European Patent Office

FUTURE FILINGS SURVEY 2009

INTENTIONS OF APPLICANTS REGARDING PATENT APPLICATIONS AT THE EUROPEAN PATENT OFFICE AND OTHER OFFICES

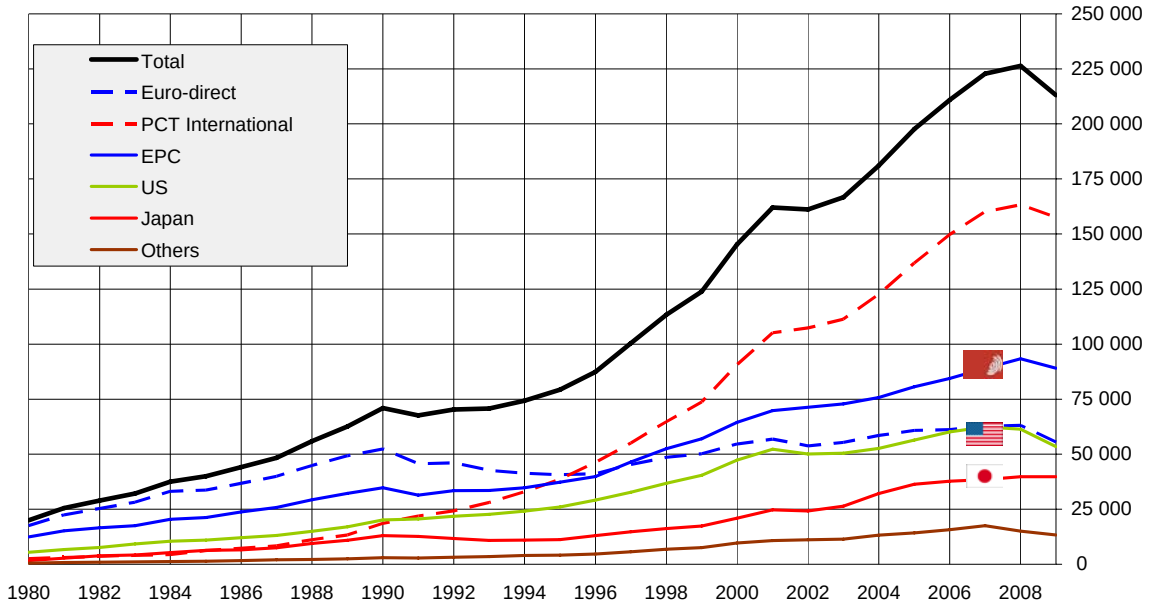
Munich, March 2010

Commentary by the European Patent Office

Each year the EPO carries out a survey of filing intentions of applicants for European patents.[1] This report concerns the survey that was done in the summer of 2009 by Synovate, the market research firm. The main use that is made of the survey is to provide information on probable filing developments for the EPO's annual forecasting exercise for budgetary planning purposes. As usual applicants were approached for a Biggest group of about 400 largest clients and a Random group of about 2 000 from the general population with a random sampling method that preferentially selected larger applicants. A considerable overlap exists between the Biggest group and the Random group.

The report highlights key findings with details appearing in annexes. The main forecast items are the numbers of Direct European route filings (Euro-direct), PCT international phase filings (PCT-IP) and Euro-PCT regional phase filings (Euro-PCT-RP). An assessment is made of current results in comparison to those from previous surveys. The annexes describe the survey setup; fieldwork experiences and response rates; a collection of comments from participants; analytical methodology; forecasts for other Offices; and a description of respondent profiles. Then follow analyses of R&D budgets, sales and numbers of inventions, as well as analyses of special questions on reasons for patenting and the effects of hypothetical changes to the fee system. The special questions complement questions on other aspects of fees that were posed in the previous 2008 survey. Three annexes report on methodological experiments, and another annex describes the sizes of the population and the samples.

Total European patent filings



[1] In previous years this report was entitled "Applicant Panel Survey". The random sampling approach that is used means that it is not technically a panel survey and so it was decided to rename it "Future Filings Survey". This does not imply any fundamental changes to the survey design.

Contrary to most previous years and under the influence of the global recession, the numbers of filings at the European Patent Office decreased in 2009 compared to 2008. This contrasts with predictions of stability or slight growth that were made in last year's 2008 survey report.

The current survey asks about filing intentions for three calendar years (this time 2009, 2010 and 2011). The forecasts that are identified as being most appropriate are given in Table 9. The results are analysed by groups (Biggest and Random) under various breakdowns, by four blocs of residence for the applicants (EPC, Japan, USA, Others) and by technical areas in terms of five EPO mega clusters (groups of joint clusters). This year for the first time results are also shown with a two-way breakdown by both residence bloc and mega cluster (Table 17). Unlike in previous years, in this survey correction factors were not used in order to augment these forecasts for reasons given in Annex IX. The favoured scenario largely agrees with the observed out-turn for 2009 and predicts moderate growth from a lower base for 2010 and 2011. As in previous years, the forecasts from the Biggest group are for lower growth rates than the forecasts obtained from the Random group - the Biggest group predicts that by 2011 the number of total filings (Euro-direct + PCT international phase) will not even be as high as the 2008 figure.

The preferred forecasts in the previous 2008 survey report can now be seen in retrospect to have overestimated the out-turn of filings in 2009. It can be argued that the reasons for this were not so much inaccuracy in the information that was available last year but rather a failure to interpret what was known in the most appropriate way. In the *Commentary by the European Patent Office* to last year's 2008 survey report, a corrected growth rate index for 2009 vs 2008 was obtained after a follow-up survey as 0.956, equivalent to predicting a 4.4% drop in filings from 226 310 in 2008 to 216 352 in 2009. This was not so far away from the currently observed out-turn level of 213 017. However, it now appears to have been wrong to add a correction factor to this estimate in order to predict filings for 2009 at above 227 500.

The main 2009 survey was carried out in the months up to September 2009 and reflects applicants' intentions as they had been up to that time. No follow-up exercise was carried out. But we feel that we can trust the main survey results because there is less evidence than last year that the economic environment underwent any particular drastic change in the few months since the end of the fieldwork period. Nevertheless, it is relevant to think about other reasons why forecasts may now be too high. On a previous occasion when this survey was carried out at a time of economic difficulty in 2002, the forecasts for numbers of future filings turned out to be slight overestimates. Also a general problem with surveys of this type is that people who do not respond may have reasons that are confounded with the survey measures. This means that applicants that intend to reduce filings levels in future years may be more inclined not to respond than the others. This topic is difficult to study without asking non responders again, but Annex XII investigates the related possibility of partial non-response bias in the current forecasts for 2010 and 2011. This calculation suggests a small reduction in the forecast for Total filings in 2010 as recommended in this report from 220 901 to 217 743, (i.e. a downward correction of 3 158 filings). While this correction is small when compared to statistical uncertainty, it nevertheless emphasises that filings growth from 2009 to 2010 is likely to be anaemic. Current plans at EPO for future filings will therefore remain cautious for the time being. Interestingly, if such a downward correction of 3 158 is assumed also to be valid when retrospectively applied to the figure of 216 352 for 2009 from the results of last year's survey, the predicted outcome for 2009 becomes 213 194, which is very close to the currently observed out-turn figure of 213 017.

In Annex VII it is estimated that 55% of the applicant population reduced their R&D expenditures due to the recent recession. A more general analysis of R&D expenditures and other factors is presented in Annex VI. While it has to be admitted that the item response rate for the main questions on levels of R&D expenditures was not as high as for some of the other questions, Figure 20 shows the distribution of R&D among responders from the Biggest group and Figure 22 shows the inferred distribution for the whole applicant population that was obtained from the Random group. This latter distribution is extremely asymmetric and emphasises the large number of smaller companies among patent applicants at the EPO.

It is also interesting to see the responses to a question concerning rank importance of factors influencing decisions to file for a European patent in Annex VIII, where the factor "Market demand and activities of competitors" appears as being the most important among those suggested.

From other subsidiary results of the survey, graphics of the inferred distributions of year of foundation of applicant enterprises and years of starting up activities in Europe are given in Annex V. As could be expected, these two types of distributions show no big difference for applicants with addresses in Europe (EPC region). Enterprises from Japan are generally older but nevertheless tend to have operated in Europe for longer than the European companies. Applicants from USA and Other countries are typically young although tending to start up activities in Europe almost as soon as they have been founded.

We hope that you will enjoy reading the report. Please provide us with feedback on any of the issues that it covers. This will help us to refine our approach and to improve future surveys. We would like to urge you to participate in the future filings survey if you are approached with a request to do so.

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EXECUTIVE SUMMARY

Based on the findings of this survey, total filings at the European Patent Office for 2009 are forecasted to drop by 7.6% versus 2008 filings, resulting in an expected number of 209 040 filings. For 2010, 220, 901 total filings are expected (-2.4% versus 2008) and for 2011, the survey predicts 230 515 filings (+1.9% versus 2008).

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1 Introduction

1.1 Background and objectives

Since 1996, the European Patent Office (EPO) has carried out an annual "Future Filings Survey" (formerly known as “Applicant Panel Survey”). Applicants are surveyed with the main objective of predicting the number of patent filings for the base year and the two ensuing years. The EPO uses the predictions as one of the ways of allocating resources in order to ensure a high service level when processing future patent filings.

In 2009, the fourteenth in the series of surveys took place. The interviews and data collection were undertaken by Synovate, providing the EPO with the benefit of joint experience previously gained in similar surveys from 2001 to 2008. For the sixth year in succession, the same company was also in charge of the data analysis and interpretation in 2009.

The primary objective of the survey was to calculate quantitative forecasts of patent filings at the EPO and other patent offices by various filing routes and applicants' residence blocs (EPC[2], Japan, USA, Others). A secondary objective was to explore technological areas of patenting in order to make more detailed forecasts and to explore the relationship between R&D expenditures and patent applications. This was done on the basis of 14 joint clusters, itemised according to the technology-based classes of the patent applications and corresponding to the structure in which the EPO has organised its search, examination and opposition departments. Since 14 classes spread the survey results rather thinly, amalgamation of joint clusters was made into five rather more meaningful “mega clusters”.

1.2 Content and structure of this report

The survey involves establishing forecasts from basic filing types and residence blocs of the applicants. The basic filings types at the EPO are first and subsequent filings, each of which can be either Euro-direct or PCT international phase filings (PCT-IP). The PCT-IP applications can later on become PCT applications entering the regional phase (Euro-PCT-RP). At other offices, there are national filings and PCT applications entering the national phase (PCT-NP), the latter of which also originate as PCT-IP applications.

Section 1.3 outlines the characteristics of this year’s survey and sample groups. **Section 2** provides high-level summaries of the predicted counts of total filings and growth rates for 2009, 2010 and 2011 based on the recommended forecasting method. **Section 3** summarises forecasts (for Euro-direct and PCT-IP filings) based on two sample groups using the different forecasting methods employed for this report, and puts the report into perspective by comparing results with those from previous surveys dating back to 2003. **Section 4** begins by describing the statistical methodologies employed for forecasting growth, and then provides forecast results (for Euro-direct and PCT-IP filings) for both sample groups with the breakdown scenarios employed. **Section 5** focuses on forecasts for PCT applications entering the regional filing phase (Euro-PCT-RP). The main part of the report wraps up with conclusions and an outlook in **Section 6**.

[2] European Patent Convention (EPC) contracting states

Annex I contains the complete survey methodology report as well as this year's questionnaire, and details the data validation procedures that were employed. **Annex II** reports on the comments to the survey received from respondents. **Annex III** contains details of the analytical methodology employed. **Annex IV** provides forecasts for applications at other national patent offices (national filings and national phase PCT filings). **Annex V** provides summary statistics and a profile of respondents based on economic characteristics of the responding individuals or institutions. **Annex VI** analyses R&D budgets, inventions, first filings and sales of applicants, and reports on indicators based on these figures. **Annex VII** reports on the effect of the worldwide recession on applicant R&D budgets. **Annex VIII** reports on factors influencing filing decisions as well as on applicant assessment of the EPO's fee structure. **Annex IX** gives details on the estimation of birth/death effects which can be used to deal with structural shortfalls of the actual empirical survey. **Annex X** reports on population sizes and sample sizes of the 2009 survey. **Annex XI** reports on an experimental alternative using respondent-provided filing totals to calculate sampling weights. Finally, **Annex XII** reports on an analysis adjusting for partial non-response and possible associated bias.

1.3 The 2009 survey

The design of the 2009 survey was to a large extent similar to that of the previous years, using a comparable sample size for the Biggest and Random groups from which applicants were selected.

The total number of applicants involved was 2 164, with most of the Biggest group also appearing in the Random group[3]. The survey covered applicants for about 28% of the applications at the EPO (Euro-direct and PCT-IP filing numbers of Random sample relating to population, see **Annex X**).

The survey was carried out via telephone and mail interviews with pre-established contact persons. Questionnaires were sent out from the beginning of June, 2009, with interviews being completed by mid-September. In total, 702 interviews were completed in 2009.

In the first stage, valid addresses were found for 2 055 applicants. After removing double cases that were either identical with, or included in, other addresses, 1 700 addresses were left. Contacts were established for 1 416 applicants. The overall response rate in terms of the numbers of valid addresses was 34.2% (702 out of 2 055), lower than in the previous 2008 survey (37.2%; 772 out of 2 077) for the comparable groups.

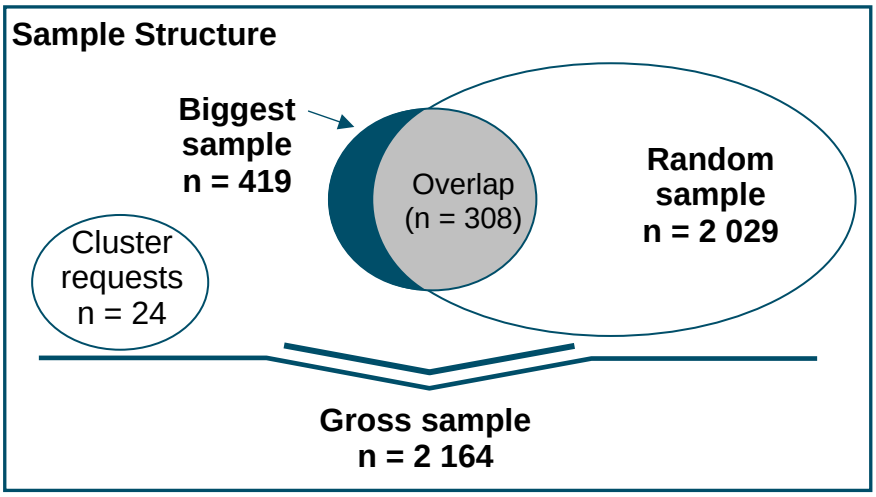
The EPO provided two **gross samples** of applicants drawn from the EPO database of applications (EPASYS) in early 2009.[4]

- "Biggest": This sample comprises the 419 largest applicants and is designed to allow for separate analysis of the intentions of the biggest applicants. As the EPO database lists subsidiaries of large applicants separately, the EPO provided a consolidated "Biggest" group to cover the largest applicants at the EPO appropriately.

[3] This total includes 24 additional addresses that were specifically requested by EPO joint cluster managers.

[4] The sampling procedures were done on database counts for Euro-direct and Euro-PCT regional phase filings only (PCT-IP filings were ignored for the sampling due to a lack of timeliness).

- "Random": This sample includes 2 029 applicants and is designed to represent all applicants of the parent population. It was obtained from a simple random sample of applications, with the effect of over-weighting large applicants due to their larger numbers of applications.



These samples were drawn separately, although Random and Biggest groups contain an overlap of 308 large applicants that are part of both groups. The EPO also added another 24 deliberately selected addresses that are of special interest. Without double counting caused by the overlap, the gross sample includes a total of 2 164 applicant addresses. Both samples should adequately represent the three regions, Europe, the US, and Japan. Other countries comprise a residual group of all other countries in the world and the sampling scheme for the Random group gives them adequate representation in terms of their numbers of patent applications to the EPO.

The questionnaire used for data collection was broadly similar to the one used in 2008 (see **Annex 1**). It contained a full matrix of questions on patent filings and expectations for patent filings for the coming three years, in this case for 2009, 2010 and 2011, itemised by first and subsequent filings, not only at the EPO but also in other main worldwide patent offices.[5] Apart from the main questions on predicting numbers of patent filings, questions were asked to elicit information on R&D expenditures and first filings by 14 joint clusters (roughly equivalent to industry segments) that are relevant to EPO operations. Descriptive information was also collected on company type and size in terms of persons employed and in terms of worldwide sales. New questions were included in this year's survey covering the following issues: average number of first filings for a single invention; impact of the current worldwide recession on the level of R&D budget; influential factors on decision for filing an application (both under normal circumstances and during the current worldwide recession); evaluation of the current EPO fee system, and the applicant's patent filing history.

For details on parent population, target persons, questionnaire topics, data collection procedure, and response statistics refer to **Annex I**.

[5] An option was provided to give information in the form of growth rates rather than actual numbers. Growth rates on a year-by-year basis were a permitted alternative because previous experience showed that some interviewees had difficulties calculating growth rates from a single base year. However, for this report we adopt the convention of indicating growth rates with respect to the base year (in this case 2008).

2 Forecast of future patent filings at EPO

Based on the recommended forecast method derived in **Section 3,** the estimated growth rates for Total filings (with respect to 2008) were calculated as -7.6% for 2009, -2.4% for 2010, and 1.9% for 2011. The **overall survey forecast for total filings in 2009 is 209 040**, with approximate 95% confidence limits of 201 830 to 216 251, resulting in a deviation of ±3.4%[6]. This forecast agrees quite well with the current estimate of actual 2009 filings currently at 213 017. The estimated percentage of PCT-IP filings amongst total filings for 2009 is 75.0%, compared to an actual value of 74.0%. For 2010, the recommended forecast method predicts **220 901** total filings with approximate 95% confidence limits of **211 940** and **229 862**. For 2011, the recommended method estimates **230 515** total filings with approximate 95% confidence limits of **220 420** and **240 610**.

Although the concept of incorporating correction factors based on birth and death effects of the entire population of applicants was again tried out, one needs to caution that the process of estimating these factors in a sense assumes a stable environment, as these effects are estimated based on historic data. The downturn of filings in the current global economic recession violates this assumption. Thus, although the main filing predictions are given both with and without applying estimated birth and death effects, we recommend using those predictions without correction factors. It should be kept in mind that the survey design alone (without correction factors) cannot properly account for applicants completely dropping out or newly appearing. See **Annex IX** for further explanation.

On the whole, this year's results show marked pessimism for one-year growth from 2008 to 2009. Some estimates, including the recommended one, predict only modest growth for 2010 and 2011, indicating a refined assessment of the current crisis versus the previous year. In last year's survey, growth rates were dampened but still positive for first-year growth, but then largely returned to normal for year 2. Volatility of estimates is somewhat higher than in previous years possibly due to the increased economic uncertainty.

As in previous years, it was also possible to analyse the questions on PCT filings entering the regional phase at the EPO (Euro-PCT-RP). For the Biggest group, growth rates (compared with 2008) can be estimated at -1.0% in 2009, -3.9% in 2010, and -1.4% in 2011. For the Random group, growth rates can be estimated at -0.9% in 2009, 1.8% in 2010, and 7.3% in 2011. Fot both Total filings and Euro-PCT-RP filings, estimates based on the Random group are somewhat more optimistic than those based on the Biggest group.

3 Summary of forecasts and comparison with previous panel surveys

This report presents and discusses a variety of different forecasting approaches. Overviews of the main results presented in **Section 4** are summarised in **Table 1** with respect to growth rates and in **Table 2** for the resulting predicted filing numbers.

[6] The term deviation refers to the distance from the forecasted filings number to the lower 95% confidence limit of the forecast as a percentage of the forecasted filings number.

Comparison of forecasts: Growth from 2008
Euro-direct and PCT-IP

		Year					
		2009		2010		2011	
Group	**Breakdown**	Growth rate	Deviation*	Growth rate	Deviation*	Growth rate	Deviation*
Biggest	None	-6.9%		-4.3%		-2.5%	
Biggest	Residence bloc	-7.6%		-4.6%		-2.3%	
Random	None	-3.2%	4.6%	2.8%	5.2%	7.2%	5.8%
Random	None (winsorized)	-3.2%	4.6%	2.8%	5.2%	7.2%	5.8%
Random	None (Euro-direct and PCT-IP filings combined)	-7.6%	3.4%	-2.4%	4.1%	1.9%	4.4%
Random	None (excluding companies with comments)	-3.7%	6.4%	3.7%	6.8%	10.0%	7.7%
Random	Residence bloc	-2.0%	4.5%	6.1%	5.0%	11.8%	6.1%
Random	Residence bloc (winsorized)	-3.4%	3.8%	5.0%	4.1%	10.6%	5.1%
Random	Residence bloc (ED and PCT-IP filings combined)	-5.5%	4.3%	0.2%	4.6%	4.5%	4.9%
Random	Residence bloc (excluding companies with comments)	-0.4%	6.3%	9.6%	7.7%	16.7%	8.5%
Biggest	EPO mega cluster	-4.7%		-1.6%		0.4%	
Random	EPO mega cluster	-3.3%	4.9%	2.4%	5.5%	6.8%	6.2%
Random	EPO mega cluster and residence bloc	-7.9%	4.8%	-1.6%	5.9%	2.7%	7.0%

*) **Deviation** corresponds to the distance from the forecasted filings to the lower 95% confidence limit (as % of the forecasted filings)

Table 1: Predicted growth rates for Euro-direct and PCT-IP filings by forecasting methods

Comparison of forecasts: Predicted total filings
Euro-direct and PCT-IP
LCL/UCL indicates lower/upper 95% confidence limit

		Year								
		2009			2010			2011		
Group	**Breakdown**	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL
Biggest	None	210 694			216 608			220 645		
Biggest	Residence bloc	209 136			215 876			221 127		
Random	None	219 053	208 879	229 226	232 712	220 572	244 852	242 511	228 440	256 582
Random	None (winsorized)	214 791	207 222	222 360	229 138	220 199	238 076	239 169	228 517	249 821
Random	None (Euro-direct and PCT-IP filings combined)	209 040	201 830	216 251	220 901	211 940	229 862	230 515	220 420	240 610
Random	None (excluding companies with comments)	217 879	203 926	231 832	234 780	218 834	250 725	248 890	229 706	268 075
Random	Residence bloc	221 867	211 859	231 875	240 141	228 031	252 252	253 034	237 692	268 376
Random	Residence bloc (winsorized)	218 709	210 364	227 053	237 602	227 850	247 355	250 245	237 568	262 923
Random	Residence bloc (ED and PCT-IP filings combined)	213 809	204 607	223 011	226 668	216 134	237 203	236 512	224 915	248 110
Random	Residence bloc (excluding companies with comments)	225 436	211 254	239 617	248 000	228 871	267 129	263 997	241 654	286 339
Biggest	EPO mega cluster	215 618			222 711			227 105		
Random	EPO mega cluster	218 754	208 127	228 220	231 768	218 935	243 229	241 613	226 694	254 614
Random	EPO mega cluster and residence bloc	208 449	198 432	218 465	222 689	209 591	235 787	232 487	216 280	248 695
Actual Filings		213 017								

Table 2: Predicted total numbers of Euro-direct and PCT-IP filings by forecasting methods

A priori the Biggest group is not the preferred sample on which to base overall estimates of growth rates and filings, since its composition is skewed to large companies. Although it gives valuable information about the intentions of the small number of major applicants to EPO, it is not representative of the overall EPO applicant population, whereas the Random group represents a probabilistic sample of the totality of the EPO applicant population. The recommendation regarding which sample group to use thus usually goes to the Random group.

