedure has a number of limitations: i) The analysis is limited to word mark applications; ii) The analysis does not at present include applicants whose names overlap partially as we did not have the resources to verify when such partial overlap indicates that we are dealing with the same firm; iii) More importantly, we would not be able to establish the connection between two applications, if an applicant applied for the same mark under the names of differing subsidiaries; iv) We would miss all applicants that have never applied for the same mark at both offices but that use both offices for separate applications.

Our matching procedure identified 22,882 marks belonging to 12,159 separate applicants. Some of these marks were assigned to multiple applicants resulting in 24,436 instances of a link between an applicant and a trade mark. Of these trade marks 67% (15,440) belonged to 7,343 (60%) German applicants.

The 15,440 marks represent 19% of the 80,662 marks applied for at the Office by German firms before 2006. Of those only 12,175 indicated that a seniority exists.

The 12,159 applicants we identify overall hold 20.4% of trade marks registered at the Office before 2006 although they make up only 4.6% of applicants. They have registered 16.6% of all trade marks granted by DPMA between 1996 and 2006 but make up only 4.6% of applicants at DPMA. Thus, these applicants have a significantly larger portfolio of trade marks than the average firm within the CTM system and within DPMA. These firms have also been active for more years than the average firms within both the CTM and the DPMA trade mark systems.

In Tables 6 and 7 below we demonstrate that the applicants we identify as using both the Office and DPMA are increasing the fraction of their trade marks that they register only at the Office while decreasing that fraction only registered at DPMA. The fraction of marks that is registered at both offices is quite stable between 1997 and 2006.

The results from this exercise also indicate that larger applicants are increasingly switching applications away from DPMA towards the Office. We have yet to establish what are the characteristics of the marks registered at both offices relative to those marks just registered at either the Office or DPMA. We leave this to future work as these details are not relevant to the assessment undertaken in this report.

Table 6: Average Fraction of TM Registrations at DPMA and OHIM (Applicant Level)

Year	OHIM	DPMA	OHIM & DPMA	Total
1997	0.01	0.64	0.35	2454
1998	0.23	0.35	0.42	4126
1999	0.27	0.31	0.42	4452
2000	0.28	0.31	0.41	4581
2001	0.29	0.30	0.41	4715
2002	0.30	0.31	0.39	4398
2003	0.32	0.30	0.38	4254
2004	0.33	0.30	0.37	4057
2005	0.37	0.22	0.41	4839
2006	0.42	0.20	0.38	4236
Total	0.30	0.31	0.39	42112

Table 7: Average Fraction of TM Registrations at DPMA and OHIM (Application Level)

Year	OHIM	DPMA	OHIM & DPMA	Total
1997	0.01	0.91	0.08	5873
1998	0.29	0.49	0.22	10796
1999	0.35	0.44	0.21	11419
2000	0.33	0.49	0.18	12301
2001	0.35	0.46	0.19	12799
2002	0.37	0.44	0.39	11567
2003	0.37	0.45	0.18	11380
2004	0.40	0.42	0.18	10587
2005	0.48	0.30	0.22	15456
2006	0.53	0.27	0.20	12244
Total	0.37	0.44	0.19	114422

3.3 Results on Applications from Macro Data

We turn now to evidence from data on aggregate levels of trade mark applications at national offices. As noted above our current results are based on data obtained from the website of WIPO. We supplement this data with data obtained directly from the national offices where this is possible.

Costs of Trade Mark Registration in Europe

In Table 9 below we provide information on the differences in costs of trade mark application at differing European Offices. This evidence is relevant here because it provides an indication

of how expensive these offices are relative to the Office itself. Table 3 shows that there are quite strong differences in the fee schedules offered by different national offices.

Given the range of costs for registration the registration of a CTM solely on the basis of these administrative costs is more attractive than a set of national trade marks as soon as the applicant is contemplating registration in at least three countries. It is often argued that the larger share of the costs of registration is made up of fees payable to the legal representatives of the company. It is hard to imagine that these legal fees will be lower if a trade mark is to be registered at several national offices within the CTM system than if it is registered at the Office.

The only factor that might temper an applicant's enthusiasm for trade mark application at the Office is the comparatively higher risk of encountering an opposition there.

Table 8: Costs³ of Trade Mark Application in Europe

Country	Appli- cation	Classes	Extra Classes	Accel- eration	Opposition	Renewal	Appeal	WIPO
Austria	329	3	40	n.a.	150	500	220-450	100
Benelux	240	3	37	30	400 (1000)	260	n.a.	80
Denmark	315	3	80	n.a.	335	315	335	315
France	225	3	40	n.a.	310	240	n.a.	60
Hungary	275	3	118	275	236	275	n.a.	40
Portugal	180	1	60	0	100	90	100	0
Spain	150	1	100	51,11	42	178,73	95	0
Finland	215	3	80	n.a.	215	235	200	155
Sweden	150	1	50	n.a.	0	150	0	150
Germany	300	3	100	200	120	750	n.a.	120
Lithuania	138	1	35	n.a.	93	69	35	58
Czech Rep.	192	3	19	n.a.	39	96	39	96
UK	200£	1	50£	n.a.	200£	200£	0	40£

Time series of Trade Mark Applications at National Offices

Below we provide information on the level of trade mark applications at a number of national offices within the CTM system that have seen a drop in the level of trade mark application at some time after 1996. We focus on Spain, Denmark, Finland and Hungary.

In the case of Spain it must be taken into account that after 2002 it became possible to register trade marks in more than a single Nice class. This is likely to have reduced the level of trade mark applications somewhat. Given our lack of data we are unable to establish whether

³ All costs are provided in Euro unless otherwise stated.

any part of the reduction in trade mark applications at the Spanish trade mark office can be attributed to the competition provided by the Office.