Comparing the scenarios with no residence bloc breakdowns or other corrections, all estimates of growth based on the Biggest group this year are clearly more pessimistic than those of the Random group. In fact, based on the Biggest group estimate, even the filing numbers in 2011 will remain below those in 2008, indicating the expectation of a slower economic recovery among big applicants.

This year, the forecasting method preferred in previous years using the Random group without any breakdown does not appear to perform as well as usual. When compared with the current estimate of actual 2009 filings, the growth estimate appears to be rather optimistic and in addition the deviation is higher than those of some other potential candidates.

When considering which forecasting method to use, our recommendation this year is based, as in previous years, on predictive accuracy for one-year growth and low variability of the estimate. Thus, this year we recommend using the forecast without any breakdowns and combining Euro-Direct and PCT-IP filings[7]. Its one-year estimate aligns quite well with the current expectation of actual filings in 2009 and it has the lowest deviation of all estimates and for all forecast years. The filing estimates using the recommended prediction method are **209 035 for 2009, 220 896 for 2010, and 230 510 for 2011**. This recommendation also aligns best with the long-term conservativism of estimates based on the Biggest group.

Figure 1 and **Table 3** as well as **Figure 2** and **Table 4** compare the forecasting results of previous panel surveys since 2003 for the Biggest and the Random groups respectively.

The **precision of predictions** from previous years' surveys can be evaluated by comparison with actual filing numbers, which are given in the last row of the respective tables. Based on the actual number of filings, the forecast numbers are given as percentage values of the actual filings in brackets. On the whole, the forecast deviation in terms of the percentage of actual filings remains between 90% and 105% with the notable exception of estimates for 2009. Neither the 2007 nor (more surprisingly) the 2008 survey was able to adequately anticipate the marked downturn in filings in 2009. This holds true for Random group estimates as well as for the – more conservative – Biggest group.[8]

Concerning which sample to base estimates on, in retrospect, the estimates based on the Random group were slightly more accurate than the estimates based the Biggest group, with the exception of estimates of the 2007 and 2008 surveys for 2009, where the Biggest group can now be seen to have fared better.

Given the current uncertainty about the speed of economic recovery, we will continue monitoring the performance of estimates based on both samples in subsequent surveys.

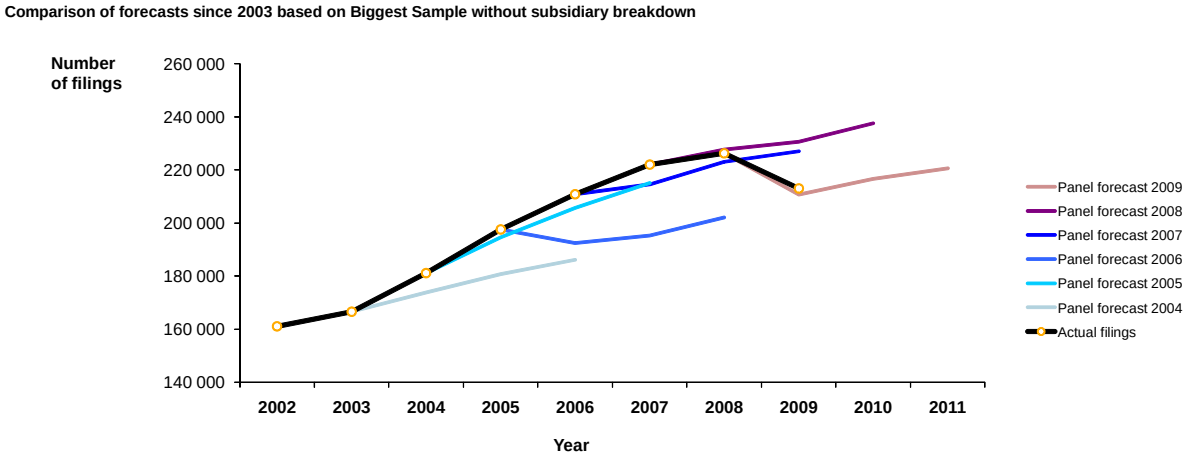


Figure 1: Comparison of forecasts since 2003 (Biggest group with no subsidiary breakdown).

[7] "None (Euro-direct and PCT-IP filings combined)" in Table 1 and Table 2. See also Table 9. Forecasts for PCT proportions are taken from Table 7.

[8] See Annex IX and earlier survey reports for discussion on the advisability and results of using a correction factor on estimates to deal with births and deaths of applicants in the population.

Comparison of forecasts since 2003 based on Biggest Sample without subsidiary breakdown

Number of filings* forecasted based on …	Forecasting Year									
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
… 2003 panel survey (in % of actual filings)	**161 086** (=actual)	**-****	**-****	**-****						
… 2004 panel survey (in % of actual filings)		**166 651** (=actual)	**173 827** (96%)	**180 766** (91%)	**186 140** (88%)					
… 2005 panel survey (in % of actual filings)			**181 109** (=actual)	**194 586** (98%)	**205 662** (98%)	**215 022** (97%)				
… 2006 panel survey (in % of actual filings)				**197 600** (=actual)	**192 442** (91%)	**195 328** (88%)	**202 094** (89%)			
… 2007 panel survey (in % of actual filings)					**210 849** (=actual)	**214 497** (97%)	**223 070** (99%)	**227 064** (107%)		
… 2008 panel survey (in % of actual filings)						**222 046** (=actual)	**227 711** (101%)	**230 606** (108%)	**237 601** (N/A)	
… 2009 panel survey (in % of actual filings)							**226 310** (=actual)	**210 694** (99%)	**216 608** (N/A)	**220 645** (N/A)
Actual filings	**161 086**	**166 651**	**181 109**	**197 600**	**210 849**	**222 046**	**226 310**	**213 017**	**N/A**	**N/A**

*) First and subsequent Euro-direct and Euro-PCT-IP filings

**) The 2003 panel survey did not analyze the Biggest group without subsidiary breakdown

Table 3: Comparison of forecasts since 2003 (Biggest group with no subsidiary breakdown)

Comparison of forecasts since 2003 based on the recommended forecast

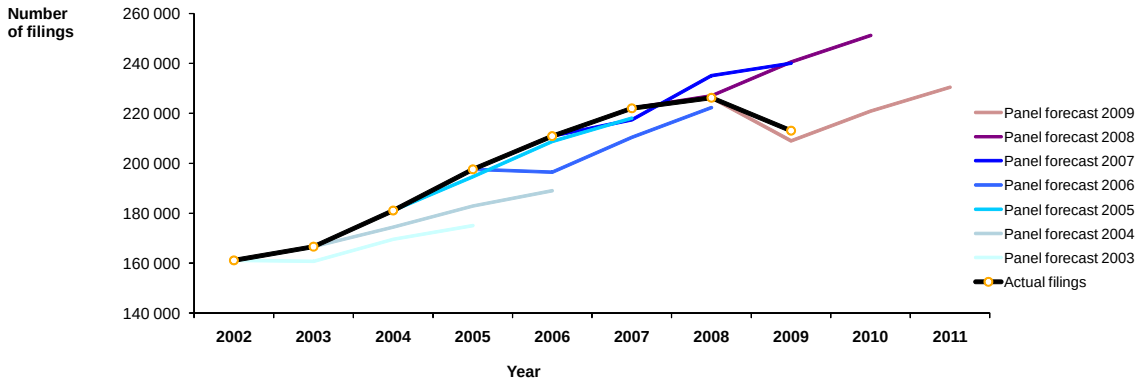


Figure 2: Comparison of recommended forecasts since 2003 (Random group).

Survey year	Recommended forecast method	Forecast*)	Forecasting Year 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
2003	**Random group** with residence bloc breakdown (EPC and Others combined)	**Number of filings** (in % of actual filings) *Lower confidence limit* *Upper confidence limit*	**161 086** (=actual)	**160 766** (96%) *155 007* *166 525*	**169 511** (94%) *160 982* *178 091*	**175 029** (89%) *166 171* *184 680*						
2004	**Random group** without subsidiary breakdown	**Number of filings** (in % of actual filings) *Lower confidence limit* *Upper confidence limit*		**166 651** (=actual)	**174 456** (96%) *164 250* *184 661*	**182 833** (93%) *170 228* *195 439*	**188 957** (90%) *175 084* *202 830*					
2005	**Random group** without subsidiary breakdown	**Number of filings** (in % of actual filings) *Lower confidence limit* *Upper confidence limit*			**181 109** (=actual)	**194 673** (99%) *186 324* *203 023*	**208 772** (99%) *197 983* *219 560*	**218 007** (98%) *205 505* *230 509*				
2006	**Random group** with residence bloc breakdown	**Number of filings** (in % of actual filings) *Lower confidence limit* *Upper confidence limit*				**197 600** (=actual)	**196 402** (93%) *178 298* *214 506*	**210 436** (95%) *187 051* *233 821*	**222 271** (98%) *196 847* *247 694*			
2007	**Random&Smallest group** without subsidiary breakdown	**Number of filings** (in % of actual filings) *Lower confidence limit* *Upper confidence limit*					**210 849** (=actual)	**217 444** (98%) *209 961* *224 927*	**235 056** (104%) *227 359* *242 753*	**240 131** (113%) *231 081* *249 180*		
2008	**Random group** without subsidiary breakdown	**Number of filings** (in % of actual filings) *Lower confidence limit* *Upper confidence limit*						**222 046** (=actual)	**226 978** (100%) *219 446* *234 509*	**240 574** (113%) *231 547* *249 601*	**251 198** (N/A) *240 746* *261 649*	
2009	**Random group** without subsidiary breakdown Euro-direct and Euro-PCT-IP filings combined	**Number of filings** (in % of actual filings) *Lower confidence limit* *Upper confidence limit*							**226 310** (=actual)	**209 040** (98%) *201 830* *216 251*	**220 901** (N/A) *211 940* *229 862*	**230 515** (N/A) *220 420* *240 610*
		Actual filings	**161 086**	**166 651**	**181 109**	**197 600**	**210 849**	**222 046**	**226 310**	**213 017**	**N/A**	**N/A**

*) First and subsequent Euro-direct and Euro-PCT-IP filings

Table 4: Comparison of recommended forecasts since 2003 (Random group)

4 Methodology and Individual Forecasts

Section 4.1 details the methodology employed for obtaining the growth forecasts. In **Sections 4.2 and 4.3,** results for the Biggest group and the Random group are presented respectively. Detailed results for all sample groupings itemised by mega cluster are given in **Section 4.4**.[9]

4.1 Methodology and Structure of Results

The main part of the survey covers the predictions of future patent filings and the basic approach was the same as in the previous surveys. For a detailed description of the methodology please refer to the *Applicant Panel Survey 2003 report*. The survey data from the main questions in **Part B** of the questionnaire are used to measure patent growth rates. For the Biggest group, growth rates are calculated as a **composite index**.[10] Growth rates in the Random group are calculated as a **Q Index**.[11]

As in previous years, a natural logarithmic transformation was applied to the data before calculating the Q Index.[12] As introduced in 2006, a finite population correction (fpc) was included when calculating the confidence limits for forecasts of total patent filings. Details on the construction of the finite population correction are given in the Applicant Panel Survey 2006 report[13]. Specific fpc values used this year are explained in **Annex III, Section 9.2**.

[9] See Annex III, Section 9, for an explanation of mega clusters.
[10] Cf. Applicant Panel Survey 2001 report: Annex III.
[11] Cf. Applicant Panel Survey 2002 report: Section IV.1, Annex IV.
[12] Cf. Applicant Panel Survey 2002 report: Annex IV.
[13] Cf. Applicant Panel Survey 2006 report: Annex VII, page 79.

When analysing data subsets, e.g. itemisations by residence blocs or mega clusters, cases arise where the sample size falls below a critical threshold of five or fewer respondents. In such cases for either the composite index or for the Q Index replacement is done by a growth value taken from the corresponding analysis on the next available level of aggregation. In the results tables, the replacement of growth indices with aggregated values is marked with an asterisk (*).

Once the growth indices were calculated based on the survey results, they were multiplied by the actual numbers of filings in the 2008 base year in order to generate explicit forecasts. Data on Euro-direct, PCT-IP and Euro-PCT-RP filings for 2008 and 2009 were supplied by the EPO on February 8, 2010, and reflect the state of knowledge as of that date.

The patent filing predictions are presented in various **breakdown scenarios**, e.g. itemising by residence blocs or mega clusters. Based on the resulting forecasts by accumulation, an overall growth forecast is derived for each year. Of particular interest for the EPO are filing predictions on the level of the five mega clusters. As the Random group constitutes a random sample across applications, the responses can be disaggregated by mega cluster as an alternative to the breakdown by residence bloc. Care has to be taken when interpreting these estimates, as case numbers for some cells in the breakdown matrix are rather small.

In many cases, the responses on growth forecasts in the questionnaire (**Part B**) made it necessary for the researchers to validate the responses, usually by conducting a clarifying conversation with the respondent. In some cases, more substantial **qualifying comments**[14] were given for the interpretation of the results. These cases are specifically marked for the data analyses in order to forecast growth estimates including and excluding the respective responses. For details, please refer to plausibility checks described in **Annex I, Section 7.5**.

As a means of analysing and reducing distortions by outliers**,** the technique of **winsorisation** was applied.[15] Using this method, the data were adjusted by replacing the most extreme growth indices after logarithmic transformation. Indices that fall below the 5% percentile and indices that lie above the 95% percentile are replaced by the respective percentile. The adjusted data were then used for carrying out Q Index calculations according to the various breakdown scenarios. This year, in contrast to previous years, winsorisation analyses revealed at least one relatively highly weighted respondent that intends to shift from Euro-direct to PCT-IP filings and thus gives outlying Q indices for each component considered separately. Two forecasting tables based on winsorised data are included in this report.

4.2 Biggest group

The Biggest group is based on a sample of 414 addresses found for Euro-direct filings and Euro-PCT-RP filings, of which 208 responded to the Future Filings Survey 2009 (50.2%).

It is considered appropriate to calculate growth rates for the Biggest group as a composite index (CI).[16] Detailed information on the forecasts by filing type and route are shown in **Table 5** and **Figure 3** (no subsidiary breakdown). **Table 6** shows details of the forecasts by filing type

[14] For details on qualifying comments see Annex II.
[15] Cf. Applicant Panel Survey 2006: Section 7.5.
[16] Cf. Applicant Panel Survey 2001 report: Annex III.

and route where the four residence blocs Europe (EPC), Japan (JA), Other (OT) and the US are differentiated (broken down by residence blocs). No confidence limits are given for the estimates as this is a survey of the intentions of the Biggest applicants and not of a random statistical sample. The forecasts for the absolute number of both Euro-direct and PCT-IP filings are illustrated in **Figure 3**, based on the analysis with no subsidiary breakdown.

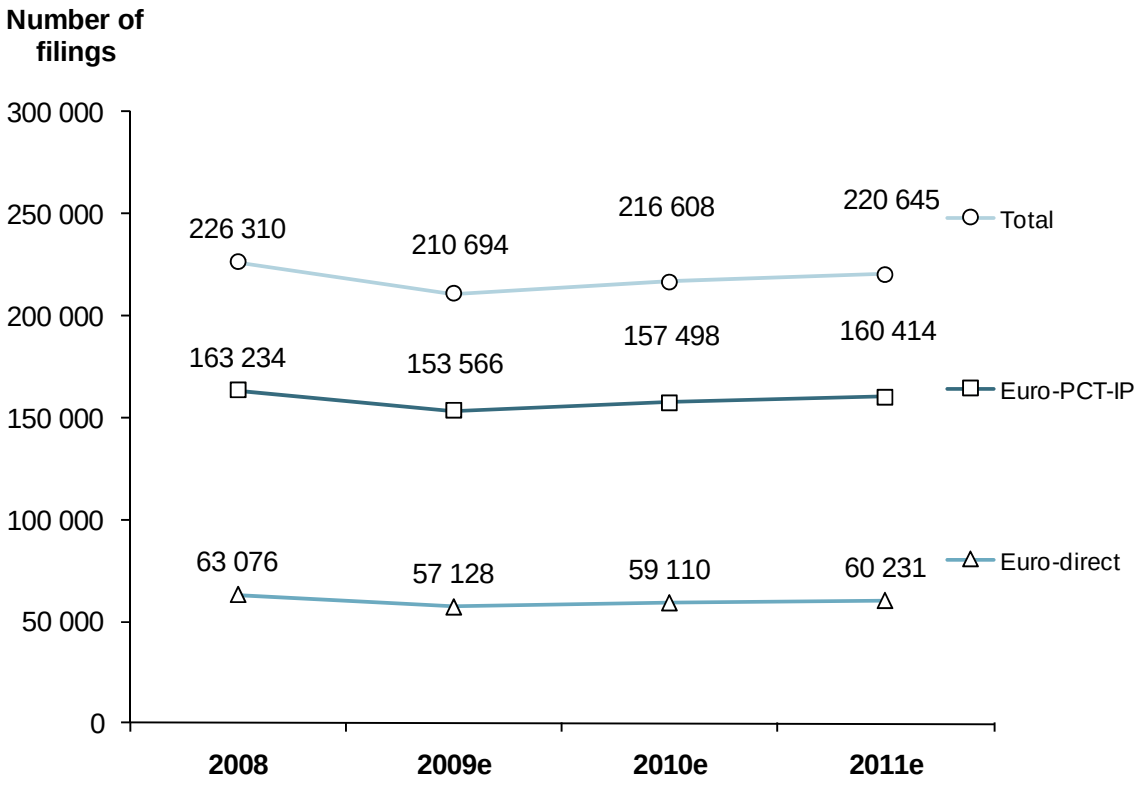


Figure 3: Forecasts for EPO filings – Biggest group with no subsidiary breakdown.

Biggest group
No subsidiary breakdown
Composite indices

			Year										
			2008	2009				2010			2011		
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Index 09	Predicted filings	Actual filings	Cases 10	Index 10	Predicted filings	Cases 11	Index 11	Predicted filings
First	Euro-direct	Total	20 959	85	0.9112	19 098	18 966	77	0.9455	19 817	71	0.9609	20 139
	Euro-PCT-IP	Total	15 148	59	0.9885	14 975	15 292	55	1.0025	15 187	52	1.0183	15 425
Subsequent	Euro-direct	Total	42 117	131	0.9030	38 031	36 518	110	0.9329	39 293	109	0.9519	40 092
	Euro-PCT-IP	Total	148 086	159	0.9359	138 592	142 241	139	0.9610	142 311	130	0.9791	144 989
All	Euro-direct	Total	63 076			57 128	55 484			59 110			60 231
	Euro-PCT-IP	Total	163 234			153 566	157 532			157 498			160 414
Grand total		**Total**	**226 310**			**210 694**	**213 017**			**216 608**			**220 645**
Growth from 2008						**-6.9%**	**-5.9%**			**-4.3%**			**-2.5%**
Implied % Euro-PCT-IP			**72.1%**			**72.9%**	**74.0%**			**72.7%**			**72.7%**

Table 5: Forecasts for EPO filings – Biggest group with no subsidiary breakdown

Biggest group
Breakdown by residence bloc
Composite indices

			Year										
			2008	2009				2010			2011		
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Index 09	Predicted filings	Actual filings	Cases 10	Index 10	Predicted filings	Cases 11	Index 11	Predicted filings
First	Euro-direct	EP	17 961	67	0.9314	16 729	16 690	59	0.9640	17 314	56	0.9778	17 563
		JA	362	8	0.4788	173	335	7	0.5070	184	6	0.4835	175
		OT	1 308	1 *	0.9112	1 192	934	1 *	0.9455	1 237	1 *	0.9609	1 257
		US	1 328	9	1.0500	1 394	1 007	10	1.0972	1 457	8	1.1381	1 511
		Total	**20 959**	**85**		**19 488**	**18 966**	**77**		**20 191**	**71**		**20 506**
First	Euro-PCT-IP	EP	4 842	29	0.8819	4 270	4 987	28	0.8510	4 121	28	0.8623	4 175
		JA	4 202	17	1.0043	4 220	4 790	16	1.0172	4 275	15	1.0074	4 234
		OT	4 462	2 *	0.9885	4 411	4 149	2 *	1.0025	4 473	2 *	1.0183	4 543
		US	1 642	11	1.1648	1 913	1 366	9	1.3392	2 200	7	2.1026	3 453
		Total	**15 148**	**59**		**14 814**	**15 292**	**55**		**15 068**	**52**		**16 405**
Subsequent	Euro-direct	EP	18 588	67	0.9025	16 775	16 979	52	0.9404	17 481	53	0.9737	18 099
		JA	10 654	45	0.8936	9 520	8 067	40	0.9096	9 691	39	0.9058	9 650
		OT	4 517	1 *	0.9030	4 079	4 183	1 *	0.9329	4 214	1 *	0.9519	4 300
		US	8 358	18	0.9292	7 766	7 289	17	0.9801	8 191	16	1.0174	8 504
		Total	**42 117**	**131**		**38 140**	**36 518**	**110**		**39 577**	**109**		**40 553**
Subsequent	Euro-PCT-IP	EP	51 918	84	0.9794	50 851	50 320	72	0.9679	50 253	67	0.9893	51 363
		JA	24 581	50	0.9378	23 051	26 516	45	0.9816	24 127	44	0.9896	24 326
		OT	21 710	1 *	0.9359	20 318	21 698	1 *	0.9610	20 864	1 *	0.9791	21 256
		US	49 877	24	0.8516	42 474	43 707	21	0.9182	45 796	18	0.9367	46 718
		Total	**148 086**	**159**		**136 693**	**142 241**	**139**		**141 039**	**130**		**143 663**
All	Euro-direct	EP	36 549			33 504	33 669			34 795			35 662
		JA	11 016			9 694	8 402			9 874			9 825
		OT	5 825			5 271	5 117			5 451			5 557
		US	9 686			9 160	8 297			9 649			10 015
		Total	**63 076**			**57 629**	**55 484**			**59 769**			**61 059**
All	Euro-PCT-IP	EP	56 760			55 121	55 308			54 373			55 538
		JA	28 783			27 271	31 305			28 402			28 559
		OT	26 172			24 729	25 846			25 337			25 800
		US	51 519			44 387	45 073			47 996			50 171
		Total	**163 234**			**151 508**	**157 532**			**156 107**			**160 068**
Grand total	**Total**	EP	93 309			88 624	88 976			89 168			91 200
		JA	39 799			36 965	39 708			38 276			38 385
		OT	31 997			30 000	30 963			30 788			31 356
		US	61 205			53 547	53 370			57 644			60 186
		Total	**226 310**			**209 136**	**213 017**			**215 876**			**221 127**
Growth from 2008						**-7.6%**	**-5.9%**			**-4.6%**			**-2.3%**
Implied Euro-PCT-IP						**72.4%**	**74.0%**			**72.3%**			**72.4%**

Table 6: Forecasts for EPO filings – Biggest group, broken down by residence bloc

4.3 Random group

The Random group is based on a sample of 1 920 addresses found for Euro-direct filings and Euro-PCT-RP filings, of which 647 responded to the survey (33.7%).

For responses from the Random group, the Q Index method was used following logarithmic transformation of the data. All results tables for the Random group analyses show the numbers of cases that estimates were based on, Q indices with their standard errors, the resulting filing forecasts and the 95% confidence intervals based thereon.[17]

The forecasts for numbers of patent filings without a breakdown by residence bloc are illustrated in **Table 7** to **Table 10**. **Figure 4** and **Table 7** depict the results with the usual breakdowns by filing types and filing routes. **Table 8** gives the results of the same forecast method using winsorised data. To address the shifting of and uncertainty about filing routes, a forecast combining filing routes Euro-direct and PCT-IP was done, the results of which are displayed in **Figure 5** and **Table 9**. Finally, **Table 10** provides the results of the analysis without a breakdown by residence bloc but excluding those companies for which qualifying comments were given.

Analyses for the Random group using a breakdown into the four residence blocs Europe (EPC), Japan (JA), Other (OT) and the US are shown in **Table 11** to **Table 14**. **Table 11** shows the results when using all available data. **Table 12** depicts the results using winsorised data. **Table 13** combines Euro-direct and PCT-IP filings prior to estimation and **Table 14** excludes cases with qualifying comments.

The analysis corresponding to **Table 7**, with no subsidiary breakdown, was used for the recommended filing forecasts in the 2005, 2007 and 2008 reports. This recommendation was based mostly on narrow confidence intervals of the forecast and better adherence to known filing figures of the survey year compared to other forecasting approaches.

This year, however, comparing the deviations and widths of the confidence intervals shown in **Table 7** (analysis with no subsidiary breakdown) and **Table 9** (analysis with no subsidiary breakdown and with Euro-direct and PCT-IP filings combined), it becomes apparent that combining filing routes leads to narrower confidence intervals.

In contrast to previous years, analyses excluding cases with qualifying comments are not consistently more conservative in terms of one-year growth estimates than the respective estimate using all available applicants. In fact, overall three-year growth estimates using only companies without qualifying comments project higher growth but have higher deviations.

[17] Cf. Applicant Panel Survey 2002 report: Section IV.1, Annex IV. Reported standard errors are based on the logarithms of the respective Q-Index estimates. Cf. Applicant Panel Survey 2002 report, Annex IV. Finite population correction factors are applied. Cf. Applicant panel Survey 2006 report: Annex VII, page 79.

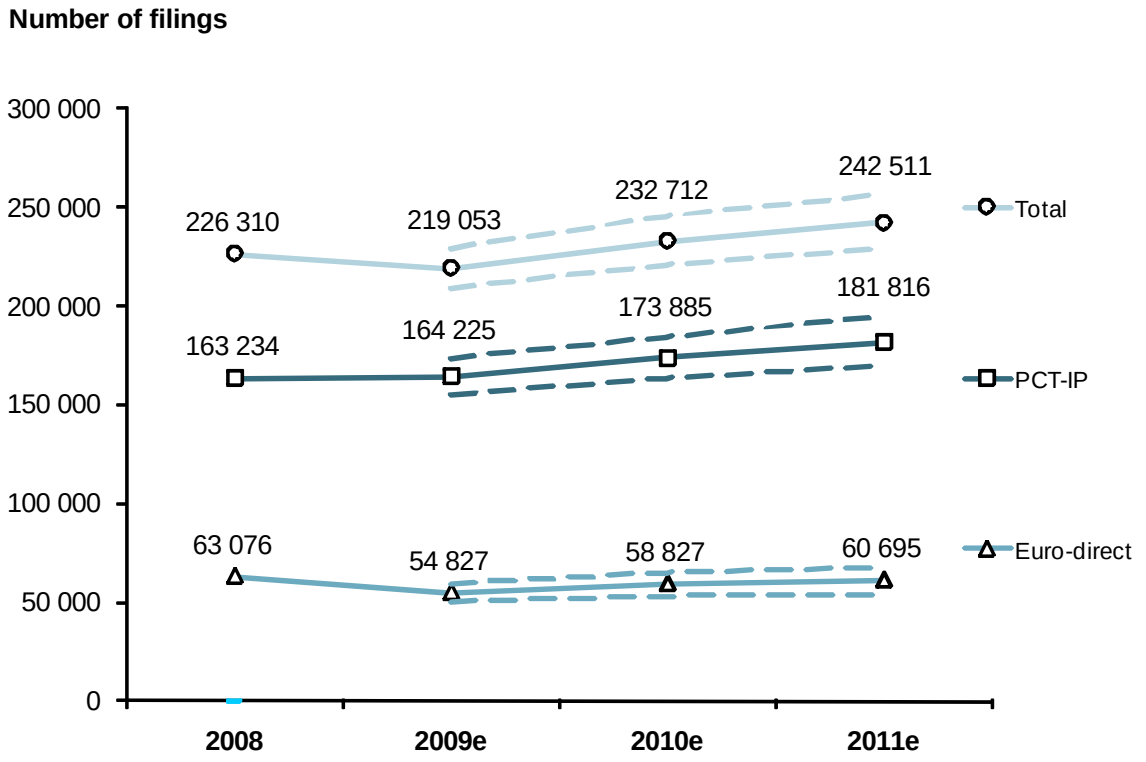


Figure 4: Forecasts for EPO filings – Random group without breakdown by residence bloc (dotted lines illustrate 95% confidence limits).

Random group
No subsidiary breakdown
Q-Indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index	S.E. 10	Predicted filings	Cases 11	Q-index	S.E. 11	Predicted filings
First	Euro-direct	**Total**	**20 959**	195	0.9721	0.0267	**20 373**	**18 966**	183	1.0421	0.0313	**21 841**	170	1.0636	0.0376	**22 291**
		LCL					19 308					20 499				20 647
		UCL					21 439					23 184				23 936
First	Euro-PCT-IP	**Total**	**15 148**	147	1.1271	0.0830	**17 074**	**15 292**	141	1.1724	0.0972	**17 759**	132	1.2328	0.1089	**18 674**
		LCL					14 283					14 350				14 652
		UCL					19 864					21 168				22 697
Subsequent	Euro-direct	**Total**	**42 117**	273	0.8181	0.0696	**34 454**	**36 518**	243	0.8782	0.0804	**36 986**	233	0.9118	0.0866	**38 404**
		LCL					29 740					31 127				31 852
		UCL					39 168					42 844				44 955
Subsequent	Euro-PCT-IP	**Total**	**148 086**	338	0.9937	0.0295	**147 152**	**142 241**	306	1.0543	0.0326	**156 126**	292	1.1017	0.0365	**163 141**
		LCL					138 646					146 144				151 472
		UCL					155 657					166 108				174 811
All	Euro-direct	**Total**	**63 076**				**54 827**	**55 484**				**58 827**				**60 695**
		LCL					49 994					52 817				53 941
		UCL					59 660					64 837				67 450
All	Euro-PCT-IP	**Total**	**163 234**				**164 225**	**157 532**				**173 885**				**181 816**
		LCL					155 274					163 337				169 472
		UCL					173 177					184 433				194 159
Grand total		**Total**	**226 310**				**219 053**	**213 017**				**232 712**				**242 511**
		LCL					208 879					220 572				228 440
		UCL					229 226					244 852				256 582
Growth from 2008							**-3.2%**	**-5.9%**				**2.8%**				**7.2%**
Implied % Euro-PCT-IP			**72.1%**				**75.0%**	**74.0%**				**74.7%**				**75.0%**
Deviation in % of forecast							**4.6%**					**5.2%**				**5.8%**

Table 7: Forecasts for EPO filings – Random group with no subsidiary breakdown

Forecasts for EPO filings - Random group with no subsidiary breakdown

WINSORIZED "5/95" (log)

Random group
No subsidiary breakdown
Q-Indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year												
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index	S.E. 10	Predicted filings	Cases 11	Q-index	S.E. 11	Predicted filings
First	Euro-direct	**Total**	**20 959**	195	0.9763	0.0244	**20 463**	**18 966**	183	1.0527	0.0281	**22 064**	170	1.0729	0.0359	**22 487**
		LCL					19 484					20 850				20 902
		UCL					21 442					23 278				24 072
First	Euro-PCT-IP	**Total**	**15 148**	147	1.1322	0.0794	**17 151**	**15 292**	141	1.1495	0.0917	**17 413**	132	1.2096	0.1035	**18 324**
		LCL					14 468					14 263				14 577
		UCL					19 834					20 564				22 071
Subsequent	Euro-direct	**Total**	**42 117**	273	0.8284	0.0651	**34 890**	**36 518**	243	0.8997	0.0699	**37 894**	233	0.9337	0.0716	**39 327**
		LCL					30 423					32 687				33 783
		UCL					39 356					43 101				44 870
Subsequent	Euro-PCT-IP	**Total**	**148 086**	338	0.9608	0.0194	**142 287**	**142 241**	306	1.0249	0.0216	**151 766**	292	1.0739	0.0261	**159 032**
		LCL					136 884					145 333				150 896
		UCL					147 689					158 199				167 167
All	Euro-direct	**Total**	**63 076**				**55 353**	**55 484**				**59 958**				**61 814**
		LCL					50 780					54 611				56 048
		UCL					59 926					65 305				67 579
All	Euro-PCT-IP	**Total**	**163 234**				**159 438**	**157 532**				**169 179**				**177 355**
		LCL					153 406					162 016				168 398
		UCL					165 470					176 342				186 312
Grand total		**Total**	**226 310**				**214 791**	**213 017**				**229 138**				**239 169**
		LCL					207 222					220 199				228 517
		UCL					222 360					238 076				249 821
Growth from 2008							**-5.1%**	**-5.9%**				**1.2%**				**5.7%**
Implied % Euro-PCT-IP			**72.1%**				**74.2%**	**74.0%**				**73.8%**				**74.2%**
Deviation in % of forecast							**3.5%**					**3.9%**				**4.5%**

Table 8: Forecasts for EPO filings – Random group with no subsidiary breakdown, Analysis employing winsorisation

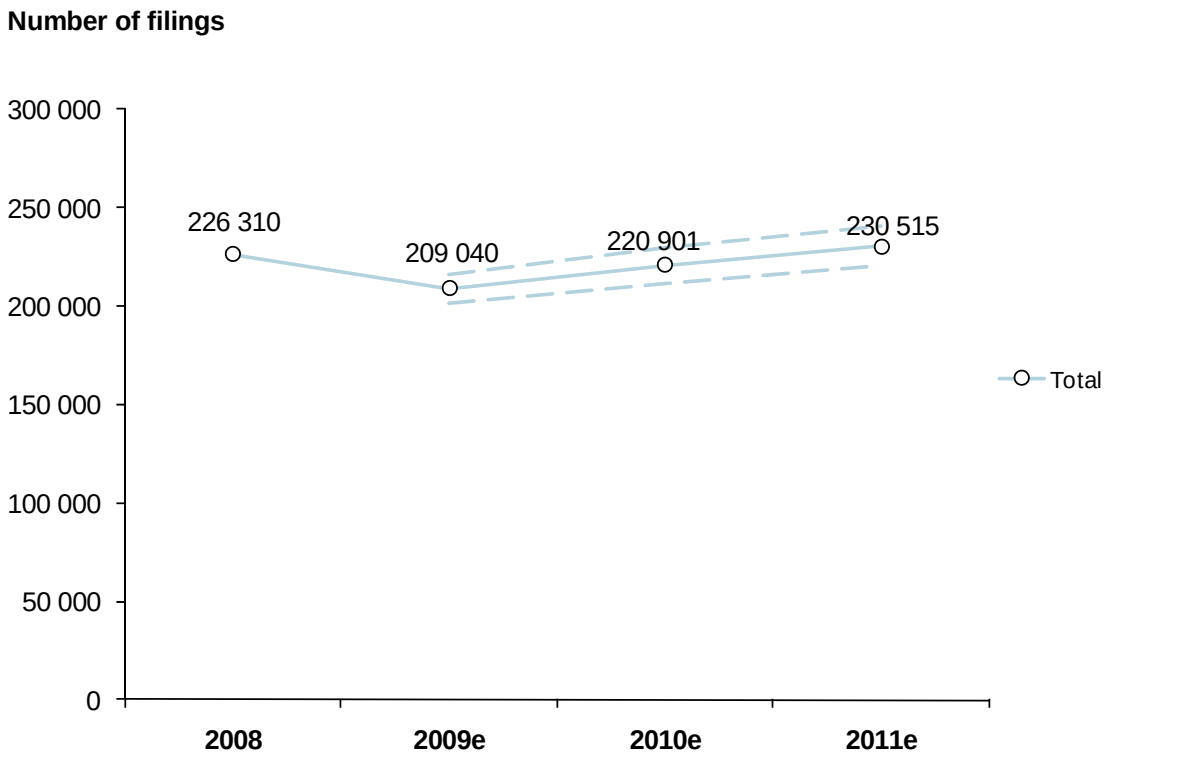


Figure 5: Forecasts for EPO filings – Random group without breakdown by residence bloc, Euro-direct and PCT-IP filings combined (dotted lines illustrate 95% confidence limits).

Random group
No subsidiary breakdown
Q-Indices
Euro-direct and Euro-PCT-IP filings combined

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	All	**Total**	**36 107**	152	1.0210	0.0349	**36 866**	**34 258**	143	1.0653	0.0468	**38 464**	136	1.1061	0.0557	**39 939**
		LCL					34 342					34 934				35 565
		UCL					39 390					41 994				44 312
Subsequent	All	**Total**	**190 203**	288	0.9052	0.0200	**172 174**	**178 759**	255	0.9592	0.0230	**182 437**	245	1.0020	0.0243	**190 576**
		LCL					165 420					174 201				181 478
		UCL					178 928					190 673				199 674
Grand total		**Total**	**226 310**				**209 040**	**213 017**				**220 901**				**230 515**
		LCL					201 830					211 940				220 420
		UCL					216 251					229 862				240 610
Growth from 2008							**-7.6%**	**-5.9%**				**-2.4%**				**1.9%**
Deviation in % of forecast							**3.4%**					**4.1%**				**4.4%**

Table 9: Forecasts for EPO filings – Random group with no subsidiary breakdown (Euro-direct and PCT-IP filings combined)

Random group
No subsidiary breakdown (excluding companies with qualifying comments)
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	Euro-direct	**Total**	**20 959**	84	0.9098	0.0419	**19 069**	**18 966**	77	1.0013	0.0507	**20 986**	71	1.0707	0.0620	**22 441**
		LCL					17 500					18 896				19 708
		UCL					20 637					23 075				25 174
First	Euro-PCT-IP	**Total**	**15 148**	56	1.0866	0.1862	**16 460**	**15 292**	51	1.3561	0.1872	**20 543**	49	1.4696	0.2170	**22 262**
		LCL					10 294					12 804				12 453
		UCL					22 626					28 282				32 071
Subsequent	Euro-direct	**Total**	**42 117**	167	0.8626	0.0407	**36 328**	**36 518**	151	0.9438	0.0469	**39 750**	146	0.9980	0.0516	**42 032**
		LCL					33 427					36 088				37 776
		UCL					39 229					43 412				46 287
Subsequent	Euro-PCT-IP	**Total**	**148 086**	214	0.9861	0.0421	**146 022**	**142 241**	196	1.0366	0.0441	**153 501**	188	1.0950	0.0493	**162 155**
		LCL					133 948					140 212				146 463
		UCL					158 096					166 789				177 848
All	Euro-direct	**Total**	**63 076**				**55 397**	**55 484**				**60 736**				**64 473**
		LCL					52 099					56 519				59 415
		UCL					58 694					64 952				69 531
All	Euro-PCT-IP	**Total**	**163 234**				**162 482**	**157 532**				**174 044**				**184 418**
		LCL					148 925					158 666				165 912
		UCL					176 040					189 422				202 923
Grand total		**Total**	**226 310**				**217 879**	**213 017**				**234 780**				**248 890**
		LCL					203 926					218 834				229 706
		UCL					231 832					250 725				268 075
Growth from 2008							**-3.7%**	**-5.9%**				**3.7%**				**10.0%**
Implied % Euro-PCT-IP			**72.1%**				**74.6%**	**74.0%**				**74.1%**				**74.1%**
Deviation in % of forecast							**6.4%**					**6.8%**				**7.7%**

Table 10: Forecasts for EPO filings – Random group with no subsidiary breakdown (excluding companies with qualifying comments)

Random group
Breakdown by residence bloc
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	Euro-direct	EP	17 961	164	0.9600	0.0275	17 242	16 690	148	1.0403	0.0336	18 684	140	1.0565	0.0398	18 976
		JA	362	11	0.9724	0.1986	352	335	12	0.9463	0.1886	343	9	0.9551	0.2639	346
		OT	1 308	5 *	0.9721	0.0267	1 271	934	5 *	1.0421	0.0313	1 363	5 *	1.0636	0.0376	1 391
		US	1 328	15	1.0473	0.0715	1 391	1 007	18	1.0855	0.0590	1 441	16	1.1380	0.0672	1 511
		Total	**20 959**	**195**			**20 256**	**18 966**	**183**			**21 832**	**170**			**22 224**
		LCL					19 292					20 579				20 715
		UCL					21 220					23 084				23 733
First	Euro-PCT-IP	EP	4 842	80	1.0174	0.0882	4 926	4 987	77	1.0351	0.0961	5 012	75	1.0720	0.1030	5 190
		JA	4 202	25	1.1927	0.1067	5 012	4 790	26	1.2059	0.1117	5 068	24	1.2834	0.1305	5 393
		OT	4 462	12	1.5176	0.1634	6 771	4 149	11	1.8024	0.2168	8 042	9	2.2215	0.2497	9 912
		US	1 642	30	1.5190	0.2893	2 495	1 366	27	1.7470	0.2942	2 869	24	2.0164	0.3069	3 312
		Total	**15 148**	**147**			**19 204**	**15 292**	**141**			**20 991**	**132**			**23 807**
		LCL					16 201					16 771				18 021
		UCL					22 207					25 211				29 593
Subsequent	Euro-direct	EP	18 588	161	0.7961	0.1025	14 798	16 979	137	0.8391	0.1200	15 597	133	0.8759	0.1266	16 282
		JA	10 654	71	0.8350	0.0763	8 896	8 067	66	0.8539	0.0787	9 097	63	0.8769	0.0831	9 343
		OT	4 517	10	0.9498	0.0815	4 290	4 183	9	1.0662	0.0970	4 816	9	1.1218	0.1260	5 067
		US	8 358	31	0.8685	0.1041	7 259	7 289	31	1.1188	0.0816	9 351	28	1.1808	0.0917	9 869
		Total	**42 117**	**273**			**35 244**	**36 518**	**243**			**38 861**	**233**			**40 561**
		LCL					31 574					34 520				35 678
		UCL					38 913					43 203				45 444
Subsequent	Euro-PCT-IP	EP	51 918	193	1.0462	0.0403	54 318	50 320	175	1.0802	0.0452	56 082	167	1.1313	0.0500	58 736
		JA	24 581	90	0.9094	0.0613	22 355	26 516	83	1.0028	0.0666	24 651	81	1.0313	0.0724	25 350
		OT	21 710	10	1.2025	0.1191	26 106	21 698	10	1.3423	0.1235	29 142	10	1.4620	0.1412	31 740
		US	49 877	45	0.8899	0.0415	44 384	43 707	38	0.9741	0.0496	48 584	34	1.0148	0.0710	50 616
		Total	**148 086**	**338**			**147 163**	**142 241**	**306**			**158 458**	**292**			**166 441**
		LCL					138 402					148 044				153 183
		UCL					155 924					168 871				179 700
All	Euro-direct	EP	36 549				32 040	33 669				34 281				35 258
		JA	11 016				9 248	8 402				9 440				9 689
		OT	5 825				5 562	5 117				6 179				6 458
		US	9 686				8 650	8 297				10 793				11 380
		Total	**63 076**				**55 500**	**55 484**				**60 693**				**62 785**
		LCL					51 706					56 175				57 674
		UCL					59 294					65 211				67 896
All	Euro-PCT-IP	EP	56 760				59 244					61 094				63 926
		JA	28 783				27 367					29 718				30 743
		OT	26 172				32 878					37 184				41 651
		US	51 519				46 879					51 453				53 928
		Total	**163 234**				**166 367**	**157 532**				**179 449**				**190 249**
		LCL					157 106					168 213				175 783
		UCL					175 629					190 685				204 714
Grand total	**Total**	EP	93 309				91 284					95 375				99 184
		JA	39 799				36 615					39 158				40 431
		OT	31 997				38 439					43 363				48 110
		US	61 205				55 528					62 245				65 308
		Total	**226 310**				**221 867**	**213 017**				**240 141**				**253 034**
		LCL					211 859					228 031				237 692
		UCL					231 875					252 252				268 376
Growth from 2008							**-2.0%**	**-5.9%**				**6.1%**				**11.8%**
Implied Euro-PCT-IP							**75.0%**	**74.0%**				**74.7%**				**75.2%**
Deviation in % of forecast							**4.5%**					**5.0%**				**6.1%**