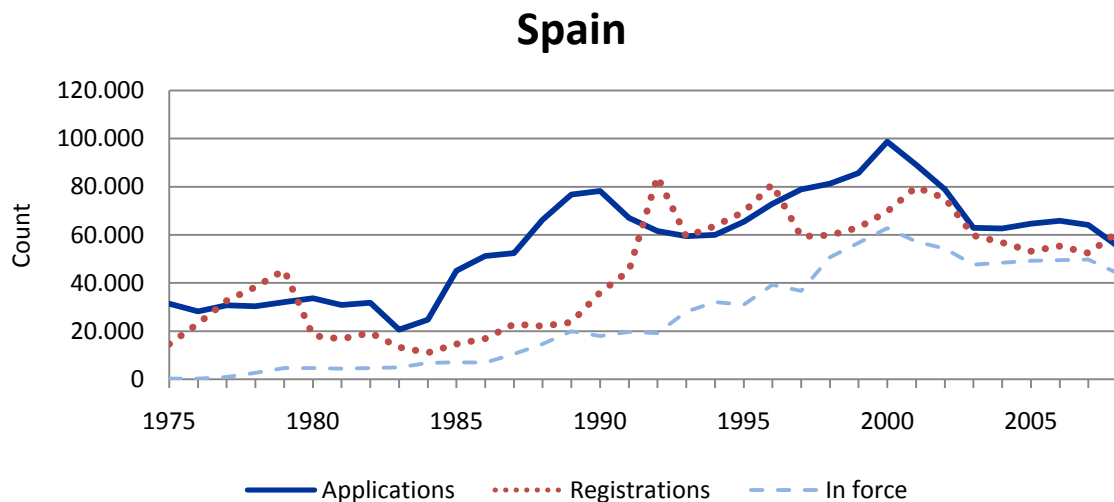


Figure 14: A Large National Office Facing Declining Demand

The aggregate data indicate that until 2007 the level of trade mark applications at the UKIPO, the DPMA and the french trade mark office was stable.

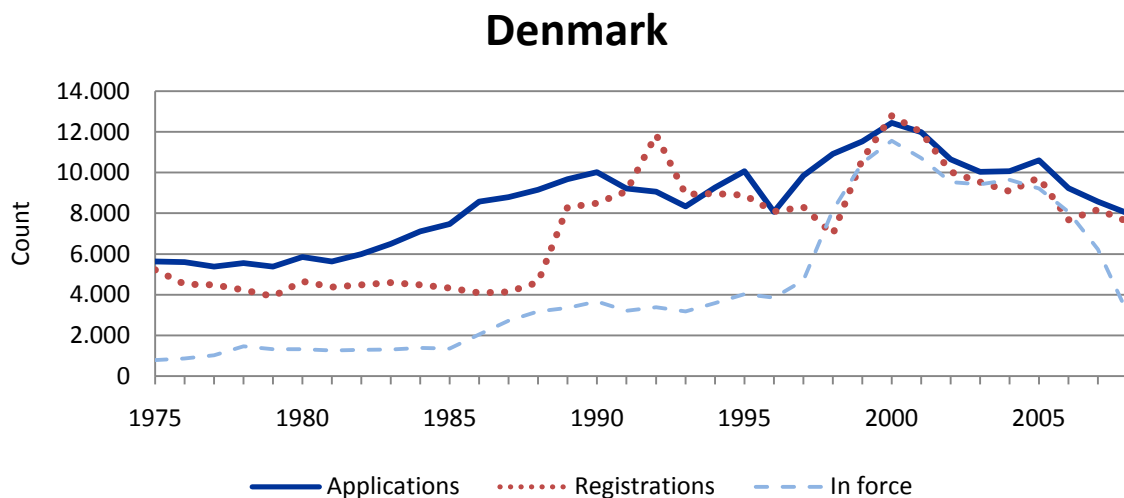


Figure 15: A Small National Office Facing Declining Demand

We have already noted that this may mask changes in the composition of applicants. It is also important to bear in mind that demand for trade marks at the Office and in Norway and Switzerland increased during the same period.

In contrast Figure 14 shows that the level of trade mark applications at the Spanish trade mark office has been in decline since the dot-com bubble. We also find that the demand for

trade mark protection at several smaller national offices has fallen, in some cases dramatically.