Table 11: Forecasts for EPO filings – Random group broken down by residence bloc

Forecasts for EPO filings - Random group, breakdown by residence bloc

WINSORIZED "5/95" (log)

Random group
Breakdown by residence bloc
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	Euro-direct	EP	17 961	164	0.9673	0.0247	17 373	16 690	148	1.0523	0.0307	18 900	140	1.0672	0.0382	19 169
		JA	362	11	0.9402	0.1817	340	335	12	0.9646	0.1488	349	9	0.9607	0.2360	348
		OT	1 308	5 *	0.9721	0.0267	1 271	934	5 *	1.0421	0.0313	1 363	5 *	1.0636	0.0376	1 391
		US	1 328	15	1.0460	0.0712	1 389	1 007	18	1.0819	0.0576	1 437	16	1.1380	0.0672	1 511
		Total	**20 959**	**195**			**20 374**	**18 966**	**183**			**22 049**	**170**			**22 419**
		LCL					19 498					20 893				20 953
		UCL					21 251					23 204				23 884
First	Euro-PCT-IP	EP	4 842	80	1.0376	0.0844	5 024	4 987	77	1.0319	0.0917	4 996	75	1.0678	0.0989	5 170
		JA	4 202	25	1.1585	0.0883	4 868	4 790	26	1.1708	0.0939	4 920	24	1.2487	0.1144	5 247
		OT	4 462	12	1.5176	0.1634	6 771	4 149	11	1.8024	0.2168	8 042	9	2.2215	0.2497	9 912
		US	1 642	30	1.4710	0.2821	2 416	1 366	27	1.5849	0.2865	2 603	24	1.8207	0.3008	2 990
		Total	**15 148**	**147**			**19 080**	**15 292**	**141**			**20 562**	**132**			**23 320**
		LCL					16 195					16 487				17 678
		UCL					21 964					24 636				28 962
Subsequent	Euro-direct	EP	18 588	161	0.8120	0.0985	15 093	16 979	137	0.8581	0.1046	15 950	133	0.8982	0.1049	16 696
		JA	10 654	71	0.8387	0.0526	8 936	8 067	66	0.8967	0.0521	9 553	63	0.9172	0.0560	9 772
		OT	4 517	10	0.9498	0.0815	4 290	4 183	9	1.0662	0.0970	4 816	9	1.1218	0.1260	5 067
		US	8 358	31	0.8628	0.0838	7 212	7 289	31	1.1070	0.0783	9 252	28	1.1520	0.0838	9 628
		Total	**42 117**	**273**			**35 531**	**36 518**	**243**			**39 571**	**233**			**41 163**
		LCL					32 161					35 736				37 007
		UCL					38 901					43 406				45 320
Subsequent	Euro-PCT-IP	EP	51 918	193	0.9999	0.0254	51 912	50 320	175	1.0392	0.0297	53 953	167	1.0943	0.0358	56 813
		JA	24 581	90	0.8841	0.0380	21 733	26 516	83	0.9773	0.0404	24 022	81	1.0065	0.0462	24 740
		OT	21 710	10	1.1733	0.1045	25 472	21 698	10	1.2965	0.0983	28 147	10	1.4031	0.1088	30 462
		US	49 877	45	0.8943	0.0399	44 607	43 707	38	0.9884	0.0451	49 299	34	1.0291	0.0669	51 329
		Total	**148 086**	**338**			**143 724**	**142 241**	**306**			**155 421**	**292**			**163 344**
		LCL					136 710					147 518				152 881
		UCL					150 738					163 325				173 806
All	Euro-direct	EP	36 549				32 466	33 669				34 849				35 864
		JA	11 016				9 276	8 402				9 902				10 120
		OT	5 825				5 562	5 117				6 179				6 458
		US	9 686				8 601	8 297				10 689				11 140
		Total	**63 076**				**55 905**	**55 484**				**61 619**				**63 582**
		LCL					52 423					57 614				59 175
		UCL					59 387					65 625				67 989
All	Euro-PCT-IP	EP	56 760				56 936					58 950				61 983
		JA	28 783				26 601					28 942				29 987
		OT	26 172				32 243					36 189				40 374
		US	51 519				47 023					51 902				54 319
		Total	**163 234**				**162 804**	**157 532**				**175 983**				**186 663**
		LCL					155 220					167 091				174 777
		UCL					170 387					184 875				198 550
Grand total	**Total**	EP	93 309				89 403					93 799				97 847
		JA	39 799				35 877					38 844				40 107
		OT	31 997				37 805					42 368				46 832
		US	61 205				55 623					62 591				65 459
		Total	**226 310**				**218 709**	**213 017**				**237 602**				**250 245**
		LCL					210 364					227 850				237 568
		UCL					227 053					247 355				262 923
Growth from 2008							**-3.4%**	**-5.9%**				**5.0%**				**10.6%**
Implied Euro-PCT-IP							**74.4%**	**74.0%**				**74.1%**				**74.6%**
Deviation in % of forecast							**3.8%**					**4.1%**				**5.1%**

Table 12: Forecasts for EPO filings – Random group broken down by residence bloc, Analysis employing winsorisation

Random group
Breakdown by residence bloc
Q-indices
Euro-direct and Euro-PCT-IP filings combined

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	All	EP	22 803	99	0.9671	0.0320	22 053	21 677	88	0.9983	0.0422	22 764	87	1.0246	0.0493	23 364
		JA	4 564	23	1.1968	0.1416	5 462	5 125	24	1.2015	0.1498	5 484	21	1.3319	0.1870	6 079
		OT	5 770	8	1.1630	0.0773	6 710	5 082	8	1.2258	0.0838	7 073	8	1.2872	0.0886	7 427
		US	2 970	22	1.1663	0.1389	3 464	2 374	23	1.3117	0.1544	3 896	20	1.4753	0.1753	4 382
		Total	**36 107**	**152**			**37 690**	**34 258**	**143**			**39 217**	**136**			**41 252**
		LCL					35 192					36 210				37 458
		UCL					40 188					42 224				45 046
Subsequent	All	EP	70 506	148	0.9469	0.0237	66 760	67 299	127	0.9826	0.0302	69 280	124	1.0275	0.0324	72 444
		JA	35 235	90	0.8281	0.0448	29 177	34 583	84	0.8891	0.0492	31 328	81	0.9275	0.0522	32 680
		OT	26 227	9	1.1600	0.1160	30 423	25 881	9	1.1762	0.1143	30 847	9	1.2247	0.1136	32 121
		US	58 235	41	0.8545	0.0375	49 760	50 996	35	0.9616	0.0475	55 996	31	0.9962	0.0523	58 016
		Total	**190 203**	**288**			**176 119**	**178 759**	**255**			**187 451**	**245**			**195 260**
		LCL					167 263					177 355				184 301
		UCL					184 975					197 548				206 220
Grand total	**Total**	EP	93 309				88 813	88 976				92 044				95 808
		JA	39 799				34 639	39 708				36 812				38 759
		OT	31 997				37 133	30 963				37 920				39 548
		US	61 205				53 224	53 370				59 893				62 398
		Total	**226 310**				**213 809**	**213 017**				**226 668**				**236 512**
		LCL					204 607					216 134				224 915
		UCL					223 011					237 203				248 110
Growth from 2008							**-5.5%**	**-5.9%**				**0.2%**				**4.5%**
Deviation in % of forecast							**4.3%**					**4.6%**				**4.9%**

Table 13: Forecasts for EPO filings – Random group, broken down by residence bloc (Euro-direct and PCT-IP filings combined)

Random group
Breakdown by residence bloc ("other" incorporated in EP; excluding companies with qualifying comments)
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	Euro-direct	EP/OT	19 269	76	0.9030	0.0455	17 399	17 624	66	1.0029	0.0575	19 326	62	1.0597	0.0673	20 419
		JA	362	4	1.0104	0.1345	366	335	5	0.9448	0.1255	342	3	1.2723	0.1640	461
		US	1 328	4	0.9150	0.1258	1 215	1 007	6	1.0433	0.0486	1 385	6	1.1231	0.0471	1 491
		Total	**20 959**	**84**			**18 980**	**18 966**	**77**			**21 053**	**71**			**22 371**
		LCL					17 395					18 864				19 661
		UCL					20 565					23 243				25 080
First	Euro-PCT-IP	EP/OT	9 303	35	0.9421	0.2173	8 765	9 136	32	1.2064	0.2105	11 224	32	1.2870	0.2352	11 973
		JA	4 202	13	1.3535	0.1851	5 688	4 790	13	1.3337	0.2150	5 605	11	1.6374	0.2894	6 881
		US	1 642	8	1.8000	0.4956	2 956	1 366	6	3.7084	0.6163	6 091	6	3.6224	0.6260	5 950
		Total	**15 148**	**56**			**17 410**	**15 292**	**51**			**22 919**	**49**			**24 804**
		LCL					11 807					11 731				12 682
		UCL					23 012					34 107				36 925
Subsequent	Euro-direct	EP/OT	23 105	101	0.8530	0.0511	19 708	21 162	87	0.9141	0.0603	21 119	85	0.9764	0.0684	22 560
		JA	10 654	46	0.8215	0.0726	8 752	8 067	44	0.9133	0.0782	9 731	42	0.9511	0.0814	10 133
		US	8 358	20	1.0404	0.1233	8 696	7 289	20	1.2029	0.1205	10 054	19	1.2520	0.1268	10 464
		Total	**42 117**	**167**			**37 156**	**36 518**	**151**			**40 904**	**146**			**43 158**
		LCL					33 995					37 128				38 823
		UCL					40 317					44 681				47 492
Subsequent	Euro-PCT-IP	EP/OT	73 629	124	1.0441	0.0554	76 878	72 018	113	1.0593	0.0571	77 997	108	1.1322	0.0650	83 359
		JA	24 581	62	0.9010	0.0826	22 148	26 516	59	0.9974	0.0874	24 517	57	1.0331	0.0970	25 395
		US	49 877	28	0.9326	0.0776	46 515	43 707	24	1.0272	0.0837	51 234	23	1.0720	0.0934	53 465
		Total	**148 086**	**214**			**145 541**	**142 241**	**196**			**153 749**	**188**			**162 220**
		LCL					133 991					140 876				146 921
		UCL					157 091					166 621				177 518
All	Euro-direct	EP/OT	42 374				37 108	38 786				40 445				42 978
		JA	11 016				9 118	8 402				10 073				10 594
		US	9 686				9 911	8 297				11 440				11 956
		Total	**63 076**				**56 136**	**55 484**				**61 957**				**65 528**
		LCL					52 600					57 592				60 417
		UCL					59 672					66 322				70 640
All	Euro-PCT-IP	EP/OT	82 932				85 643	81 154				89 221				95 333
		JA	28 783				27 836	31 305				30 122				32 276
		US	51 519				49 471	45 073				57 325				59 415
		Total	**163 234**				**162 951**	**157 532**				**176 668**				**187 023**
		LCL					150 113					159 613				167 505
		UCL					175 788					193 723				206 542
Grand total	**Total**	EP/OT	125 306				122 750	119 940				129 666				138 311
		JA	39 799				36 954	39 708				40 195				42 870
		US	61 205				59 382	53 370				68 764				71 371
		Total	**226 310**				**219 087**	**213 017**				**238 625**				**252 552**
		LCL					205 771					221 020				232 375
		UCL					232 402					256 230				272 729
Growth from 2008							**-3.2%**	**-5.9%**				**5.4%**				**11.6%**
Implied Euro-PCT-IP							**74.4%**	**74.0%**				**74.0%**				**74.1%**
Deviation in % of forecast							**6.1%**					**7.4%**				**8.0%**

Table 14: Forecasts for EPO - Random group, broken down by residence bloc ("Other" incorporated in EPC; excluding companies with qualifying comments)

4.4 Results broken down by mega cluster

The forecasts for EPO filings were analysed with primary breakdowns by mega clusters based on amalgamated joint clusters (see **Annex III, Section 9.1**). For the Biggest group sample the composite indices were calculated and for the Random group sample Q indices were calculated.

In this year's forecasts employing a mega cluster breakdown, the allocation of weights was modified compared to previous years. Since respondents may be active in more than one mega cluster, the total Poisson weight obtained for each respondent is now distributed across mega clusters based on the proportion of filings per mega cluster as obtained from answers to questions C(g) of this year's survey. Thus, even though a respondent's growth estimates may influence more than one mega cluster, a respondent's total weight, and thus influence, is always equal to the original Poisson weight. In previous years, for analyses broken down by joint or mega clusters, when a respondent indicated activity in several clusters, his growth estimates influenced every active cluster with the full Poisson weight, resulting in the undesirable property that the total weight ("influence") of such a respondent ended up being a multiple of the original Poisson weight.

When deriving the standard error for mega cluster based analyses, a correction factor is included to avoid distortions caused by multiple mega cluster classifications. For the Random group, this correction factor takes into account the average repetition factor of 1.57, and widens the confidence limits by multiplying standard errors by 1.25, the square root of 1.57. The correction factor approach remains in place unaltered this year, despite the modification in the allocation of Poisson weights. As previously for the calculation of standard errors, a finite population correction is also applied that has a compensating effect to narrow the confidence limits.

The forecasts of filings by filing type, filing route and joint cluster for the Biggest group are shown in **Table 15**. The analogous forecasts for the Random group broken down by mega clusters are illustrated in **Figure 6** (and **Table 16**).

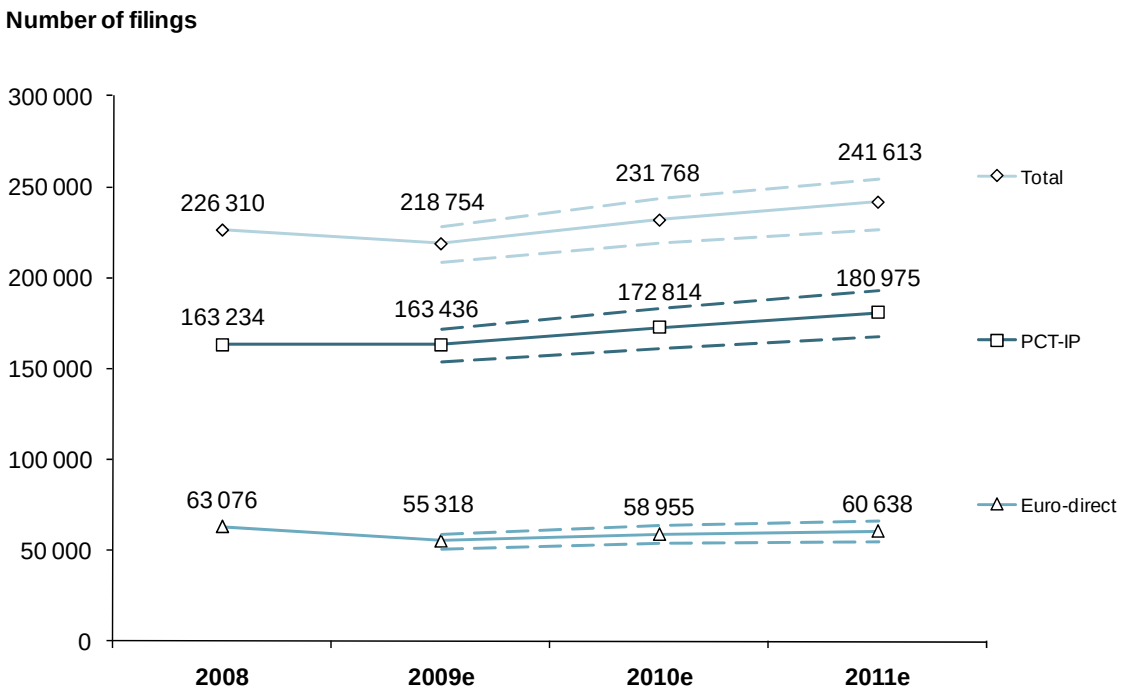


Figure 6: Forecasts for EPO filings based on breakdown by mega cluster for the Random group (dotted lines illustrating 95% confidence limits).

On the whole, the aggregated forecasts for total filings and standard errors are not too dissimilar to those with no subsidiary breakdown (e.g. compare **Table 5** with **Table 15**, or **Table 7** with **Table 16**). This gives confidence in the forecasts for mega clusters. However, it is not suggested that the total filing forecasts based on the mega cluster breakdown should be used for the overall forecast of EPO filings. Each respondent that indicated being active in a specific joint cluster (and thus mega cluster) contributes to the estimate of said mega cluster with the totality of filings and future filing expectations. For this reason, it appears to be better to use a forecast for total filings without a breakdown by mega clusters.

The approach based on mega clusters is, however, useful for business planning as it provides for forecasts for groups of individual EPO examining departments of the various primary combinations of first, subsequent, Euro-direct and PCT-IP filings.

Biggest group
Breakdown by EPO mega cluster
Composite indices

			Year										
			2008	2009				2010			2011		
Filing type	**Filing route**	**Cluster**	Actual filings	Cases 09	Index 09	Predicted filings	Actual filings	Cases 10	Index 10	Predicted filings	Cases 11	Index 11	Predicted filings
First	Euro-direct	Electricity	4 115	24	0.8695	3 578	3 712	21	0.8309	3 419	17	0.8178	3 365
		Organic Chemistry	3 847	19	0.9690	3 727	3 610	17	0.9929	3 819	16	1.0134	3 898
		Inorganic Chemistry	3 324	19	0.9322	3 099	3 067	19	0.9650	3 207	19	0.9934	3 302
		ICT	3 518	11	0.8717	3 066	2 826	10	0.8399	2 955	9	0.8114	2 854
		Traditional	6 156	28	0.9448	5 816	5 751	26	0.9534	5 869	26	0.9919	6 106
		Total	**20 959**			**19 286**	**18 966**			**19 269**			**19 526**
First	Euro-PCT-IP	Electricity	3 573	18	0.9967	3 561	2 713	18	1.0090	3 605	14	1.0477	3 743
		Organic Chemistry	1 184	20	1.0249	1 213	2 792	15	1.1377	1 347	15	1.2282	1 454
		Inorganic Chemistry	1 624	11	1.8524	3 008	2 205	10	2.1346	3 466	11	2.1951	3 564
		ICT	3 786	11	1.0279	3 892	2 374	11	0.9459	3 581	10	0.8816	3 338
		Traditional	4 982	26	0.9849	4 906	5 207	24	1.0307	5 134	24	1.0351	5 156
		Total	**15 148**			**16 581**	**15 292**			**17 133**			**17 256**
Subsequent	Euro-direct	Electricity	9 543	42	0.8325	7 945	8 072	40	0.8951	8 542	37	0.9283	8 859
		Organic Chemistry	2 376	23	0.7744	1 840	2 374	19	0.8547	2 031	18	0.8496	2 019
		Inorganic Chemistry	3 849	33	0.8970	3 452	3 540	28	0.9618	3 702	28	0.9906	3 812
		ICT	7 561	25	0.9069	6 857	5 935	24	1.0040	7 592	23	1.0416	7 876
		Traditional	18 788	64	0.9040	16 984	16 597	55	0.9456	17 766	55	0.9685	18 196
		Total	**42 117**			**37 078**	**36 518**			**39 632**			**40 762**
Subsequent	Euro-PCT-IP	Electricity	29 350	47	0.9794	28 745	25 232	45	0.9819	28 820	40	1.0100	29 643
		Organic Chemistry	21 430	41	0.9261	19 846	25 975	34	0.9769	20 934	33	0.9910	21 236
		Inorganic Chemistry	21 805	42	0.9743	21 245	20 514	38	1.0041	21 895	37	1.0313	22 488
		ICT	28 023	29	1.0040	28 134	22 083	29	1.0371	29 062	28	1.0422	29 204
		Traditional	47 478	77	0.9416	44 703	48 436	67	0.9681	45 965	65	0.9897	46 989
		Total	**148 086**			**142 673**	**142 241**			**146 676**			**149 561**
All	Euro-direct	Electricity	13 658			11 523	11 783			11 962			12 224
		Organic Chemistry	6 223			5 567	5 984			5 850			5 917
		Inorganic Chemistry	7 172			6 551	6 608			6 909			7 114
		ICT	11 079			9 924	8 761			10 546			10 730
		Traditional	24 943			22 799	22 349			23 635			24 303
		Total	**63 076**			**56 364**	**55 484**			**58 902**			**60 288**
All	Euro-PCT-IP	Electricity	32 923			32 306	27 945			32 425			33 386
		Organic Chemistry	22 613			21 059	28 768			22 280			22 690
		Inorganic Chemistry	23 429			24 253	22 720			25 361			26 053
		ICT	31 809			32 026	24 457			32 643			32 542
		Traditional	52 460			49 610	53 643			51 100			52 145
		Total	**163 234**			**159 254**	**157 532**			**163 809**			**166 817**
Grand total	**Total**	Electricity	46 581			43 829	39 728			44 387			45 610
		Organic Chemistry	28 836			26 627	34 752			28 131			28 607
		Inorganic Chemistry	30 601			30 803	29 328			32 270			33 167
		ICT	42 888			41 950	33 218			43 190			43 272
		Traditional	77 403			72 409	75 991			74 734			76 448
		Total	**226 310**			**215 618**	**213 017**			**222 711**			**227 105**
Growth from 2008						**-4.7%**	**-5.9%**			**-1.6%**			**0.4%**
Implied Euro-PCT-IP						**73.9%**	**74.0%**			**73.6%**			**73.5%**

Table 15: Forecasts for EPO filings at the EPO – Biggest group broken down by mega cluster

Random group
Breakdown by EPO mega cluster
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008		2009				2010				2011			
Filing type	**Filing route**	**Cluster**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual Filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	Euro-direct	Electricity	4 115	45	0.9574	0.0741	3 940	3 712	45	0.9446	0.0839	3 887	39	0.9343	0.0942	3 845
		Organic Chemistry	3 847	51	1.0722	0.0580	4 125	3 610	50	1.1657	0.0778	4 484	47	1.1415	0.0907	4 391
		Inorganic Chemistry	3 324	38	0.9107	0.0835	3 027	3 067	36	0.9966	0.0992	3 313	35	1.0203	0.1066	3 391
		ICT	3 518	26	1.0193	0.0625	3 586	2 826	27	1.0205	0.0716	3 590	24	1.0001	0.0863	3 518
		Traditional	6 156	80	0.9168	0.0723	5 644	5 751	75	1.0364	0.0726	6 380	73	1.1147	0.0737	6 862
		Total	**20 959**				**20 321**	**18 966**				**21 653**				**22 007**
		LCL					19 042					20 107				20 279
		UCL					21 464					23 060				23 580
First	Euro-PCT-IP	Electricity	3 573	42	0.8653	0.1729	3 092	2 713	44	0.9116	0.1440	3 257	40	0.9277	0.1677	3 315
		Organic Chemistry	1 184	47	1.4246	0.1127	1 686	2 792	41	1.4262	0.1234	1 688	38	1.4815	0.1228	1 754
		Inorganic Chemistry	1 624	32	1.1290	0.2165	1 833	2 205	29	1.5243	0.1853	2 475	28	1.6030	0.2023	2 603
		ICT	3 786	28	0.9280	0.0589	3 514	2 374	29	0.8584	0.0736	3 250	27	0.8675	0.0827	3 284
		Traditional	4 982	60	1.0854	0.1117	5 407	5 207	58	1.1354	0.0926	5 656	57	1.1989	0.0935	5 973
		Total	**15 148**				**15 532**	**15 292**				**16 327**				**16 928**
		LCL					13 652					14 543				14 915
		UCL					17 076					17 846				18 606
Subsequent	Euro-direct	Electricity	9 543	82	0.8182	0.0965	7 809	8 072	77	0.8174	0.1123	7 801	72	0.8372	0.1260	7 989
		Organic Chemistry	2 376	51	0.7405	0.2429	1 759	2 374	44	0.7513	0.2657	1 785	42	0.7687	0.2830	1 826
		Inorganic Chemistry	3 849	56	0.7525	0.2665	2 896	3 540	49	0.7534	0.3023	2 899	48	0.7840	0.3156	3 017
		ICT	7 561	54	0.8869	0.0710	6 706	5 935	52	0.9988	0.0670	7 552	49	1.0011	0.0698	7 570
		Traditional	18 788	135	0.8424	0.1012	15 827	16 597	122	0.9189	0.1201	17 264	120	0.9703	0.1244	18 229
		Total	**42 117**				**34 997**	**36 518**				**37 301**				**38 632**
		LCL					30 945					32 281				33 109
		UCL					38 766					42 013				43 781
Subsequent	Euro-PCT-IP	Electricity	29 350	90	0.9873	0.0777	28 978	25 232	84	1.0189	0.0914	29 905	77	1.0569	0.1127	31 020
		Organic Chemistry	21 430	91	1.0253	0.0472	21 972	25 975	79	1.1435	0.0650	24 506	77	1.1865	0.0710	25 426
		Inorganic Chemistry	21 805	74	0.9875	0.0506	21 533	20 514	71	1.0181	0.0535	22 200	67	1.0874	0.0638	23 710
		ICT	28 023	59	1.0537	0.0489	29 529	22 083	55	1.0770	0.0492	30 182	53	1.0942	0.0555	30 662
		Traditional	47 478	151	0.9666	0.0820	45 892	48 436	140	1.0467	0.0919	49 695	138	1.1211	0.0973	53 229
		Total	**148 086**				**147 905**	**142 241**				**156 487**				**164 046**
		LCL					138 347					144 915				150 443
		UCL					156 372					166 727				175 761
All	Euro-direct	Electricity	13 658				11 748	11 783				11 688				11 834
		Organic Chemistry	6 223				5 884	5 984				6 269				6 217
		Inorganic Chemistry	7 172				5 923	6 608				6 212				6 408
		ICT	11 079				10 292	8 761				11 142				11 088
		Traditional	24 943				21 471	22 349				23 643				25 091
		Total	**63 076**				**55 318**	**55 484**				**58 955**				**60 638**
		LCL					51 069					53 701				54 851
		UCL					59 257					63 872				66 022
All	Euro-PCT-IP	Electricity	32 923				32 070	27 945				33 162				34 334
		Organic Chemistry	22 613				23 659	28 768				26 194				27 180
		Inorganic Chemistry	23 429				23 366	22 720				24 675				26 313
		ICT	31 809				33 042	24 457				33 432				33 946
		Traditional	52 460				51 299	53 643				55 351				59 201
		Total	**163 234**				**163 436**	**157 532**				**172 814**				**180 975**
		LCL					153 696					161 105				167 224
		UCL					172 043					183 166				192 808
Grand total	**Total**	Electricity	46 581				43 818	39 728				44 850				46 168
		Organic Chemistry	28 836				29 543	34 752				32 463				33 397
		Inorganic Chemistry	30 601				29 289	29 328				30 887				32 721
		ICT	42 888				43 334	33 218				44 574				45 034
		Traditional	77 403				72 770	75 991				78 994				84 292
		Total	**226 310**				**218 754**	**213 017**				**231 768**				**241 613**
		LCL					208 127					218 935				226 694
		UCL					228 220					243 229				254 614
Growth from 2008							**-3.3%**	**-5.9%**				**2.4%**				**6.8%**
Implied Euro-PCT-IP							**74.7%**					**74.6%**				**74.9%**
Deviation in % of forecast							**4.9%**					**5.5%**				**6.2%**

Table 16: Forecasts for EPO filings at the EPO – Random group broken down by mega cluster

4.5 Results broken down by mega cluster and residence bloc

The data of the Random group were also analysed with a simultaneous breakdown by mega cluster and residence bloc. As case numbers for this simultaneous breakdown remain low, even after combining the “EP” and “OT” residence blocs, the result is presented without interpretation, solely for informative purposes.

Random group
Breakdown by mega cluster and residence bloc ("Other" incorporated into EP)
Q-indices
First and Subsequent filings combined

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year												
			2008	2009					2010				2011			
Filing type	**mega cluster**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
All	Electricity	EP/OT	23 034	28	0.9197	0.0905	21 184	21 802	26	0.9939	0.1296	22 894	25	1.0276	0.1420	23 669
		JA	11 922	29	0.9453	0.0948	11 270	8 057	28	0.9016	0.1217	10 750	26	0.9403	0.1430	11 211
		US	11 624	12	0.8613	0.0718	10 012	9 870	12	0.9683	0.1163	11 256	10	1.0828	0.2384	12 586
		Total	**46 581**	**69**			**42 466**	**39 728**	**66**			**44 900**	**61**			**47 467**
		LCL					37 910					37 963				37 844
		UCL					47 022					51 837				57 089
All	Organic Chemistry	EP/OT	16 327	29	1.0513	0.0529	17 164	19 500	27	1.1119	0.0711	18 154	27	1.0973	0.0750	17 916
		JA	2 743	22	0.9414	0.0942	2 582	6 021	20	1.1110	0.0749	3 048	19	1.1757	0.1078	3 225
		US	9 766	9	0.8787	0.1132	8 582	9 231	8	1.0207	0.1457	9 968	8	1.1376	0.1493	11 110
		Total	**28 836**	**60**			**28 328**	**34 752**	**55**			**31 170**	**54**			**32 250**
		LCL					25 662					27 295				27 962
		UCL					30 993					35 045				36 539
All	Inorganic Chemistry	EP/OT	16 114	24	1.0134	0.0556	16 331	16 531	22	1.0701	0.0848	17 244	22	1.0822	0.1063	17 438
		JA	6 570	19	0.8519	0.1204	5 597	5 367	17	1.0079	0.0666	6 622	17	1.0437	0.0849	6 857
		US	7 917	8	0.6993	0.2000	5 536	7 429	8	0.7234	0.1646	5 727	8	0.7268	0.1691	5 754
		Total	**30 601**	**51**			**27 464**	**29 328**	**47**			**29 594**	**47**			**30 050**
		LCL					24 307					26 041				25 744
		UCL					30 621					33 146				34 356
All	ICT	EP/OT	21 694	15	0.9996	0.0545	21 686	17 904	13	1.0258	0.0423	22 254	12	1.0340	0.0464	22 431
		JA	7 668	23	0.8385	0.1938	6 429	6 975	23	0.9455	0.1339	7 250	21	0.9559	0.1616	7 330
		US	13 527	5 *	0.9461	0.0694	12 797	8 339	4 *	1.0002	0.0488	13 529	4 *	1.0088	0.0520	13 646
		Total	**42 888**	**43**			**40 913**	**33 218**	**40**			**43 033**	**37**			**43 406**
		LCL					37 073					40 066				39 983
		UCL					44 752					46 000				46 829
All	Traditional	EP/OT	48 137	50	0.9561	0.0567	46 025	44 202	47	0.9832	0.0509	47 326	47	1.0679	0.0596	51 404
		JA	10 895	36	0.6537	0.1222	7 123	13 288	36	0.6342	0.1190	6 910	35	0.6901	0.1228	7 519
		US	18 371	14	0.8780	0.1342	16 130	18 501	12	1.0754	0.1975	19 756	12	1.1099	0.2183	20 391
		Total	**77 403**	**100**			**69 278**	**75 991**	**95**			**73 992**	**94**			**79 314**
		LCL					62 367					64 665				68 293
		UCL					76 189					83 320				90 335
Grand total	**Total**	EP/OT	125 306				122 390	119 940				127 873				132 859
		JA	39 799				33 002	39 708				34 580				36 142
		US	61 205				53 057	53 370				60 236				63 486
		Total	**226 310**				**208 449**	**213 017**				**222 689**				**232 487**
		LCL					198 432					209 591				216 280
		UCL					218 465					235 787				248 695
Growth from 2008							**-7.9%**	**-5.9%**				**-1.6%**				**2.7%**
Deviation in % of forecast							**4.8%**					**5.9%**				**7.0%**

Table 17: Forecasts for EPO filings at the EPO – Random group broken down by residence bloc and mega cluster

5 Forecasts for PCT regional phase applications

The results for PCT regional phase applications at the EPO were obtained from question (l) in **Part B** of the questionnaire (see **Annex I**). The forecasts for Euro-PCT-RP filings are calculated both for the Biggest group sample and the Random group sample, applying the composite index and the Q Index, respectively. No separate questions on first filings and subsequent filings were asked regarding Euro-PCT-RP applications.

An overview of the main results of the forecasts for Euro-PCT-RP applications according to the different methods is given in terms of growth rates (**Table 18**) and in terms of absolute numbers of filings (**Table 19**). Firstly, Euro-PCT-RP filings are estimated for the Biggest group sample with no subsidiary breakdown (**Table 20**) and broken down by residence bloc (**Table 21**). Secondly, the Euro-PCT-RP filing forecasts are given for the Random group sample. Q indices for the Random group sample are calculated with no subsidiary breakdown using all available data (**Table 22**) and excluding companies with qualifying comments (**Table 23**). The same analysis is repeated with the Euro-PCT-RP filings itemised by residence bloc using all available data (**Table 24**) and again excluding companies with qualifying comments (**Table 25**). Finally, the predictions are shown in **Table 26**, based on the breakdown by mega cluster of the Random group sample.

Comparing deviations of confidence limits from forecasts, the analysis without residence bloc breakdown consistently produces the narrowest confidence bands and should thus be considered superior.

For PCT regional phase applications, forecasts for the Biggest group predict lower filing numbers for all three years when compared to 2008, with the lowest number of applications foreseen in 2010 for the estimate without subsidiary breakdown. For the Random group, estimates are somewhat more optimistic, even though most forecasts predict negative or zero growth for 2009. The preferred estimate without subsidiary breakdown in Table 22 predicts modest growth for 2010 and 2011.

As discussed in **Section 3** for Euro-direct and PCT-IP filings, birth/death corrected estimates can also be obtained for Euro-PCT-RP filings. See **Annex IX** for the appropriate correction factors.

Comparison of forecasts: Growth from 2008
Euro-PCT-RP

		2009		2010		2011	
Group	**Breakdown**	Growth rate	Deviation*	Growth rate	Deviation*	Growth rate	Deviation*
Biggest	None	-1.0%		-3.9%		-1.4%	
Biggest	Residence bloc	-1.3%		-1.9%		-3.9%	
Random	None	-0.9%	3.7%	1.8%	6.0%	7.3%	6.5%
Random	None (excluding companies with comments)	0.2%	5.7%	4.1%	7.8%	8.9%	8.8%
Random	Residence bloc	0.4%	4.7%	3.2%	6.8%	9.7%	8.6%
Random	Residence bloc (excluding companies with comments)	4.7%	5.9%	10.1%	8.3%	16.0%	9.9%
Random	EPO mega cluster	-1.0%	4.5%	1.3%	6.7%	7.6%	6.9%

Table 18: Overview of predicted growth rates for Euro-PCT-RP applications by forecasting methods

Comparison of forecasts: Predicted total filings
Euro-PCT-RP
LCL/UCL indicates lower/upper 95% confidence limit

		2009			2010			2011		
Group	**Breakdown**	**Predicted filings**	**LCL**	**UCL**	**Predicted filings**	**LCL**	**UCL**	**Predicted filings**	**LCL**	**UCL**
Biggest	None	82 704			80 272			82 400		
Biggest	Residence bloc	82 473			80 303			82 003		
Random	None	82 815	79 723	85 907	85 085	80 006	90 165	89 653	83 818	95 488
Random	None (excluding companies with comments)	83 701	78 934	88 468	86 988	80 237	93 738	90 989	83 009	98 969
Random	Residence bloc	83 923	79 960	87 885	86 283	80 447	92 119	91 637	83 769	99 504
Random	Residence bloc (excluding companies with comments)	87 479	82 293	92 664	92 045	84 410	99 679	96 950	87 362	106 538
Random	EPO mega cluster	82 734	79 051	86 258	84 690	79 013	90 238	89 939	83 700	96 022
Actual filings		78 682								

Table 19: Overview of predicted filing numbers for Euro-PCT-RP applications by forecasting methods

Biggest Group
No subsidiary breakdown
Composite Indices

			Year										
			2008	2009				2010			2011		
Patent Office	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Index 09	Predicted filings	Actual filings	Cases 10	Index 10	Predicted filings	Cases 11	Index 11	Predicted filings
EPO	Euro-PCT-RP	**Total**	**83 567**	**164**	**0.9897**	**82 704**	**78 682**	**146**	**0.9606**	**80 272**	**138**	**0.9860**	**82 400**
Growth from 2008						**-1.0%**	**-5.8%**			**-3.9%**			**-1.4%**

Table 20: Forecasts for Euro-PCT-RP applications - Biggest group (no subsidiary breakdown)

Biggest group
Breakdown by residence bloc
Composite indices

			Year										
			2008	2009				2010			2011		
Patent office	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Index 09	Predicted filings	Actual filings	Cases 10	Index 10	Predicted filings	Cases 11	Index 11	Predicted filings
EPO	Euro-PCT-RP	EP	35 760	89	0.9972	35 661	34 698	77	0.9501	33 977	73	0.9778	34 966
		JA	12 088	46	0.9741	11 775	11 408	42	0.9484	11 464	40	0.9923	11 995
		OT	8 135	2 *	0.9897	8 051	7 802	2 *	0.9606	7 814	2 *	0.9860	8 021
		US	27 584	27	0.9783	26 986	24 774	25	0.9806	27 048	23	0.9796	27 020
Total		**Total**	**83 567**	**164**		**82 473**	**78 682**	**146**		**80 303**	**138**		**82 003**
Growth from 2008						**-1.3%**	**-5.8%**			**-3.9%**			**-1.9%**

Table 21: Forecasts for Euro-PCT-RP applications - Biggest group (broken down by residence bloc)

Random group
No subsidiary breakdown
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Patent office	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
EPO	Euro-PCT-RP	**Total**	**83 567**	**380**	**0.9910**	**0.0190**	**82 815**	**78 682**	**357**	**1.0182**	**0.0304**	**85 085**	**342**	**1.0728**	**0.0332**	**89 653**
		LCL					79 723					80 006				83 818
		UCL					85 907					90 165				95 488
Growth from 2008							**-0.9%**	**-5.8%**				**1.8%**				**7.3%**
Deviation in % of forecast							**3.7%**					**6.0%**				**6.5%**

Table 22: Forecasts for Euro-PCT-RP applications - Random group (no subsidiary breakdown)

Random group
No subsidiary breakdown (excluding companies with qualifying comments)
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Patent office	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
EPO	Euro-PCT-RP	**Total**	**83 567**	**213**	**1.0016**	**0.0290**	**83 701**	**78 682**	**199**	**1.0409**	**0.0395**	**86 988**	**193**	**1.0888**	**0.0447**	**90 989**
		LCL					78 934					80 237				83 009
		UCL					88 468					93 738				98 969
Growth from 2008							**0.2%**	**-5.8%**				**4.1%**				**8.9%**
Deviation in % of forecast							**5.7%**					**7.8%**				**8.8%**

Table 23: Forecasts for Euro-PCT-RP applications - Random group (no subsidiary breakdown), excluding companies with qualifying comments

Random group
Breakdown by residence bloc
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (Predicted filings - LCL)/Predicted filings

			Year													
			2008	2009					2010				2011			
Patent Office	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
EPO	Euro-PCT-RP	EP	35 760	218	1.0012	0.0226	35 804	34 698	203	1.0440	0.0423	37 332	199	1.0930	0.0438	39 086
		JA	12 088	81	0.9298	0.0433	11 239	11 408	76	0.9058	0.0600	10 949	72	0.9510	0.0555	11 496
		OT	8 135	18	1.2120	0.1282	9 860	7 802	18	1.2438	0.1846	10 118	16	1.4228	0.2179	11 574
		US	27 584	63	0.9795	0.0461	27 020	24 774	60	1.0108	0.0538	27 883	55	1.0688	0.0822	29 481
Total		**Total**	**83 567**	**380**			**83 923**	**78 682**	**357**			**86 283**	**342**			**91 637**
		LCL					79 960					80 447				83 769
		UCL					87 885					92 119				99 504
Growth from 2008							**0.4%**	**-5.8%**				**3.2%**				**9.7%**
Deviation in % of forecast							**4.7%**					**6.8%**				**8.6%**

Table 24: Forecasts for Euro-PCT-RP applications - Random group (broken down by residence bloc)

Random group
Breakdown by residence bloc (excluding companies with qualifying comments)
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Patent office	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
EPO	Euro-PCT-RP	EP	35 760	119	0.9927	0.0356	35 498	34 698	108	1.0876	0.0466	38 892	106	1.1173	0.0574	39 954
		JA	12 088	53	0.9243	0.0562	11 172	11 408	53	0.8669	0.0783	10 479	50	0.9037	0.0737	10 924
		OT	8 135	11	1.2805	0.1466	10 417	7 802	11	1.2755	0.2461	10 376	10	1.5148	0.2671	12 323
		US	27 584	30	1.1018	0.0529	30 391	24 774	27	1.1709	0.0622	32 298	27	1.2235	0.0719	33 750
Total		**Total**	**83 567**	**213**			**87 479**	**78 682**	**199**			**92 045**	**193**			**96 950**
		LCL					82 293					84 410				87 362
		UCL					92 664					99 679				106 538
Growth from 2008							**4.7%**	**-5.8%**				**10.1%**				**16.0%**
Deviation in % of forecast							**5.9%**					**8.3%**				**9.9%**

Table 25: Forecasts for Euro-PCT-RP applications - Random group (broken down by residence bloc), excluding companies with qualifying comments

Random group
Breakdown by EPO mega cluster
Q-indices

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Patent office	**Filing route**	**Cluster**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
EPO	Euro-PCT-RP	Electricity	14 471	98	0.9516	0.0397	13 771	14 071	90	0.9553	0.0444	13 824	87	0.9600	0.0509	13 892
		Organic Chemistry	14 242	104	1.0521	0.0567	14 984	12 986	94	1.0745	0.0820	15 303	87	1.1903	0.0677	16 953
		Inorganic Chemistry	13 604	82	0.9920	0.0627	13 495	12 870	77	0.9992	0.0941	13 593	73	1.0897	0.0792	14 824
		ICT	15 383	68	0.9771	0.0542	15 030	13 423	65	1.0019	0.0608	15 412	63	1.0007	0.0727	15 393
		Traditional	25 868	161	0.9840	0.0415	25 454	25 332	152	1.0267	0.0739	26 558	148	1.1164	0.0819	28 878
		Total	**83 567**				**82 734**	**78 682**				**84 690**				**89 939**
		LCL					79 051					79 013				83 700
		UCL					86 258					90 238				96 022
Growth from 2008							**-1.0%**	**-5.8%**				**1.3%**				**7.6%**
Deviation in % of forecast							**4.5%**					**6.7%**				**6.9%**

Table 26: Forecasts for Euro-PCT-RP applications - Random group (broken down by mega cluster)

6 Conclusions and Outlook

The data for this survey were collected in mid-2009. By this time, the global recession had become readily apparent and thus, respondents have had the opportunity to weigh the effects of the crisis on expected future filing behaviour.