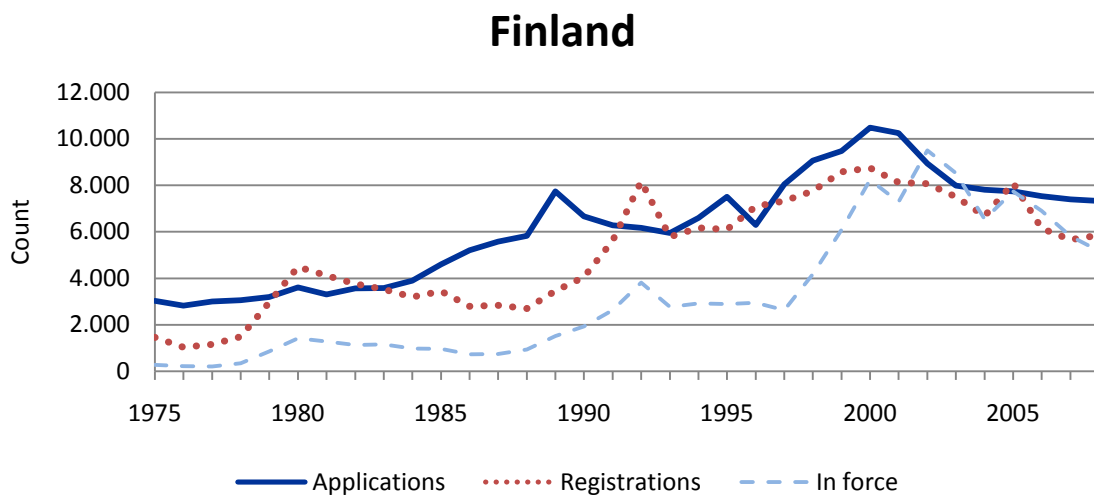


Figure 16: A Small National Office Facing Declining Demand

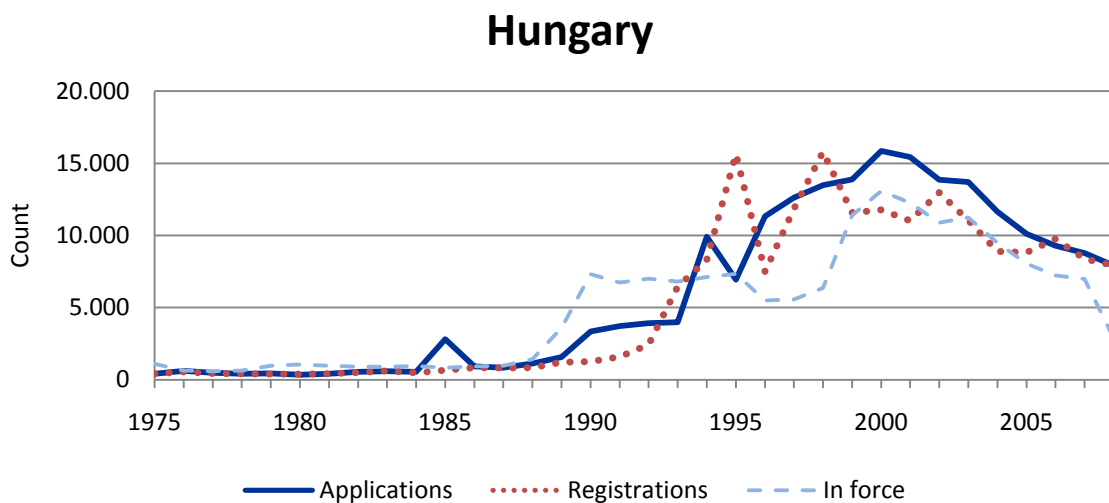


Figure 17: A Small National Office Facing Declining Demand

Figures 15- 17 indicate that the low costs and extensive coverage of the CTM are reducing the attraction of national trade mark registers. We have indications that this trend has accelerated in the recent past.

4 Applicants' Strategies within the CTM System?

In this section we analyze how large and small firms fare in their efforts to secure and uphold CTMs.

We provide the following findings:

9. There is evidence that applicants insure themselves against failure to register by applying for multiple marks at the same time. Where all such marks are successfully registered it is likely that some trade marks remain unused. We can show evidence that these application strategies are being used increasingly.
10. The group of applicants for the CTM contains firms with increasingly larger portfolios of trade mark applications.
11. The probability that CTM applications will be registered has grown over time and has grown particularly for firms with more experience of trade mark application.
12. The probability that CTM applications will be opposed has fallen significantly in almost all Nice classes.

In response to our results on the increasing importance of large firms within the pool of applicants the Office have pointed out that the proportion of trade marks coming from the very large applicants has fallen relative to all trade mark applications in the most recent cohorts.

The figures we present below are not in conflict with their results. We focus on the relative size of the portfolios of different applicants and point out that here the disparities are growing larger.

We also find that larger applicants are more likely to be able to register their trade marks and are less likely to face opposition. We conclude that the trade marking strategies of the very large applicants deserve closer scrutiny in future work.

4.1 Multiple Applications and Unused Trade Marks on the Register

Interviews with firm representatives and trade mark attorneys undertaken by the Max Planck Institute and by INNO-tec have revealed that firms often apply for more than one CTM at a time. This strategy is chosen where firms seek to ensure that they will have at least one trade mark on the register for a new product or service. It is often cheaper to apply for several marks, hoping that one will be registered, than to undertake an exhaustive search for all possible conflicts between marks on the OHIM and on national trade mark registers within the European Community. We have learned that due to the absence of coordination between the European

Medicines Agency (EMA) and OHIM, especially pharmaceuticals firms will often apply for large numbers of trade marks simultaneously.

This section provides an analysis of the question how high the proportion of trade marks not in use is by Nice class. It is argued that a large proportion of unused trade marks on the register may adversely affect the ability of others to register their own marks, should these be too similar to the marks in the register.

There are at least three mechanisms that can explain unused trade marks that remain in the register:

- 1) Trade marks are regularly applied for in three classes or more. Many of these marks are subsequently only used nationally and only in one class, but still clutter the remaining classes.
- 2) Small firms apply for trade marks, register them and then go out of business.
- 3) Larger firms systematically apply for excessive numbers of trade marks for strategic reasons.

There are two main ways in which unused trade marks could affect firms applying for trade mark protection themselves: i) the cost of registering own marks may substantially increase, because costs of search are higher and because firms may seek to apply for several alternative trade marks to raise the probability of successfully registering at least one mark; ii) trade marks that are not used and recently registered may be used to oppose a new trade mark application.

To establish without doubt that trade marks remaining on the register are cluttering the register, we would need to survey applicants (and not representatives) randomly, to establish i) whether they are still in business and ii) in which markets they are using their marks.