When comparing one-year growth rates of this survey with those experienced in the previous year, it becomes clear that filings expectations for 2009 have dropped sharply. In addition, and in contrast to last year's survey, there no longer is a clear expectation of a quick recovery of application numbers to pre-crisis levels. Estimates based on the Biggest group even predict lower numbers of total filings in 2011 than in 2008. For the Random group the recommended forecast predicts a very modest cumulative growth of 1.9% from 2008 to 2011.

Given the markedly changed economic environment, we recommend not applying the birth/death correction factors provided in Annex IX, as these are derived from data outside this survey and assume a basically stable environment.

As uncertainty about the speed or even sustainability of economic recovery remains, the annual future filings surveys are a crucial element in updating and validating growth expectations, and in promptly identifying additional shifts in expectations or sentiment.

The EPO uses the forecasts of this survey to allocate its resources and capacities in order to optimise the patent examination process. We would thus like to thank all participants of this year's survey for their valuable time and input. We realise that filling in the questionnaire diligently and in a complete fashion is a time-consuming process. In order to be able to continue with a well-founded resource allocation process, we would also like to appeal to all applicants that might be approached in the future to kindly respond in full to the questions.

Please read the following Annexes for information on the mechanism and execution of the survey (Annexes I to IV), for results on respondent profiles (Annex V) and answers to additional questions (Annexes VI to VIII). An analysis of R&D budgets, inventions and first filing is given in Annex VI. Applicants were also asked to assess the impact of the current worldwide recession on their R&D budgets (Annex VII). Special questions were asked about factors influencing filing decisions and about applicant assessment of EPO fee structure (Annex VIII). Annex IX and Annex X give further supporting information to the main part of the survey. Annex XI reports on an experimental Poisson weighting alternative and, finally, Annex XII discusses possible effects of partial non-response and potential remedies for this.

7 Annex I: Methodological approach, data collection procedure, and questionnaire

7.1 Parent population and target persons

The **parent population** of the Future Filings Survey comprises applicants who filed a patent application at the EPO in 2008. These applicants are mainly companies, but there are also some educational organisations and private inventors. The applicants are from all over the world, particularly from Europe, the US, and Japan.

The following table shows the distribution of the applicant population in 2008, broken down by residence bloc (applicants for Euro-direct and PCT-IP, see also **Annex X)**.

Residence bloc	**Applicants (popula-tion)**	**%**
EPC countries	27 095	42.4
Japan	5 115	8.0
USA	18 714	29.3
Other countries	13 043	20.3
Total	**63 967**	100.0

Table 27: Population size (applicants for Euro-direct and PCT-IP)

Details of each selected applicant were provided by the EPO, including the name of the company/person, address, identification code (Random group only), and further information from the EPO database, such as number of filings at the EPO in 2008.

The **target persons** within companies are the head of the intellectual property department, an in-house or external patent agent, a member of the R&D department, or a member of the management.

7.2 Questionnaire

The questionnaire used for data collection is printed below. It is broadly similar to the one used in 2008 and covers the following key topics:

- **Current and future filings (part B)**, split by
  - First and subsequent filings
  - Different procedures: Euro-direct, PCT international and national/regional phase, and national procedures
  - Different countries: Germany, UK, France, Japan, US, China, and other countries
- **Research and development budget as well as patenting activities (part C)**, split by the 14 joint cluster organisational groupings used for examinations at the EPO; total number of inventions considered for patent applications, percentage of inventions that are patented, number of first filings per single invention, impact of current worldwide recession on R&D budget.
- **Other issues relating to effects on filing numbers (part D)**: influencing factors on decision to file a European patent application, evaluation of EPO's current fee system and payment procedure (entrance/renewal fees, step-by-step payment, fee incentives/additional fees)
- **Company details**, such as organisation type and number of employees, founding year, year when an organisation started applying for a patent anywhere and at the EPO, year when an organisation started its business activities in Europe (**part E**), and size of total sales (**part C**)
- General **comments** regarding the questionnaire (**part F**). A summary of the comments received is included in **Annex II**.

The main part B of the questionnaire remained unchanged to allow comparisons; however, China was specifically included as a patenting target for the first time. Part C remained unchanged except that a question on size of total operating and capital expenditure was replaced by a question on average number of first filings for a single invention, and a question was included about the impact of the current worldwide recession on the level of R&D budget. Within part D, the 2008 questions were replaced by questions on influential factors on decision for filing an application under normal circumstance and current worldwide recession, and evaluation of the current EPO fee system. Part E was slightly lengthened by questions on the patent filing history of the applicant.

The questionnaire was accompanied by an **official letter of recommendation signed by the President of the EPO**, to motivate respondents to participate. This letter contained information on the background of the study, the target group and data protection, a contact person at the EPO in cases of doubt, and stated that the results will be published on the internet. In addition, a **cover letter from Synovate** provided information on the survey procedure.

Both letters and the questionnaire were personalised, i.e. the company name, the address, the name of the contact person and an identification number were printed on each questionnaire and reference letter. The letters and questionnaires sent were available in English, French, German, and Japanese (to cover the requirements of the contact persons).

Although the questionnaire was similar to the one used in 2008, it was tested in five pre-test interviews (English and German versions). For this purpose, the correct contact persons were researched and approached by telephone. If they agreed to take part in the survey, the draft questionnaire was sent via fax and discussed by phone in a follow-up call. This means that Synovate not only received their answers but had a follow-up talk about the questionnaire as well. The pre-test interviews resulted in some changes in wording. The answers given in the pre-test interviews were included in the analysis.

The English version of the questionnaire is displayed below:

Europäisches Patentamt
European Patent Office
Office européen des brevets

ID / GROUP
FA
LEITER PATENTABTL
ABTEILUNG
STRASSE

ORT
LAND

Questionnaire

for Future Patent Filings Survey

Please return to the EPO:
+49-89-2399-1333

Please respond only in respect of the company/company part mentioned to you over the phone by Synovate, e.g. your branch or subsidiary. If, however, this is not possible, we would welcome your responses in respect of whatever larger or smaller company part that you can speak for.

For which company/company part will you answer the questionnaire?

the company/company part mentioned by Synovate

smaller company/company part, please specify: _____

bigger company/company part, please specify: _____

Please answer the whole questionnaire for the same company/company part.

A. Contact Details

Should the information given above on your company details be incorrect, please provide us with corrected information below:

Contact Name: _____ *Position:* _____

*Phone Number:*_____ *E-mail-Address:* _____

*Organisation Name:*_____ *Organisation Address:*_____

_____

A summary of the results of the survey will be published in early 2010 at http: //www.epo.org/patents/surveys/future-patent-filings.html. We will remind you of this if you could please give us your E-mail address under Section A of this questionnaire.

B. Estimation of levels of patenting activity throughout the world for your company/ company part

Please give information on numbers of filings in the two tables below. In case you are unable to give actual figures, please indicate anticipated yearly growth rates as percentages (i.e. 2009 compared with 2008; 2010 compared with 2009; 2011 compared with 2010).

Please indicate the numbers of first filings (priority forming) **and subsequent filings** (claiming priority of an earlier application) with break downs by patent types and countries, that you filed in the last calendar year and that you expect to file in the present and future calendar years.

			Filed		Expected		Expected		Expected	
			2008		2009		2010		2011	
			First filings[1]	Subsequent filings	First filings[1]	Subsequent filings	First filings[1]	Subsequent filings	First filings[1]	Subsequent filings
European patent applications under the EPC (excluding PCT)[2]		(a)								
International applications under the PCT (International Phase)		(b)								
National applications (excluding PCT and EPC) in	Germany	(c)								
	United Kingdom	(d)								
	France	(e)								
	Japan	(f)								
	United States[3]	(g)								
	China	(h)								
	Other countries	(i)								
Worldwide Total First Filings		(k)								

[1] A first filing is a patent application that, according to the Paris Convention for the Protection of Industrial Property, confers a right of priority for a period of twelve months for the purpose of filing patent applications in other countries or systems, with respect to the same invention.

[2] Please exclude any multiple counting that is due to the retrospective filing of divisional applications.

[3] Please include provisional filings at USPTO in the cells for first filings of this row.

Please indicate the numbers of your PCT applications which entered the regional/national phase at the listed offices during the last calendar year and which you expect to enter **the regional/national phase** in the present and future calendar years.

PCT applications entering the regional/national phase at		Entered 2008	Expected 2009	Expected 2010	Expected 2011
European Patent Office (EPO)	(l)				
United States Patent and Trademark Office (USPTO)	(m)				
Japan Patent Office (JPO)	(n)				
German Patent and Trade Mark Office (DPMA)	(o)				
China State Intellectual Property Office (SIPO)	(p)				

If you have any comments on this part please put them on page 5.

C. Activities in total and in various sectors for your company/company part

We would like to know more information on your **R&D, patenting and business activities**.
Please indicate…

(a) the total number of distinct inventions in 2008 that led you to consider making patent applications:..... _____

(b) the percentage of these distinct inventions in 2008 which are actually leading you to file for one or more patents: ..... _____%

(c) on average how many first filings do you make for a single invention when you decide to use the patent system for it:..... _____

(d) the approximate size of your total sales throughout the world in 2008 (specify currency): ..... _____

We are also interested in classifying your activities in terms of the **Joint Cluster** organisational groupings used for examinations at the European Patent Office. Please complete the following table as far as you can, by indicating…

(e) …which of the following you believe contain(s) the main area(s) of your business. Please tick appropriate box(es).	(f) …the approximate size of your R&D budget 2008 (specify currency)	(g) …the number of **first patent filings** that you actually made in 2008 throughout the world[1]
☐ Audio, Video and Media		
☐ Biotechnology		
☐ Civil Engineering; Thermodynamics (including engines and pumps)		
☐ Computers		
☐ Electricity and Semiconductor Technology		
☐ Electronics		
☐ Handling and Processing		
☐ Human Necessities (including agriculture, medical products, printing)		
☐ Industrial Chemistry		
☐ Measuring and Optics		
☐ Polymers		
☐ Pure and Applied Organic Chemistry (including pharmaceuticals)		
☐ Telecommunications		
☐ Vehicles and General Technology (including transporting mechanisms, lighting)		
☐ Other area(s), please specify:_____		
Total		

[1] The Total for first patent filings provided at the bottom of this column should correspond to the number of worldwide total first filings provided in part B of the questionnaire, line k).

(h) To what extent do you think that the current worldwide recession has an impact on the level of your R&D budget? The recession is causing…

…considerable decrease of R&D budget ..... ☐
…slight decrease of R&D budget ..... ☐
…no change of R&D budget..... ☐
…slight increase of R&D budget ..... ☐
…considerable increase of R&D budget ..... ☐

Comments:

_____

D. Other issues

(a) How much do the following factors **influence your decision to file a European patent application**? Please rank the following in the order of importance (1 = highest, 6 = lowest) by allocating each ranking figure only once.

Ranking:	**Normally**	**In the current worldwide recession**
Recognition of R&D activities		
Need to nurture innovations		
Market demand and activities of competitors		
Need to attract financing		
Levels of patent search and examination fees		
Attorney costs and other patenting costs		

Comments:

_____

(b) In the current fee system of EPO and most national patent offices, relatively **low entrance fees** for new patent applications are subsidised by **renewal fee income** that is collected for successful patents that remain in force. Do you think that this system …

	Yes	**No**	**Please give reasons:**
…benefits **applicants** for patents?	☐	☐	
…still benefits **society** in general?	☐	☐	

(c) At EPO, procedural fees for filing, search, examination and grant have to be paid step by step, while withdrawal of the application is possible at any stage. Do you think that the **system of step-by-step payments** has proved advantageous for you?

Yes	**No**	**Please give reasons:**
☐	☐	

(d) Please indicate if you agree with the **following statements**.

	Agree	**Do not agree**
It is practical to use **fee incentives** like partial refunds to reward applicants when patent applications prove to be easy to process.	☐	☐
Additional fees to be paid after more complicated search and examination procedures can influence the way that patent applications are initially drafted.	☐	☐

Comments:

_____

E. Details of company/company part and key dates for patenting activities

(a) Please indicate the nature of the entity for which you have answered the above questions in Sections A to D of this questionnaire. Please cross all boxes that apply.

Type: Private enterprise/commercial sector ... ☐
Public sector:
- Government-performed R&D ..... ☐
- Higher educational sector ..... ☐
- Other public sector ..... ☐

Other, please specify: ..... ☐
_____

Persons employed:
individual inventor ..... ☐
1 – 9 ..... ☐
10 – 49 ..... ☐
50 – 249 ..... ☐
250 – 999 ..... ☐
1 000 – 4 999 ..... ☐
5 000 – 9 999 ..... ☐
10 000 – 49 999 ..... ☐
50 000 or more.....: .... ☐

(b) In what year was your company/company part **created**? ..... _____

(c) In what year did your company/company part **start applying for patents anywhere**? ..... _____

(d) In what year did your company / company part **start** carrying out a significant amount of its **business activities in Europe**? ..... _____

(e) In what year did your company / company part **start applying for patents at EPO**? ..... _____

F. Comments

Comments on any matter concerning this questionnaire (please continue on a separate sheet if necessary):

_____

_____

_____

_____

_____

Thank you very much for your cooperation.

7.3 Data collection procedure

As in previous years, data collection was done through mailed questionnaires backed up by telephone interviews, and consisted of three steps:

(1) International research of up-to-date telephone numbers

Updated telephone numbers had to be obtained for the 2,164 EPO applicant addresses (Biggest and Random samples and special requests).
The following sources were used to research telephone numbers:

- Internet search engines
- Special business pages on the internet
- Phone directories of the relevant countries
- Websites of the companies on the internet
- Directory enquiries

As in previous years, it was not possible to find out up-to-date telephone numbers for all applicants in the gross sample. It was difficult to research telephone numbers particularly for private inventors, for companies in Asia, and applicants in the "other countries" category.

(2) Telephone contact interviews

Following the research step, telephone contact interviews were conducted with applicants whose current telephone numbers had been obtained. The contact interviews consisted of the following steps:

- Identifying the target person within the company or organisation who could answer the questions in the questionnaire
- Introducing the background and the purpose of the survey to the target person and requesting his/her participation
- Recording the name and fax number or, where required, e-mail address of the target person, or recording their reason for declining, where applicable

Due to the complexity of the topics, all participants received the questionnaire in writing to enable them to look up the required figures and provide reasonable estimates. In 340 cases, the questionnaire and the accompanying letters were sent by fax. However, the majority of applicants preferred to receive the documents via e-mail (1 056). Eleven applicants received the documents via fax and e-mail. Few participants requested to receive the questionnaire per postal mail (10 cases).

The main contacting phase, i.e. sending the personalised questionnaires and accompanying letters to the participants, started on June 3rd, 2009.

(3) Main interviews

The target respondents were offered several modes of returning a complete questionnaire: fax, e-mail, telephone, and post. Principally, the respondents were asked to send their questionnaire to the EPO. If this did not suit their need for data protection, they were asked to return the questionnaire directly to Synovate. Alternatively, the respondents were able to opt for a telephone interview.

Most of the questionnaires were completed by the target respondents themselves and sent back to the EPO by fax or e-mail. In a few cases (39), the responses were collected directly through a follow-up telephone call. Proactive fieldwork was finished by September 14th, 2009. However, to increase the number of responses, all complete questionnaires received by October 2nd, 2009 were included in the analysis. After that date, no more questionnaires were received.

	EPO					Synovate				
	Total	**EP**	**US**	**JP**	**OT**	**Total**	**EP**	**US**	**JP**	**OT**
Fax	340	194	34	107	5	7	6	0	0	1
E-mail	166	110	30	23	3	150	90	39	7	14
Phone	-	-	-	-	-	39	34	3	0	2
Post	-	-	-	-	-	-	-	-	-	-
Total	**506**	**304**	**64**	**130**	**8**	**196**	**130**	**42**	**7**	**17**

Table 28: The distribution of responses received by the EPO and by Synovate

In total, **702 interviews** were realised in 2009. The number of responses is lower than the responses of the previous years (772 interviews in 2008, 747 in 2007, and 772 in 2006).
Of these 702 participants in 2009, 219 also took part in the 2008 survey (According to EPO identification numbers – however, as no identification number was allocated to the consolidated Biggest group members, this figure refers to the Random group only).

The following table shows the total number of applicants that were selected for the survey, the number of applicants that dropped out for various reasons, and the final numbers of responses received for the total net number of applicants and the split into Biggest and Random groups.

	Total[18]		Biggest		Random	
	n	**%**	**n**	**%**	**n**	**%**
Total gross sample	**2 164**	**100.0**	**419**	**100.0**	**2 029**	**100.0**
Addresses not found	109	5.0	5	1.2	109	5.4
Addresses found	**2 055**	**100.0**	**414**	**100.0**	**1 920**	**100.0**
Dropouts (1)	523	25.5	53	12.8	493	25.7
Adjusted sample	1 887	91.8	361	87.2	1 427	74.3
Dropouts (2)	830	40.4	153	37.0	780	40.6
Total responses/ response rate*	**702**	**34.2**	**208**	**50.2**	**647**	**33.7**

(1) Number of losses: company was identical with/included in another already identified in the sample, an appropriate contact was not found or could not be reached; contact was sick/on vacation; company no longer exists or is being restructured, etc.

(2) Number of refusals: questionnaire not returned though promised; no time available for dealing with the matter; no interest in filling in the questionnaire; not able to collect requested data; company policy; data too confidential, etc.

*) Calculation: total responses over addresses found

Table 29: Overview of sample and responses received

During the main interview phase, the respondents were contacted several times through follow-up telephone calls in order to realise both a high response rate and a high response quality. The follow-up calls aimed to

- Arrange appointments with target persons who were difficult to reach
- Remind respondents about the questionnaire
- Clarify questions and help respondents completing the questionnaire
- Collect the responses by telephone, where appropriate

All contact interviews and, where applicable, main interviews were conducted centrally by telephone from the Synovate call centre in Munich. This facilitated efficient and reliable survey coordination.

All interviewers involved were either native speakers of the required languages, or speak those languages fluently. About 80% of them already had prior experience with patent-related topics or other EPO surveys. All 20 interviewers received a detailed briefing about the study and the contents of the questionnaire in order to prepare them for any questions from the target persons. Delegates from the EPO attended the initial briefing of the interviewers.

7.4 Experiences during fieldwork

During the fieldwork, complex company structures were considered in order to avoid data overlaps. Multiple contacts with one and the same department through different company

[18] Including 24 addresses requested by EPO joint cluster managers

subsidiaries were avoided as far as possible, e.g. by carefully checking the gross sample for companies with identical or similar names.
Because of the general project schedule, most contact interviews had to be conducted during the summer months. Many applicants were not available due to holidays and had to be contacted repeatedly.

As in previous years, the contact phase was particularly difficult in the US. The overall response rate in the US (calculated over total number of addresses found) was lower for the Random group than in 2008. This was due to the increasing difficulty to identify target persons within the companies, i.e. the extended use of mailbox systems or the policy not to put any phone call through unless a correct name of a contact person could be provided.

However, in 2009 the situation that interviewers only got through if they had the name of the contact person was not only encountered in the US, but also in European countries.

On account of a reduction in the work force, as a consequence of short-time working schemes, many companies gave no priority to participating in this survey. In addition, some applicants that had participated in previous years now wanted a “break” for 2009. In some markets, for example in Japan, some respondents were reluctant to disclose certain information or participate in this survey at all due to lack of a data protection declaration on the cover page of the questionnaire.

7.5 Plausibility checks

Each questionnaire returned was checked in detail and corrected according to rules agreed with the EPO. If necessary, verbal information provided by the respondents on the questionnaire was converted into figures. All relevant modifications were recorded on a separate change and comment list.

To ensure that the answers given in the questionnaire were logical and consistent, some plausibility rules were set up. In detail, the rules covered the following topics:

- The worldwide total of first filings (line k of section B) was compared with the sum of the first filings reported for Euro-direct/European patent applications under the EPC (excluding PCT) (line a), international applications under the PCT (international phase) (line b) and national applications (lines c, d, e, f, g, h, and i) as well as with the total number of first filings given in part C/question g. If missing or being implausible, the worldwide total of first filings was calculated according to the figures provided or deleted. The calculated sum can be interpreted as estimation for the worldwide total of first filings.
- Further, total first filings given in C (g) was compared to first filing numbers in B (a) and (b) as well as subsequent filings in B (a) to (i) in order to detect cases where information on first filings in C (g) may have been incorrectly provided in terms of a subset of worldwide first filings or included counts of subsequent filings.
- The numbers in any cell under subsequent filings should be comparable (say, not more than three times as high) to the number under worldwide total first filings (line

k) for the previous year. Also, if respondents indicated first filings, there should be subsequent filings in the same year and/or respective following year.

- The numbers for PCT national/regional phase applications in any cell for 2010 and 2011 (lines l, m, n, o, or p) should be comparable to (say, not more than three times as high as) the combined figures under PCT international phase first filings and subsequent filings (line b) in 2008 and 2009, respectively.
- Technical areas noted verbally in the "Others" line of Part C were allocated to one of the 14 joint clusters ex post, where possible.
- The number of first filings should not be much higher than the number of subsequent filings applied in a foreign country (B (a), B (c) to B (h)) one year later. In addition, the number of first fillings applied at home office should not be much lower than the number of first filings applied in a foreign country (B (a), B (c) to B (h)).