At this time we only have some of this information: from the survey undertaken by Allensbach for this study we know that of the applicants surveyed directly 93.2% did not respond to the survey. This suggests that a fairly large proportion of applicants may in fact not be in business several years after registration of a trade mark.

We have some additional information on the use of trade marks from recent work in which we collected the Google citations to a random sample of trade marks filed at the Office before 2005. We collected citations for just under 5% of all applications made at the time, amounting to 14,209 trade marks.

For these applications we know how many hits the combination of firm name and trade mark name received on the Google search engine in August of 2006 and 2007. We interpret no hits in both years as an indication of the fact that the trade mark is not in use. The figures below show which proportion of trade marks in this sample received no citations in both years:

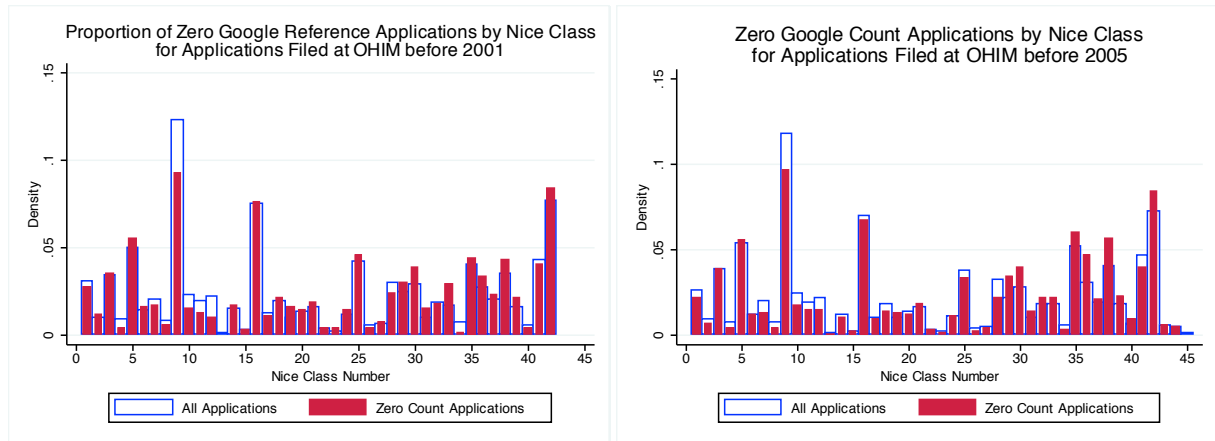


Figure 18: Distribution of Trade Marks with Zero Google Citations Relative to Full Sample
 Technical note: Both graphs show the distribution of all trade marks in the random sample across Nice classes (in blue) and the distribution of those marks attracting zero Google counts across all Nice classes (in red). In the left hand graph we focus on marks that were filed more than six years prior to data collection.

As the graphs show Nice class 9 attracted relatively fewer trade marks that received zero counts on Google, whilst classes 35, 36, 38 and 42 attracted more than one might expect if zero count trade marks were randomly distributed across Nice classes. However, the distribution of zero count trade marks follows the overall distribution of trade marks across classes quite closely.

The data show that of the trade marks registered before 2001 10.29% are zero counts. This proportion does not change if we take into account all marks contained in our 5% random sample. At present this represents our best estimate of the proportion of unused trade marks on the trade mark register at the Office.

To determine whether zero Google counts contain any information about firms' uses of their trade marks we have investigated which proportion of marks with and without zero counts in the random sample were renewed. We would expect a much larger proportion of trade marks with positive Google counts to have been renewed if Google counts are correlated with non-use of the trade mark. Table 9 below shows that as expected almost 60% of marks with positive Google counts were renewed while less than 40% of marks with zero Google counts were renewed.

Table 9: Proportion of Random Sample Renewed

Zero count	Not renewed		Renewed		Total	
	No.	Row %	No.	Row %	No.	Row %
No	1852	41.1	2650	58.9	4502	100.0
Yes	298	62.0	183	38.0	481	100.0
Total	2150	43.1	2833	56.9	4983	100.0

If we assume that all marks which are renewed are also in use, then this would lower the estimate of the proportion of trade marks not in use in the register after five years to 6%.

Unused trade marks on the register may also affect firms' application, renewal and opposition behaviours in ways which may be observable. We investigate whether we can substantiate such behaviour in the data we have received from the Office. We can also demonstrate that:

- i) The proportion of multiple simultaneous applications made by one firm in one set of Nice classes on one day is increasing since 2003.
- ii) Firms are less likely to renew their trade mark applications in five of the seven most widely used Nice classes than in a reference class exhibiting average usage intensity.

The observation that there are increasingly multiple simultaneous applications made is consistent with the application strategy discussed above and would lead to increasing numbers of unused trade marks on the register. Some proportion of these multiple simultaneous applications will be made for marks that are all used. If this proportion is constant then the number of unused marks on the register will be proportional to the number of cases of multiple simultaneous applications.

The effects on renewal are suggestive but not very strong as we cannot yet establish whether the probability of renewal changes systematically over time. We have too few years of renewal data to evaluate at present. If the register were filling up with more and more unused marks we would expect the proportion of renewed marks to fall.

Simultaneous applications by Firms on Date and in a Set of Nice Classes In our surveys of trade mark applicants we have repeatedly been told that in order to secure a successful trade mark registration at the Office it is prudent to make several applications simultaneously. Therefore, we investigate whether there is a pattern of simultaneous trade mark applications

by firms in a set of Nice classes in the data. As we now discuss such a pattern is discernible, it encompasses a significant proportion of applications and the proportion of cases has increased over time.