When tripped, these plausibility checks and figure interpretations or estimations resulted in codes in the electronic database that identify an answer scenario as being dubious. Some analyses were carried out to test the effect of excluding such cases (**Table 10, Table 14, Table 23** and **Table 25**).

A set of rules was developed together with the researchers to ensure that the answers given to the questions were correctly transcribed and interpreted in the electronic database. In cases where percentage growth rates were given instead of real figures, a method was defined for converting these into equivalent filing figures on which the analyses could be based. Rules were given concerning the interpretation of zero, to ensure correct interpretation where zero is given either as a figure or as an indicator of no change compared to the base year.

7.6 Respondents' reactions to the questionnaire

The questionnaire required a high level of commitment from the respondents. Some respondents found the questionnaire very complicated and difficult to understand. Sometimes it was impossible to gather the information requested, or data collection was perceived as being very time-consuming. As in previous years, all this resulted in a significant time lag between the initial contact and the response. In addition, a substantial number of follow-up calls were required to remind and encourage respondents to complete the questionnaire, and to assist respondents with explanations about the questions. If respondents expressed a need for more information about the survey, e.g. why the EPO requires information about R&D budgets, an explanation was developed to motivate respondents to fill in at least estimates (as long as no exact data was available).

In general, the respondents had the following difficulties when responding to the questionnaire:

- Difficulty in providing the information due to unavailability of the data
    - Some organisations do not record the requested data
    - Data are only available for a larger part of the company than that requested
    - Data are not recorded in the required structure
    - Change in data recording system or application procedure
- Difficulty in providing the information due to data confidentiality
- Confusion about the terminology used in the questionnaire and the purpose of some parts of the questionnaire
- Difficulty in answering the questions as they are not relevant to their organisation

7.7 Non-response analysis and response rates

7.7.1 Address qualification

The EPO provided lists containing a total[19] of 2 164 selected applicants. The researchers strove to identify contact names, addresses and telephone numbers, and 2 055 addresses were confirmed. For the Biggest group, it was possible to obtain 414 telephone numbers for 419 addresses through the international research procedure. In the Random group (including target group overlap), this level was comparable (95%) to that of the Biggest group.

7.7.2 Losses

In 2009, 8% of the addresses found for the Biggest group were identical with or included in another company. A further 5% had to be classified as non-systematic losses. Cases were classified as losses if either a company or contact person was not available or a company could not take part due to economic or organisational changes. In the Random group, 18% of the addresses found were identical to or included in another applicant in the sample. Another 8% were non-systematic losses. Compared to 2008, the shares (as well as absolute numbers) of duplicates and losses turned out to be higher in 2009 than they were in 2008 (14%/4%).

In the Biggest group, a direct contact person was identified for 86% of the 419 gross addresses (= "adjusted sample B", 2008 and 2007: 84% each). This figure was lower in the Random group (70% of 2 029 gross addresses), which is again lower than that of last year (78%).

This means that in 2009 a lower number of addresses could actually be used for the survey (1 472 addresses in 2009 compared to 1 571 addresses in 2008). This particularly applies to the US: as already described, the contacting phase turned out to be extremely difficult here, due to the use of mailbox systems or the policy not to put any phone call

[19] Including 24 addresses requested by EPO joint cluster managers

through if the calling person cannot provide a correct name of a contact person. In 2009, 85 addresses got “lost” during this contacting phase compared to 19 in 2008.

7.7.3 Response rates

In terms of addresses found, Table 29 shows that the overall response rate is 34.2%, 50.2% in the Biggest group, and 33.7% in the Random group.

In the following detailed response tables, response rates are given in terms of percentages against Adjusted sample B (equivalent to "Adjusted sample" in Table 29) ("Response rate 1") and the number of addresses found (Response rate 2). The latter includes duplicates (according to names/addresses) and non-systematic losses and is, therefore, lower than response rate 1. In addition, this type of response rate also reflects the differences resulting from duplicates and/or losses reported above in 7.7.2.

Referring to adjusted sample B, the overall response rate was 58% in the Biggest group and 45% in the Random group. Compared to the previous year, there was a slight increase in the Biggest group, while the rate remained the same for the Random group (2008: 54% response rate in the Biggest group, and 45% in the Random group).

The response rates in the different regions of the survey vary compared to 2008:

The response rate for EPC countries increased in the Biggest group to 59% (54% in 2008), while in the Random group this was 50%, which was comparable to the previous year (2008: 51%). Among EPC applicants, high response rates were achieved in Great Britain (78% Biggest), Austria (75% Random), Finland (69% Random), Denmark (67% Biggest), Belgium (63% Biggest, 65% Random), and Sweden (63% Biggest).

In the US, the response rate increased to 39% in the Biggest group (2008: 33%), and remained constant at 30% in the Random group (2008: 29% - however, referring to addresses found it dropped from 28% in 2008 to 20% in 2009, which shows that in 2009 it was possible to establish contact with fewer respondents than in 2008).

In Japan, the response rates decreased in both groups; 79% in the Biggest group (2008: 84%) and 63% in the Random group (2008: 67%).

As in previous years, the response rate was higher in the Biggest group than in the Random group.

The detailed response statistics with blocs and countries of origin are shown in **Table 30** (Biggest group) and **Table 31** (Random group). **Table 32** shows blocs and countries of origin of the respondents themselves. Reasons for non-response are explained in **Table 33** (Biggest and Random groups).

Bloc, Biggest	Country	Addresses in gross sample[1]	Addresses not found	Addresses found	Included in/Identical with other applicant [D1]	Adjusted sample A	Number of losses[D1]	Adjusted sample B	Number of refusals[D2]	Number of interviews	Response rate 1*	Response rate 2**
EPC	AT	1	0	1	0	1	0	1	0	1	100%	100%
EPC	BE	9	0	9	0	9	1	8	3	5	63%	56%
EPC	CH	23	0	23	1	22	0	22	10	12	55%	52%
EPC	DE	86	0	86	6	80	3	77	35	42	55%	49%
EPC	DK	6	0	6	0	6	0	6	2	4	67%	67%
EPC	ES	1	0	1	0	1	0	1	0	1	100%	100%
EPC	FI	4	0	4	0	4	0	4	2	2	50%	50%
EPC	FR	30	0	30	4	26	0	26	13	13	50%	43%
EPC	GB	9	0	9	0	9	0	9	2	7	78%	78%
EPC	IE	1	0	1	0	1	0	1	0	1	100%	100%
EPC	IT	6	0	6	0	6	0	6	0	6	100%	100%
EPC	LI	1	0	1	0	1	0	1	0	1	100%	100%
EPC	NL	13	0	13	2	11	1	10	4	6	60%	46%
EPC	SE	11	1	10	2	8	0	8	3	5	63%	50%
EPC	TR	1	0	1	0	1	0	1	0	1	100%	100%
EPC	**Total**	**202**	**1**	**201**	**15**	**186**	**5**	**181**	**74**	**107**	**59%**	**53%**
JP	**JP**	**89**	**0**	**89**	**7**	**82**	**0**	**82**	**17**	**65**	**79%**	**73%**
US	**US**	**110**	**1**	**109**	**9**	**100**	**12**	**88**	**54**	**34**	**39%**	**31%**
OT	**Total**	**18**	**3**	**15**	**2**	**13**	**3**	**10**	**8**	**2**	**20%**	**13%**
OT	CA	3	0	3	0	3	1	2	1	1	50%	33%
OT	BM	1	0	1	0	1	0	1	0	1	100%	100%
OT	KR	5	1	4	0	4	0	4	4	0	0%	0%
OT	CN	2	0	2	0	2	1	1	1	0	0%	0%
Total	**Total**	**419**	**5**	**414**	**33**	**381**	**20**	**361**	**153**	**208**	**58%**	**50%**

1) Without addresses requested by EPO joint cluster managers

D1) Both columns sum up to Dropouts (1) in **Table 29**

D2) This column refers to Dropouts (2) in **Table 29**

*) Calculation: number of interviews over adjusted sample B

**) Calculation: number of interviews over addresses found

Table 30: Non-response statistics – Biggest (incl. overlapping members of the Random group)

Bloc, Biggest	Country	Addresses in gross sample[1]	Addresses not found	Addresses found	Included in/Identical with other applicant [D1]	Adjusted sample A	Number of losses [D1]	Adjusted sample B	Number of refusals [D2]	Number of interviews	Response rate 1*	Response rate 2**
EPC	AT	29	3	26	1	25	1	24	6	18	75%	69%
EPC	BE	25	3	22	0	22	2	20	7	13	65%	59%
EPC	BG	1	1	0	0	0	0	0	0	0	0%	0%
EPC	CH	97	4	93	15	78	2	76	38	38	50%	41%
EPC	CZ	2	2	0	0	0	0	0	0	0	0%	0%
EPC	DE	348	5	343	32	311	13	298	149	149	50%	43%
EPC	DK	33	3	30	4	26	1	25	14	11	44%	37%
EPC	ES	28	1	27	1	26	3	23	17	6	26%	22%
EPC	FI	19	2	17	4	13	0	13	4	9	69%	53%
EPC	FR	135	5	130	34	96	2	94	46	48	51%	37%
EPC	GB	80	7	73	5	68	3	65	38	27	42%	37%
EPC	HU	1	0	1	1	0	0	0	0	0	0%	0%
EPC	IE	6	0	6	0	6	1	5	4	1	20%	17%
EPC	IT	69	1	68	6	62	8	54	23	31	57%	46%
EPC	LI	5	0	5	2	3	0	3	1	2	67%	40%
EPC	LU	2	1	1	0	1	0	1	1	0	0%	0%
EPC	NL	58	0	58	17	41	3	38	19	19	50%	33%
EPC	NO	8	0	8	0	8	0	8	3	5	63%	63%
EPC	PL	1	1	0	0	0	0	0	0	0	0%	0%
EPC	PT	1	0	1	0	1	0	1	0	1	100%	100%
EPC	SE	55	6	49	11	38	4	34	21	13	38%	27%
EPC	SI	1	0	1	0	1	0	1	0	1	100%	100%
EPC	TR	2	0	2	0	2	0	2	0	2	100%	100%
EPC	**Total**	**1 006**	**45**	**961**	**133**	**828**	**43**	**785**	**391**	**394**	**50%**	**41%**
JP	**JP**	**276**	**1**	**275**	**68**	**207**	**6**	**201**	**74**	**127**	**63%**	**46%**
US	**US**	**531**	**17**	**514**	**94**	**420**	**85**	**335**	**234**	**101**	**30%**	**20%**
OT	**Total**	**216**	**46**	**170**	**42**	**128**	**22**	**106**	**81**	**25**	**24%**	**15%**
OT	CA	31	0	31	5	26	9	17	14	3	18%	10%
OT	AU	17	0	17	0	17	3	14	10	4	29%	24%
OT	IL	21	1	20	3	17	3	14	6	8	57%	40%
OT	KR	58	12	46	26	20	0	20	18	2	10%	4%
OT	CN	20	6	14	3	11	2	9	8	1	11%	7%
Total	**Total**	**2 029**	**109**	**1 920**	**337**	**1 583**	**156**	**1 427**	**780**	**647**	**45%**	**34%**

1) Without addresses requested by EPO joint cluster managers

D1) Both columns sum up to Dropouts (1) in **Table 29**

D2) This column refers to Dropouts (2) in **Table 29**

*) Calculation: number of interviews over adjusted sample B

**) Calculation: number of interviews over addresses found

Table 31: Non-response statistics – Random (incl. overlapping members of the Biggest group)

Bloc	Country	Biggest (incl. Target group overlap)[1]	Random (incl. Target group overlap)[1]	Biggest & Random / net number of interviews[2]
EPC	AT	1	18	19
EPC	BE	5	13	14
EPC	BG	0	0	0
EPC	CH	12	38	41
EPC	CZ	0	0	0
EPC	DE	42	149	162
EPC	DK	4	11	14
EPC	ES	1	6	6
EPC	FI	2	9	10
EPC	FR	13	48	53
EPC	GB	7	27	31
EPC	HU	0	0	0
EPC	IE	1	1	2
EPC	IT	6	31	35
EPC	LI	1	2	2
EPC	LU	0	0	0
EPC	NL	6	19	19
EPC	NO	0	5	5
EPC	PL	0	0	0
EPC	PT	0	1	1
EPC	SE	5	13	17
EPC	SI	0	1	1
EPC	TR	1	2	2
EPC	**Subtotal**	**107**	**394**	**434**
JP	**JP**	**65**	**127**	**137**
US	**US**	**34**	**101**	**106**
OT	**OT**	**2**	**25**	**25**
OT	AD	0	1	1
OT	AU	0	4	4
OT	BM	1	1	1
OT	BR	0	1	1
OT	CA	1	3	3
OT	IL	0	8	8
OT	IN	0	2	2
OT	ZA	0	2	2
OT	KR	0	2	2
OT	CN	0	1	1
Total	**Total**	**208**	**647**	**702**

1) Without addresses requested by EPO joint cluster managers
2) Including addresses requested by EPO joint cluster managers

Table 32: Respondent structure

Losses[1]			Systematic losses/refusals[1]		
- Company is never available	24	15%	- Didn't return questionnaire	409	50%
- Appropriate contact not found / mailbox system**	29	18%	- No time	131	16%
- Technical problems (fax, e-mail address not working)	3	2%	- Not interested	52	6%
- Language problems	1	1%	- Company policy	54	7%
- Company no longer exists	6	4%	- Not able to identify/collect data	49	6%
- Contact is sick/on vacation	5	3%	- Data too confidential	45	5%
- Company is being restructured	17	10%	- No reason given	41	5%
- Company will be liquidated	4	2%	- Questionnaire too complicated	15	2%
- Contact never available**	73	45%	- Participated in other EPO survey	2	0%
			- Returned questionnaire too late		0%
			- Other reasons (please specify in comment)*	13	2%
			- No name policy**	12	1%
Total	**162**	**100%**	**Total**	**823**	**100%**

1) Without addresses requested by EPO joint cluster managers

* = Too expensive due to external attorney / Didn't want to give contact data of externals

** = Mailbox systems / No name policy / Blocking operators

Table 33: Reasons for non-response – Biggest and Random group

7.7.4 Item non-response

Apart from the overall response rates, the different sections of the questionnaire were filled in with varying completeness, i.e. there are different response rates for different parts of the questionnaire. The completion rates of the questionnaire were 99% for Part B (10 out of 702 cases without data), 89% for Part C, 78% for Part D, and 88% for Part E, although these gratifyingly high percentages hide cases where not all questions were answered for a part (see **Annex XII**). Follow-up calls supported the response rate for parts of the questionnaire.

In total (Biggest and Random groups), out of 702 complete interviews, 671 responses contributed to the forecasting analyses based on Part B (EPC and PCT International Phase – B(a) and B(b)) and 595 responses could be used for EPO PCT regional phase applications (B(l)). 547 respondents provided information on the technical area they are active in. However, 159 of these respondents noted their technical area(s) in the "others" line. These responses (147) were allocated to one of the 14 joint clusters by Synovate ex post, where possible. A further 155 respondents did not enter any information on their technical area. 239 responses contributed to the analysis of R&D budgets (C(f)).

In the Biggest group (including overlap), out of 208 complete interviews, 207 cases could be used for the forecasting analyses based on Part B (EPC and PCT International Phase – B(a) and B(b) – equivalent response rate 2 over addresses found: 50%), and 190 responses provided useful information on EPO PCT regional phase applications (B(l) – equivalent response rate 2: 46%). For Part C, 180 respondents answered at least one question (equivalent response rate 2: 43%), and 69 responses contributed to the analysis of R&D budgets (C(f) – equivalent response rate 2: 17%). 161 respondents provided useful answers to Part D questions (equivalent response rate 2: 39%), while 182 respondents and 154 respondents provided the information on company type (E(a) – equivalent response rate 2: 44%), and founding year and starting year for patent applications (E(b)-E(e) – equivalent response rate 2: 37%) respectively.

In the Random group (including overlap), out of 647 complete interviews, 617 responses contributed to the forecasting analyses based on Part B (EPC and PCT International Phase – B(a) and B(b) – equivalent response rate 2: 32%), and 550 responses supplied useful information on EPO PCT regional phase applications (B(l) – equivalent response rate 2: 29%). For Part C, 576 respondents answered at least one question (equivalent response rate 2: 30%) and 229[20] responses could be used for the analysis of R&D budgets (C(f) – equivalent response rate 2: 12%). 505 respondents answered Part D questions (equivalent response rate 2: 26%), while 567 respondents and 511 respondents provided useful information on company type (E(a) – equivalent response rate 2: 30%), and founding year and starting year for patent application (E(b)-E(e) – equivalent response rate 2: 27%) respectively.

[20] 229 respondents provided information on some parts of C(f), but not all responses could be used for analysis.

8 Annex II: Comments received from participants

8.1 Multiple Comments

8.1.1 General multiple comments (selection)

Questionnaire part:	B	C	D	E	F	Total
	Absolute frequency of comments					
No answer/ no data available	16	47	2	30		**95**
Confidentiality	18	20			8	**46**
Difficult to provide figures/hard to estimate/estimation only	33	1			3	**37**
Unclear question/terminology	2	2	1	1		**6**
Question not relevant to this entity/organisation					5	**5**
Purpose of questionnaire/survey is unclear					3	**3**
Hard to answer (not collecting data in requested structure/change in organisation)					3	**3**
Time-consuming/takes a lot of effort					2	**2**
Total	**69**	**70**	**3**	**31**	**24**	**197**

Numbers refer to counts of total comments that were received. Sometimes the same respondent made identical comments in several parts of the questionnaire.

8.1.2 (Multiple) comments in part B (selection, absolute frequency of comments)

Questionnaire part:	B
Future filing numbers will be unchanged/stable	**6**
No future plan/unclear trend for future filing	**6**
Future filing numbers will be increasing	**4**
No further filing/no more filing	**3**

8.1.3 (Multiple) comments in part C (h) (impact of current worldwide recession on the level of R&D budget (selection, absolute frequency of comments)

Questionnaire part:	C
Stable R&D Budget/no impact from recession/only marginal impact	**12**
R&D Budget is not determined by/related to the world econ/it depends on other factors	**8**
Decrease of R&D Budget/negative impact on R&D budget	**6**
Increase of R&D Budget	**2**

8.2 Individual Comments (selection)

8.2.1 Individual comments on the questionnaire/the survey

- The purpose of the questionnaire is not clear. It's difficult to understand the intention, if EPO needs these data only for their estimation to plan or for the improvement of the system at EPO.
- Much of the information request is statistical information that is not readily available to me. Also, much of the information is of a confidential nature and not the type of information we can disclose.
- Many compliments for this precious data collection. It's very useful to coordinate the EPO structures according to companies' actual and future needs and for the companies too, in order to plan future developments. It's a big help to manage the future activities and developments of traditional and new business.

8.2.2 Individual comments on patenting strategy and development

- Since 2009, we have completely abstained from the PCT. From 2010, we plan first filings only as an EP, no longer in Germany.
- The nationalisation within EP must be urgently abolished. On average, 5 000 euros per country and patent are not affordable! Consequence: partial rights problem in almost all countries, except few key states. If an EP was granted, it must be valid without any additional costs such as nationalisation, annual fees, etc. for national offices all over Europe! Otherwise, the EP does not deserve its name. There should be a pre-usage right and 6-month period of grace for the EP, as in Germany.
- In mid-2008, the filing strategy was subject to a fundamental overhaul in order to cut costs. Instead of joining PCT and waiting to see what will happen - maybe filing in 10+ different countries - the nationalisation decision is made in the beginning. Filings are limited to a small group of countries (DE, UK, J, CH, USA, South Korea). This proves to be more cost-advantageous to us. Especially given the current market dynamic; however, this new strategy will be kept even if market conditions change again for the better.
- We have been applying for patent in Europe via our licensee, who has been paying all the bills. We expect future licensees to continue this practice.
- The application work in China has been discontinued, since it is linked to no protection. Our machines have been counterfeited there and they bear even our logo. For non-European countries, we therefore only apply for patent in the U.S. and Japan.
- IP Strategy: 1. filing of provisionals in the U.S. 2. after 12-month period: filing of non-provisionals U.S. 3. 1 day later: PCT filing 4. Also after 12-month period: non-PCT other countries such as Taiwan, Chile. 5. after 30-month period: national phase of PCT (via EPA, Japan, China)

8.2.3 Individual comments on impact of current worldwide recession on R&D budget

- In the field of dentistry, there is no recession. Since our inventions result in significant cost savings in the manufacture of dental prostheses. Our practices are currently in demand.
- Level of R&D budget determined by several factors, income from central government and research councils as well as commercial investment. On the whole, at the moment there is no recession effect, but this may be delayed if future government spend to Universities is reduced in the UK.
- We look for strategic partners for R&D. As their budget declines, ours does as well. If partners' budget reduces, theirs also will.
- Budgets for much of our ongoing R&D programmes are set several years in advance. Other than some lengthening of timescales, 2009 R&D spending has not yet been very significantly impacted by the current recession.
- No real effect on R&D budget, but on filing policy. However, filing costs are not included in R&D budget.
- Larger impact on patenting levels.
- The recession has curtailed the rate of growth of the budget, but there has been no actual decrease (i.e. without the recession the budget would have likely increased.)
- We are a University and hence slightly protected.
- The recession impacts the fund raising and thus the company growth.
- We feel that the business units are demanding us to be more cost-efficient. There is no decrease of the bottom line R&D budget, but there is a request to limit all additional costs (less expensive hotels when on business trip, video conferences in stead of real-life meetings, filling in questionnaires).

8.2.4 Individual comments on fees and costs (as well as effects on patenting strategy)

- Patenting is an extremely expensive process in Europe for a start-up company but often required to achieve funding. The recent reduction in translation requirements was a good thing, but there might be other ways to reduce costs for start-ups, which would encourage innovation, without facilitating blanket bombing by larger companies, which stifles competition.
- PCT fees have gotten out of hand, which has impacted xxx´s decisions to file PCT applications and then enter Europe. I doubt that I will ever file another PCT application again as long as the costs remain so high.
- Please improve the maintenance fee: for example to reduce the maintenance fee if examination takes long time. Regarding cases which are transferred to EP via PCT: when it takes 30 months as maximum to be transferred, we have to pay the third year’s maintenance fee to EP during this period. That means we do not have enough time to organise the payment by externals, e.g. Pension Company / bank as there is not much spare time before the pay is due.
- We notice that it is often taking extremely long time till starting examination by a PCT. We can’t accept that we have to pay a lot for maintenance fees even though it is not our fault to be taken so long time. Please improve/reduce maintenance fees.