We can show that firms apply for more than one trade mark for the same set of Nice classes on a given day surprisingly often. On average over the period between 1996 and 2010 32.39% of applications involved more than one application made on the same day for the same set of Nice classes by an applicant. 17.06% of cases involved two simultaneous applications.

We have analyzed whether the proportion of such simultaneous applications has increased and whether it differs among classes in ways we would expect.

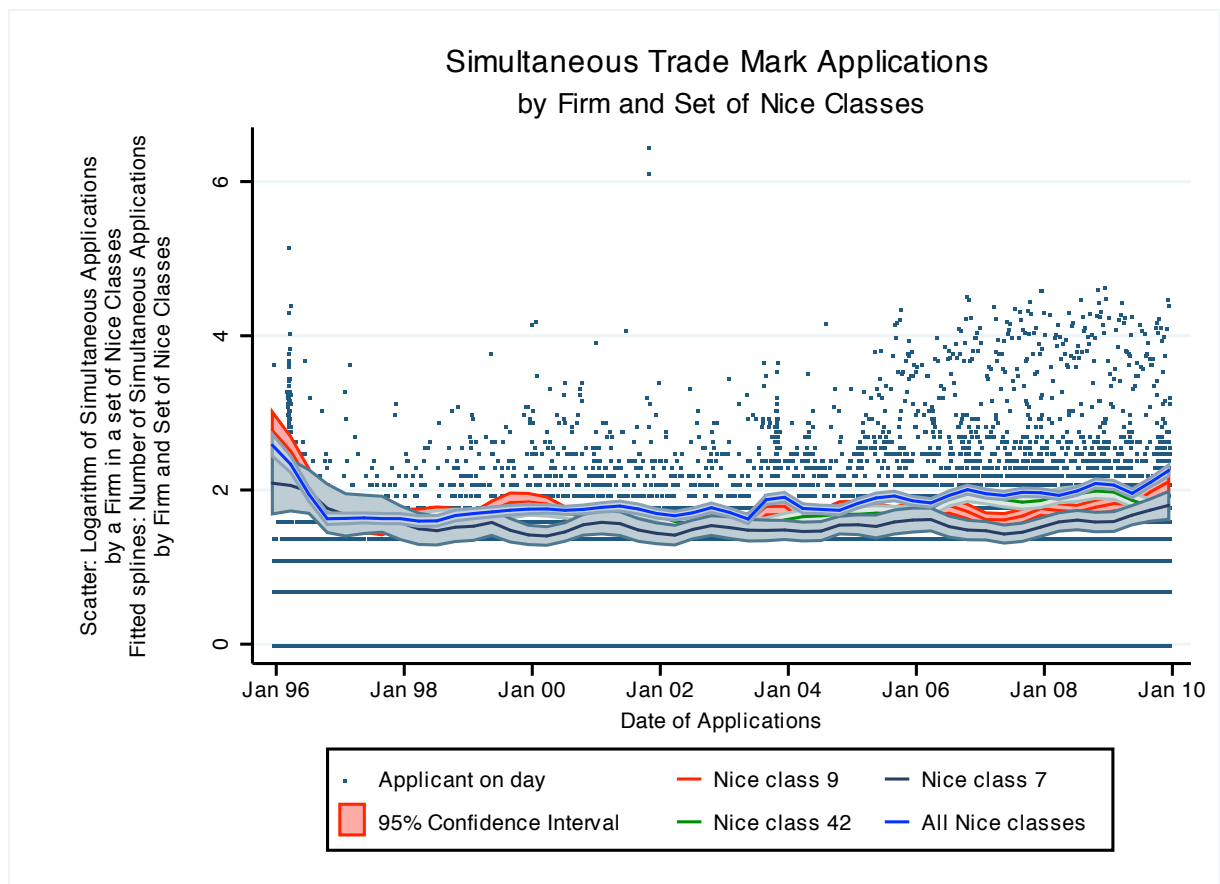


Figure 19:

Technical note: The scatter in this graph is based on a 10% random sample of all trade mark applications made between 1996 and 2010 at the Office. The fitted local polynomials exclude the 1% most extreme outliers. Shaded areas represent confidence intervals. Nice classes 9 and 42 are the most populated. Nice class 7 is provided for comparison. For further discussion refer to main text.

Figure 19 shows that on average (blue line) the number of simultaneous trade mark applications made by one firm in the same set of Nice classes has increased from an average of 1.8 to 2.2 between 1997 and 2010. The increase is statistically significant. More importantly,

there is a clear time trend (if we exclude the year 1996 which was anomalous), which we would expect to see if cluttering were to be becoming more important.

We have also sought to disaggregate this effect by investigating all applications that include Nice classes 9, 42 and 7. Class 7 is chosen as a comparison as it is a class attracting an average number of applications (viz. Figure 9). As we show below (viz. Figure 20) the level of renewals in this class is also very high, suggesting that trade marks in this class are much used by their owners. In contrast the probability of renewal in classes 9 and 42 is much lower indicating that trade marks registered in these classes are less used by their owners than in class 7. This pattern is consistent with a higher degree of cluttering in classes 9 and 42.

Figure 19 shows that the level of simultaneous applications for the same set of Nice classes by one applicant is significantly stronger in classes 9 and 42 than in class 7. This is what we would expect if both the level of renewals and the application strategy are affected by strategic considerations as those discussed above.

Renewal probability by Class and frequency of classes The following two graphs provide the results from a probit regression on the number of classes firms apply for and on dummy variables for the specific classes firms apply within. This regression is performed to identify whether firms are more or less likely to renew their marks relative to a specific bench mark.

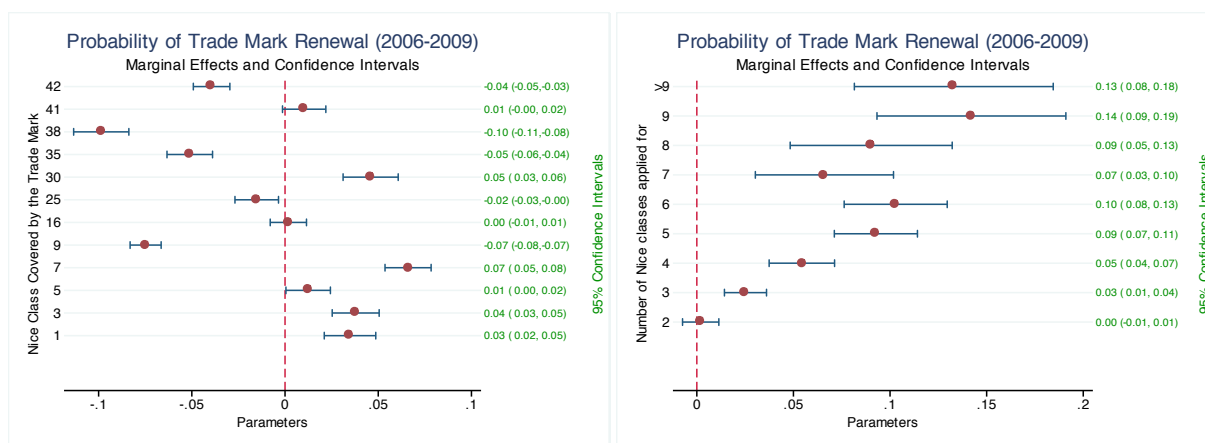


Figure 20: Renewal probabilities by Nice Class and Number of Classes

Technical note: The probability of trade mark renewal in the left hand graph is relative to the probability of renewal in Class 33 (Alcoholic beverages except beer). The probability of trade mark renewal in the right hand graph is relative to renewal if only one Nice class has been specified.

In case of the number of marks applied for the bench mark is given by marks registered in

a single class. We find that on average additional marks increase the probability of renewal. There is a slight divergence from this pattern if marks are registered in seven or eight classes. The effects are statistically highly significant as the graph shows.

In case of the Nice classes which firms registered their marks in the bench mark is given by class 33 (Alcoholic beverages except beer). We find that firms are less likely to renew their trade mark applications in the classes 9,25,35,38 and 42. All of these effects are statistically significant. With the exception of classes 16 and 41, these are five of the seven most popular Nice classes as Figure 9 above shows.

These findings indicate that trade marks registered across a broader range of Nice classes generally are more likely to be renewed. This might be expected as the costs of registration increase in the number of classes firms choose to register marks within.

We also find that marks registered in classes attracting more trade marks are frequently less likely to be renewed. This result is consistent with “cluttering”. It does not by itself prove that cluttering is actually present.

4.2 Typology of Applicants

We observe that the distribution of the size of applicants’ portfolios of trade mark applications is increasing at the Office since 1999.

Figure 21 provides information on the distribution of the size of firms’ portfolios. For instance it shows that the 10% largest firms in 1996 had more applications in their trade mark portfolios than in any other year.

Overall the figure provides information on the size distribution of applicant’s portfolios of applications in a given year. It shows that the size of the largest applicants’ portfolios relative to the median applicant has grown substantially after 1999. The very high skewness of applicants’ portfolios in 1996 is likely due to the importance large firms originating outside of the European Union attached to the CTM from the beginning.

4.3 Surviving Absolute Grounds

In this section we analyze how likely firms were to transform trade mark applications into registered community trade marks. We focus on all trade marks (603,017) that were either registered, refused or withdrawn within the period between 1996 and the end of 2007.

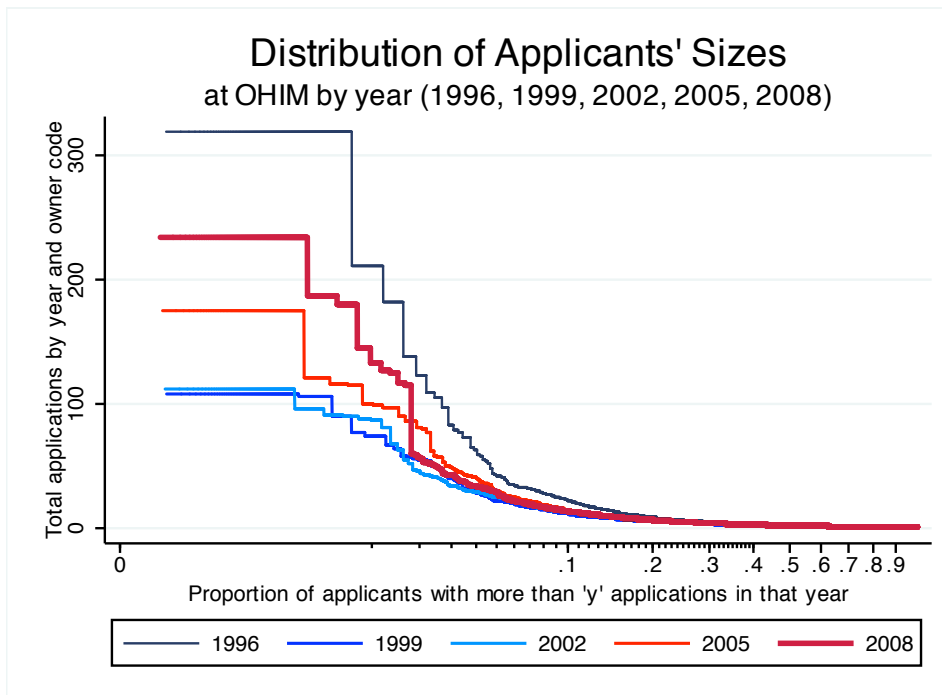


Figure 21: Size Distribution of Applicants at the Office

Technical note: This is a quantile plot of the number of applications each applicant made in a given year. The graph shows which proportion of applicants falls into each size category. In order to make the plot clear for the upper tail of the distribution the scale on the x-axis has been transformed. Applicants are identified using the owner-code supplied by OHIM. No effort has been made to aggregate the owner-code using additional information on conglomerates. Therefore the graph will tend to understate the degree of concentration.

The analysis is performed using a probit regression in which the dependent variable takes the value one if the mark is registered and the value zero if it is not. Table 10 below provides marginal effects for the following descriptive model of trade mark registration:

$$\begin{aligned}
 \text{Probability (Registration=1)} &= \beta_{INT} + \beta_{TREND}TIME + \beta_{SEN}SENIORITY \\
 &+ \beta_{OPP}OPPOSITION + \beta_{SIZE}PORTFOLIO SIZE + \beta_{INTER}(SIZE \times TREND) \\
 &+ \sum_{j=2}^{26} \beta_{COUNTRY}COUNTRY_j + \sum_{i=2}^{45} \beta_{NICE}NICE_i + \sum_{k=2}^{11} \beta_{YEAR}YEAR_k + \epsilon \quad (2)
 \end{aligned}$$

This model provides the probability that a trade mark application is registered at the Office as a function of a time trend, the size of the applicant's portfolio of trade mark applications and the interaction of the time trend and size of the applicant's portfolio of trade marks. As control variables we include whether the applicant made a seniority claim, whether they faced opposition and fixed country, year and Nice Class effects.

We estimate the model in order to see whether over time firms were more or less likely to convert trade mark applications into registered marks at the Office. The model also reveals whether this depends on the size of the firms existing portfolio of trade mark applications. We are interested in this model for two reasons: i) we expect that over time firms and their representatives come to understand more fully how to successfully apply for and register a trade mark at the Office - this should increase the probability of registering a mark; ii) we expect that larger applicants, having more experience learn these lessons faster.

Results from estimation of the model are reported in Table 10 below. We find that indeed the probability that firms registered trade marks at the Office increased with time, after controlling for macro-economic shocks using year dummies - the Time trend variable has a positive and significant coefficient. This indicates that firms may have learned to make trade mark applications with a higher chance of success over time. We also find that firms with more previous trade mark applications also benefit from this - the Portfolio size variable has a positive and significant coefficient. Although we find that the positive time trend becomes weaker for firms with larger portfolios, overall larger applicants are always more likely to convert a trade mark application into a registered trade mark.

Table 10: Probability of Trade Mark Registration at the Office (1996-2007)⁴

Dependent Variable	Probability of Registering the Trade Mark
Time trend	0.017*** (0.001)
Seniority (Yes/No)	0.430*** (0.008)
Opposition (Yes/No)	-0.604*** (0.005)
Portfolio size	0.006*** (0.001)
Portfolio size × Time trend	-0.002*** (0.000)
Country dummies	YES
NICE Class dummies	YES
Year dummies	YES
Constant	0.803*** (0.010)
N	603017

Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

⁴ We report the marginal effects from a probit regression here.

4.4 Surviving Opposition

As Figure 3 above and Table 4 show that the absolute number of oppositions against CTM applications has increased proportionately to the numbers of applications. However, the overall probability of receiving an opposition at the Office fell from 0.170 to 0.157 between 1997 and 2005. This drop is statistically highly significant. Figure 22 below shows that the reduction in the probability of opposition affects applications to almost all Nice classes as more recent (red) bars are lower than older (dark blue) bars.

Opposition is most likely in classes 3 (Perfumes), 5 (Pharmaceuticals), 18 (leather), 29 (meat, fish, cereals and fruit), 30 (tea, coffee and spices) and 32 (drinks).

The probability of opposition increases in the classes: 23 (Yarns and threads, for textile use in 2002!) and 32 (drinks), 35 (advertising) and 36 (insurance).

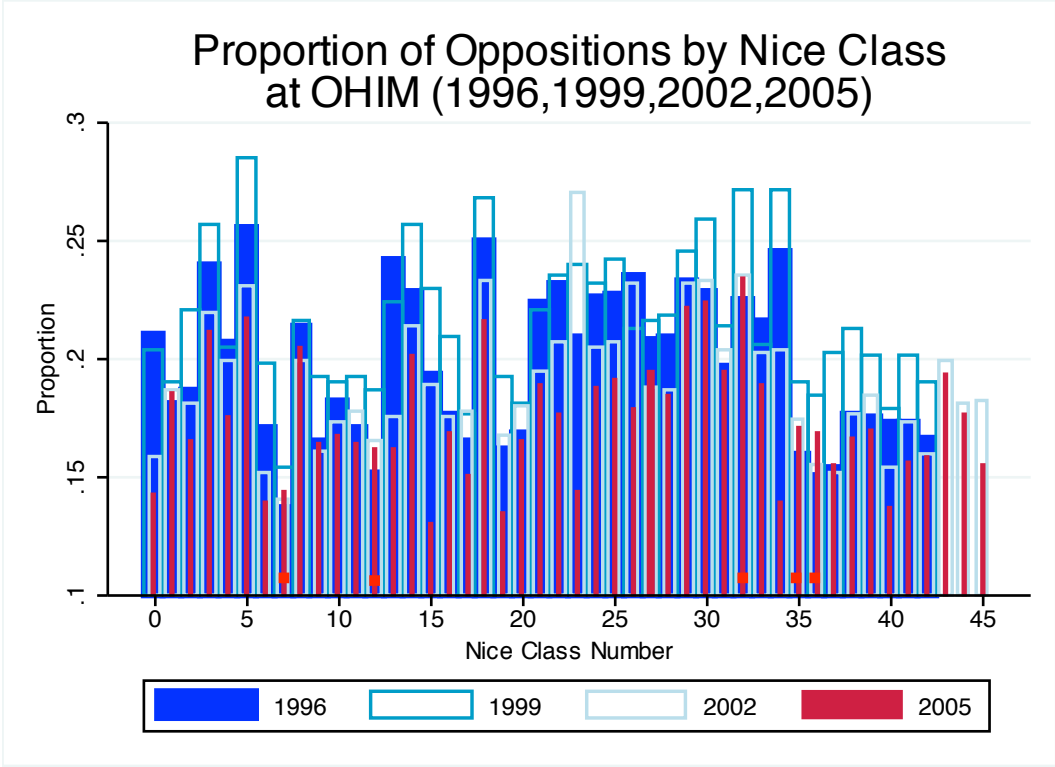


Figure 22: The Probability of Opposition is Falling

This graph superimposes four histograms, each from a separate year. Each bar represents a Nice class. The height of the bar represents the proportion of applications requesting protection in that Nice class and receiving at least one opposition.

This finding deserves further investigation as opposition is one of the main mechanisms which keeps trade marks off the register that are possible sources of infringement. Figure 23 below shows how the probability of opposition against a CTM application changes as the size

of the applicant's portfolio of applications in a given year increases. The figure demonstrates that US and German applicants with larger portfolios had significantly higher probabilities of facing opposition in 1997 than smaller applicants. However, the figure also shows that by 2005 this was reversed and larger applicants now face significantly lower probabilities of opposition. As above the graphs also reflect the overall reduction in the probability of opposition at the Office.

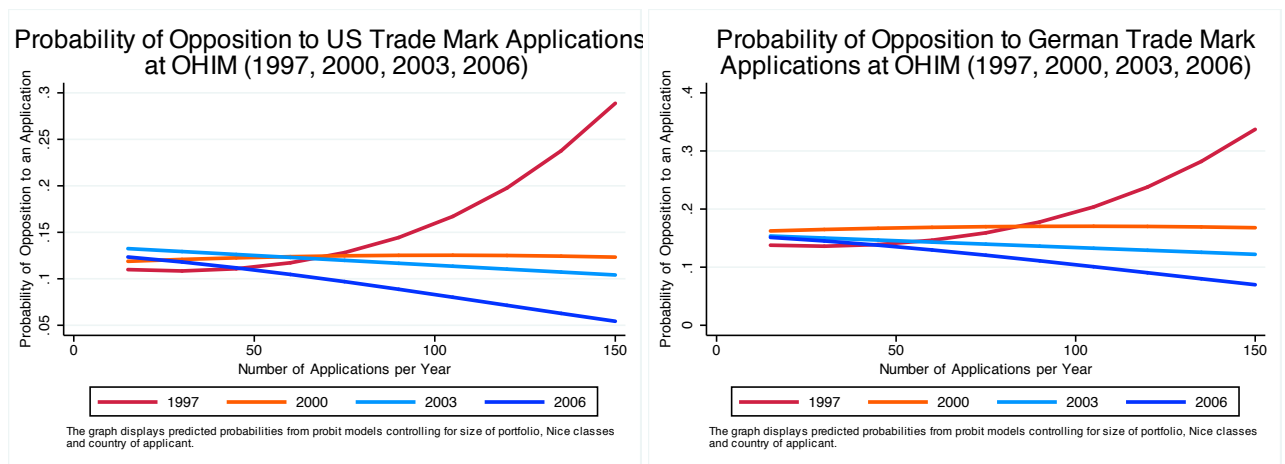


Figure 23: Large Firms Face Less Opposition

Both graphs provide predicted probabilities of opposition derived from descriptive Probit regressions. We ran a separate regression for each year and controlled for country of origin of the applicant, Nice classes in which protection was sought and size of the applicant's trade mark portfolio. No effort has been made to aggregate the owner-code using additional information on conglomerates. Therefore the graph will tend to understate the degree of concentration.

The findings presented here on registrations and oppositions can be explained in several ways. Large firms may have more experience with the CTM system and may be represented by more qualified and experienced trade mark lawyers. This experience will benefit larger firms during the process of trade mark registration and also in opposition.

During opposition it may also be that smaller applicants are more likely to find their trade marks opposed because it is less likely that they will be in a position to retaliate by opposing trade mark applications made by larger firms. The latter explanation would indicate that the low costs of obtaining a CTM have led larger firms to build up big portfolios of CTMs and that this in itself provides them bargaining power in interactions with other large and small applicants. This would be analogous to developments at patent offices in the United States, Japan, China and at the EPO. Further work is necessary to determine which explanation is the more relevant at the Office.

5 Conclusion

This document provides a review of the data we have been able to collect and the main trends contained therein. The document also shows that a number of questions remain unanswered and additional sources of data at the level of the national offices remain to be exploited in future work.

Overall the analysis has revealed that many questions remain to be answered. Some evidence suggestive of overfull trade mark registers and competition between OHIM and national offices has emerged. So far we have no indication that either problem is very large or imposes high costs on users. Neither can we say that the problems are minor or restricted to small segments of the trade mark system. Therefore, both developments should be investigated more thoroughly in focused studies. The frequency and effects of trade mark litigation in Europe remain to be investigated.