- The costs of oral presentations are really high because they usually take place in Munich (an expensive city). Even more costly, as they take place as early as 9:00, we have to pay for a hotel and more man-hours.

8.2.5 Individual comments on EPO quality

- Please consider how commercial firms could get access to tools like EPOQUE, to better search for patentability prior to filing.
- I understand the large workload but from a small-business perspective, the wait for the application review seems interminable. One thing that would have helped in my case would be a prioritisation system that could speed up the review of patent applications for inventions intended to save lives. In my case, without patent protection I cannot get funding for development. Somehow, the application review process should take this into account.[21]
- The examinations in the bio industry field are taking too much time compared to the other fields (e.g. micro (small) molecule medicals). Please improve the examination time (quicker work).
- Europe is an attractive market and the EPO makes patent prosecution feasible with value for the money, good examinations and reasonable fees.

[21] EPO comment: There is a system called "PACE" at EPO that allows for applicants to request speedy treatment of applications either for search or substantive examination. See pages 102 to 105 at *http://archive.epo.org/epo/pubs/oj007/08_07/special_edition_3_epc_2000_decisions.pdf*

9 Annex III: Analytical Methodology

9.1 Amalgamation of joint clusters to mega clusters

At EPO, operations with respect to patent filings are organised according to 14 industry segments, also called *joint clusters*. In the questionnaire Part C respondents are invited to give some information broken down according to these classes. Joint cluster specific filing estimates help EPO anticipate industry-specific trends and dynamics. For purposes of aggregating enough sample responses to give better forecasts by technical areas, these 14 joint clusters have been amalgamated into five larger groups in this report. These *mega clusters* each define a hopefully fairly homogenous group of industries. Through this amalgamation, each of the 14 joint clusters is assigned to exactly one of the mega clusters. The assignment is given in **Table 34**.

In this year's report, growth and filing estimates as well as the additional analyses of **Annex V** to **Annex VIII** are provided using mega cluster breakdowns.

Joint Mega Cluster	Joint Cluster
Electricity	Electricity & Electrical Machines
	Electronics
	Measuring, Optics
ICT	Audio, Video & Media
	Computer
	Telecommunications
Inorganic Chemistry	Industrial Chemistry
	Polymers
Organic Chemistry	Biotechnology
	Pure & Applied Organic Chemistry
Traditional	Civil Engineering & Thermodynamics
	Handling and Processing
	Human Necessities
	Vehicles & General Technology

Table 34: Amalgamation of joint clusters to mega clusters

9.2 Finite population correction

Finite population correction values were obtained from the EPO database counts of Euro-direct and Euro-PCT-RP filings of respondents in the Random group as follows:

Residence bloc	fpc
Total	0.14
EP	0.18
JA	0.20
OT	0.04
US	0.08

Finite population correction factor values shown here were used in the current analysis. In fact, these fpc values are conservative because they are based on database counts for filings by respondents, while the reported counts for base year filings by the respondents can be somewhat higher (see **Annex X**, where numbers of applicants responding are much smaller than numbers of applicants asked, although numbers of applications are almost the same). Respondents often answer on behalf of larger corporate entities than those represented by the applicant numbers for which they were selected. This is an advantage in that it increases the coverage of the population by the sample.

9.3 Nonparametric bootstrapping

Nonparametric bootstrapping was carried out to validate the stability of the forecast results in terms of the analytically calculated standard errors of the growth indices[22]. Again this year, the bootstrap results confirm the validity of the analytic formulae that are routinely used throughout the report. Due to limited further insights, the bootstrapping analysis results are not included in this report.

[22] Cf. Applicant Panel Survey 2006: Section 7.5.

10 Annex IV: Forecasts for applications at other patent offices (national applications and PCT national phase applications).

Intentions regarding future patent filings at national offices were obtained from questions *(c)* to *(i)* and *(m)* to *(p)* in **Part B** of the questionnaire (**Annex I**).

National applications by country based on the Random group are presented in **Table 35** and **Table 36**. Forecasts based on the Random group for PCT national phase applications at USPTO, JPO, SIPO and DPMA (German Patent Office) are displayed in **Table 37** to **Table 40.** The tables are limited to calculating growth indices as up-to-date filing numbers are not generally available for the base year from all the offices concerned.

With the exception of national filings in China, filing intentions for 2009 are negative or flat. National first filings in China are projected to almost double by 2011, when compared to 2008. Table 36 indicates that this high growth estimate largely comes from EPC-based respondents. However, it should be borne in mind that this result applies only to applicants who also applied at EPO in 2008, and has a large standard error. When excluding companies with critical comments, however, the growth rate for national filings in China from 2008 to 2011 moderates to about 50%, while the standard error is cut in half as well.

Random Group
No breakdown
Q Indices

				Year								
				2009			2010			2011		
Filings type	**Filing route**	**Nation**	**Res. bloc**	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10	Cases 11	Q-index 11	S.E. 11
First	National	Germany (c)	Total	145	0.9400	0.0265	129	0.9683	0.0320	124	0.9931	0.0363
		United Kindom (d)	Total	52	0.9965	0.1099	46	0.9823	0.1451	43	1.0190	0.1573
		France (e)	Total	56	0.7077	0.2755	49	0.7299	0.3298	47	0.7543	0.3457
		Japan (f)	Total	134	1.0444	0.0610	127	1.0892	0.0465	118	1.1205	0.0471
		United States (g)	Total	214	1.0234	0.0436	191	1.0588	0.0421	182	1.0946	0.0455
		China (h)	Total	33	1.5044	0.2248	33	1.7772	0.2350	29	1.9190	0.2563
		Other Countries (i)	Total	93	1.0475	0.1429	85	1.0756	0.1498	85	1.0888	0.1501
		Worldwide total (k)	Total	537	0.9505	0.0186	503	0.9956	0.0181	479	1.0253	0.0211
Subsequent	National	Germany (c)	Total	80	0.9082	0.0692	64	0.9506	0.0892	59	0.9824	0.1038
		United Kindom (d)	Total	45	1.2290	0.0778	41	1.3531	0.0645	37	1.4750	0.0740
		France (e)	Total	40	1.4264	0.2384	35	1.4452	0.1978	34	1.5158	0.1876
		Japan (f)	Total	132	0.9371	0.0526	112	1.0205	0.0643	104	1.0796	0.0749
		United States (g)	Total	245	0.8371	0.0379	217	0.8984	0.0420	207	0.9145	0.0471
		China (h)	Total	156	0.7254	0.1957	134	0.8275	0.2363	129	0.9097	0.2570
		Other Countries (i)	Total	175	0.8129	0.0430	151	0.8813	0.0437	143	0.9153	0.0469

Table 35: Detailed forecasting results for national applications (excluding PCT), no breakdown – Random group

Random Group
Breakdown by residence bloc
Q Indices

				Year								
				2009			2010			2011		
Filings type	**Filing route**	**Nation**	**Res. bloc**	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10	Cases 11	Q-index 11	S.E. 11
First	National	Germany (c)	EP	128	0.9321	0.0263	116	0.9587	0.0332	113	0.9827	0.0365
			JA	3	0.9400 *	0.0265 *	2	0.9683 *	0.0320 *	2	0.9931 *	0.0363 *
			OT	2	0.9400 *	0.0265 *	2	0.9683 *	0.0320 *	1	0.9931 *	0.0363 *
			US	12	0.8828	0.1274	9	1.0950	0.1348	8	1.2216	0.2107
		United Kindom (d)	EP	41	0.9933	0.1393	35	0.9555	0.1885	35	0.9845	0.1905
			JA	1	0.9965 *	0.1099 *	1	0.9823 *	0.1451 *	1	1.0190 *	0.1573 *
			OT	2	0.9965 *	0.1099 *	2	0.9823 *	0.1451 *	1	1.0190 *	0.1573 *
			US	8	0.9763	0.0600	8	1.0293	0.0514	6	1.1485	0.0993
		France (e)	EP	46	0.6438	0.3137	41	0.6837	0.3491	40	0.7100	0.3639
			JA	1	0.7077 *	0.2755 *	1	0.7299 *	0.3298 *	1	0.7543 *	0.3457 *
			OT	2	0.7077 *	0.2755 *	2	0.7299 *	0.3298 *	1	0.7543 *	0.3457 *
			US	7	1.0771	0.0829	5	0.7299 *	0.3298 *	5	0.7543 *	0.3457 *
		Japan (f)	EP	16	1.3242	0.1182	14	1.3409	0.0833	12	1.3952	0.0900
			JA	108	0.9255	0.0261	103	0.9708	0.0252	100	0.9935	0.0248
			OT	2	1.0444 *	0.0610 *	3	1.0892 *	0.0465 *	2	1.1205 *	0.0471 *
			US	8	0.9638	0.0639	7	1.0406	0.0683	4	1.1205 *	0.0471 *
		United States (g)	EP	94	1.0582	0.0735	83	1.1049	0.0753	80	1.1355	0.0796
			JA	39	1.1368	0.0987	34	1.1220	0.0724	33	1.1497	0.0772
			OT	13	0.9972	0.1169	11	0.9686	0.0719	10	0.9833	0.0815
			US	68	0.8978	0.0422	63	0.9547	0.0372	59	1.0037	0.0425
		China (h)	EP	12	1.6981	0.3366	12	2.1326	0.3556	12	2.2494	0.3656
			JA	11	1.1290	0.0701	11	1.1290	0.0701	9	1.0346	0.0684
			OT	4	1.0234 *	0.0436 *	4	1.0588 *	0.0421 *	3	1.0946 *	0.0455 *
			US	6	1.2330	0.0691	6	1.4130	0.0748	5	1.0946 *	0.0455 *
		Other Countries (i)	EP	58	1.0797	0.2087	51	1.0938	0.2205	53	1.1027	0.2173
			JA	14	1.0604	0.0667	13	1.0279	0.0732	13	1.0532	0.0774
			OT	5	1.0234 *	0.0436 *	5	1.0588 *	0.0421 *	4	1.0946 *	0.0455 *
			US	16	0.9766	0.1355	16	1.0698	0.1089	15	1.0945	0.1128
		Worldwide total (k)	EP	323	0.9624	0.0222	304	1.0102	0.0258	291	1.0377	0.0303
			JA	111	0.9098	0.0281	107	0.9460	0.0285	103	0.9696	0.0288
			OT	22	1.2254	0.1182	17	1.1545	0.0794	15	1.2102	0.0970
			US	81	0.8975	0.0666	75	0.9700	0.0440	70	1.0123	0.0504
Subsequent	National	Germany (c)	EP	37	0.8623	0.0926	28	0.9003	0.1212	27	0.9750	0.1558
			JA	30	0.8800	0.0797	25	0.9260	0.0825	23	0.9281	0.0702
			OT	1	1.0234 *	0.0436 *	1	1.0588 *	0.0421 *	1	1.0946 *	0.0455 *
			US	12	1.3268	0.2015	10	1.3797	0.2234	8	1.2277	0.1215
		United Kindom (d)	EP	23	1.2869	0.0930	19	1.4538	0.0859	18	1.5640	0.1163
			JA	12	1.1629	0.1674	12	1.2775	0.1489	11	1.4128	0.1661
			OT	1	1.0234 *	0.0436 *	1	1.0588 *	0.0421 *	1	1.0946 *	0.0455 *
			US	9	1.1736	0.1469	9	1.2521	0.1387	7	1.3455	0.1130
		France (e)	EP	22	1.9221	0.2297	19	1.7757	0.1971	19	1.8529	0.1733
			JA	13	0.8724	0.2741	11	0.9803	0.2657	11	1.0196	0.2736
			OT	0	1.0234 *	0.0436 *	0	1.0588 *	0.0421 *	0	1.0946 *	0.0455 *
			US	5	1.0234 *	0.0436 *	5	1.0588 *	0.0421 *	4	1.0946 *	0.0455 *
		Japan (f)	EP	63	0.8466	0.0909	50	0.9420	0.1105	47	1.0414	0.1265
			JA	48	1.0860	0.0669	42	1.1123	0.0775	39	1.0602	0.0992
			OT	3	1.0234 *	0.0436 *	3	1.0588 *	0.0421 *	3	1.0946 *	0.0455 *
			US	18	0.8719	0.0613	17	0.9778	0.0618	15	1.0685	0.0774
		United States (g)	EP	118	0.8598	0.0488	99	0.9045	0.0541	96	0.9180	0.0614
			JA	76	0.8211	0.0625	70	0.9044	0.0647	67	0.9135	0.0695
			OT	6	0.9107	0.0897	6	1.0256	0.0962	6	0.9779	0.1864
			US	45	0.7852	0.1299	42	0.8518	0.1433	38	0.8932	0.1638
		China (h)	EP	71	0.6289	0.3415	58	0.6518	0.3908	56	0.7124	0.4243
			JA	64	0.7694	0.0739	59	0.8941	0.0771	56	0.9723	0.0814
			OT	2	1.0234 *	0.0436 *	2	1.0588 *	0.0421 *	2	1.0946 *	0.0455 *
			US	19	1.0449	0.3333	15	1.7912	0.4109	15	2.0793	0.3648
		Other Countries (i)	EP	86	0.8427	0.0541	70	0.8742	0.0630	67	0.9115	0.0705
			JA	60	0.7175	0.0843	54	0.8307	0.0704	51	0.8973	0.0759
			OT	2	1.0234 *	0.0436 *	2	1.0588 *	0.0421 *	2	1.0946 *	0.0455 *
			US	27	0.8810	0.1288	25	0.9924	0.1092	23	0.9595	0.1060

Table 36: Detailed forecasting results for national applications (excluding PCT), broken down by residence bloc – Random group

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2009			2010			2011		
Patent Office	**Filing route**	**Res. bloc**	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10	Cases 11	Q-index 11	S.E. 11
USPTO	PCT National	EP	197	1.0152	0.0295	178	1.0769	0.0561	178	1.1198	0.0628
		JA	80	1.0849	0.1061	76	1.0862	0.1119	71	1.1307	0.1179
		OT	15	1.2741	0.1683	13	1.1351	0.1409	12	1.1666	0.1760
		US	43	0.9478	0.1394	38	1.0096	0.1422	35	0.9742	0.1729
USPTO	PCT National	Total	335	1.0275	0.0347	305	1.0720	0.0464	296	1.1058	0.0516

Table 37: Detailed forecasting results for PCT applications entering the national phase at USPTO (United States) – Random group

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2009			2010			2011		
Patent Office	**Filing route**	**Res. bloc**	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10	Cases 11	Q-index 11	S.E. 11
JPO	PCT National	EP	153	0.9651	0.0304	142	0.9979	0.0552	141	1.0502	0.0624
		JA	71	1.0406	0.0486	68	0.9758	0.0527	62	1.0224	0.0557
		OT	11	1.7808	0.2582	10	2.2449	0.3899	10	2.4715	0.4820
		US	53	0.9662	0.0550	47	1.0342	0.0624	43	1.0596	0.1023
JPO	PCT National	Total	288	1.0010	0.0291	267	1.0273	0.0457	256	1.0789	0.0541

Table 38: Detailed forecasting results for PCT applications entering the national phase at JPO (Japan) – Random group

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2009			2010			2011		
Patent Office	**Filing route**	**Res. bloc**	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10	Cases 11	Q-index 11	S.E. 11
SIPO	PCT National	EP	136	0.9544	0.0311	126	1.0135	0.0546	124	1.0580	0.0603
		JA	73	0.9226	0.0543	69	0.8763	0.0650	64	0.9276	0.0670
		OT	10	1.3709	0.1470	10	1.6719	0.2051	10	1.8359	0.2954
		US	41	0.9608	0.0612	38	1.0241	0.0695	34	0.9930	0.1075
SIPO	PCT National	Total	260	0.9599	0.0257	243	1.0006	0.0394	232	1.0414	0.0461

Table 39: Detailed forecasting results for PCT applications entering the national phase at SIPO (China) – Random group

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2009			2010			2011		
Patent Office	**Filing route**	**Res. bloc**	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10	Cases 11	Q-index 11	S.E. 11
DPMA	PCT National	EP	44	0.8945	0.2387	40	1.0848	0.1927	40	1.1720	0.1867
		JA	27	1.0680	0.1573	24	1.1002	0.0918	22	1.0371	0.0881
		OT	3	1.2163	0.0948	3	1.1432	0.1098	3	1.0000	0.0000
		US	12	0.9022	0.0565	11	0.9467	0.0719	10	0.8780	0.1470
DPMA	PCT National	Total	86	0.9324	0.1625	78	1.0699	0.1296	75	1.1081	0.1288

Table 40: Detailed forecasting results for PCT applications entering the national phase at DPMA (Germany) – Random group

11 Annex V: Respondents' profiles

In **Sections C** and **E** of the questionnaire, respondents were asked to indicate the profile of the company, including company/organisation type, the number of persons employed, the joint clusters that best describe the applicant's business, and the year of foundation of the company.

11.1 All respondents

These findings represent the totality of responses to the survey. It is considered most appropriate for the main forecasting exercise of this report to analyse and report results separately for the Biggest and Random groups, and not to provide combined results for all respondents.

11.2 Respondents from the Biggest group

Figure 7 shows that the majority of companies in the Biggest group were founded in the first half of the twentieth century, but it wasn't until the second half of the century that most of these companies started conducting business in Europe. About 50% of the responding companies employ more than 10 000 persons.

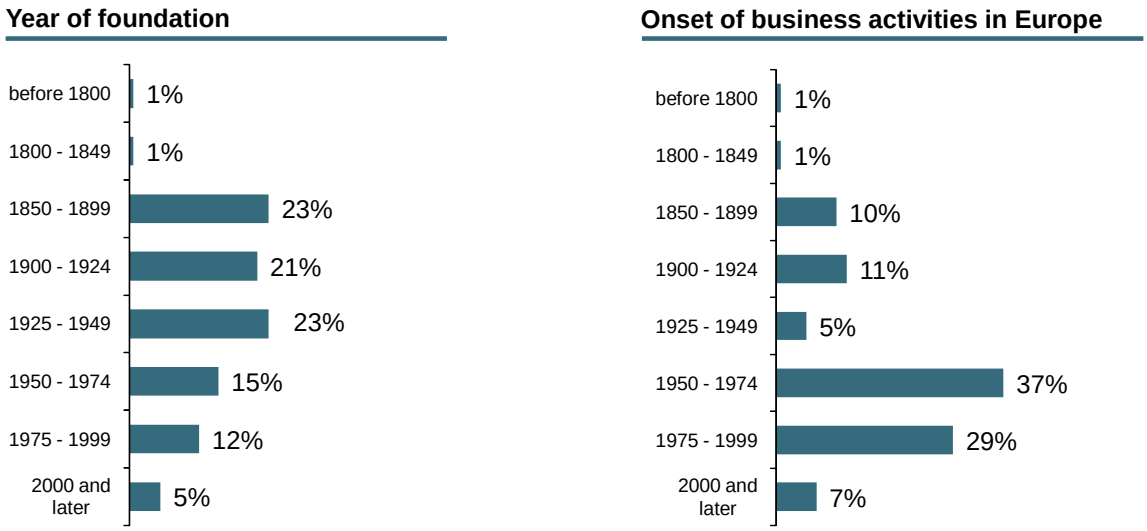


Figure 7: Biggest group by year of foundation and year of onset of business activities in Europe.

Broken down by residence bloc, distributions are as shown in the following three tables:

Biggest group
By year of foundation
Total and breakdown by residence bloc

Residence bloc	before 1800	1800 - 1849	1850 - 1899	1900 - 1924	1925 - 1949	1950 - 1974	1975 - 1999	2000 and later	Grand total	No. of cases
Total	**1%**	**1%**	**23%**	**21%**	**23%**	**15%**	**12%**	**5%**	**100%**	**156**
EP	1%	1%	33%	16%	13%	14%	15%	6%	100%	79
JA	0%	0%	4%	32%	38%	20%	4%	4%	100%	56
OT	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0
US	0%	0%	38%	10%	24%	5%	19%	5%	100%	21

Table 41: Biggest group by year of foundation and residence bloc

Biggest group
By number of employees
Total and breakdown by residence bloc

Residence bloc	Individual inventor	1 to 9	10 to 49	50 to 249	250 to 999	1 000 to 4 999	5 000 to 9 999	10 000 to 49 999	50 000 or more	Grand total	No. of cases
Total	**0%**	**0%**	**0%**	**2%**	**5%**	**25%**	**17%**	**30%**	**20%**	**100%**	**172**
EP	0%	0%	0%	3%	8%	20%	15%	29%	24%	100%	86
JA	0%	0%	0%	0%	3%	43%	23%	23%	8%	100%	61
OT	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0
US	0%	0%	0%	4%	0%	0%	12%	48%	36%	100%	25

Table 42: Biggest group by number of employees and residence bloc

Biggest group
By onset of business activities in Europe
Total and breakdown by residence bloc

Residence bloc	before 1800	1800 - 1849	1850 - 1899	1900 - 1924	1925 - 1949	1950 - 1974	1975 - 1999	2000 and later	Grand total	No. of cases
Total	**1%**	**1%**	**10%**	**11%**	**5%**	**37%**	**29%**	**7%**	**100%**	**122**
EP	1%	1%	18%	18%	4%	28%	24%	6%	100%	68
JA	0%	0%	0%	0%	3%	45%	45%	8%	100%	38
OT	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0
US	0%	0%	0%	13%	13%	56%	13%	6%	100%	16

Table 43: Biggest group by year of onset of business activities in Europe

With respect to the type of organisation, as in previous years, the overwhelming majority of Biggest group applicants (97.9% this year) are private enterprises.

11.3 Respondents from the Random group

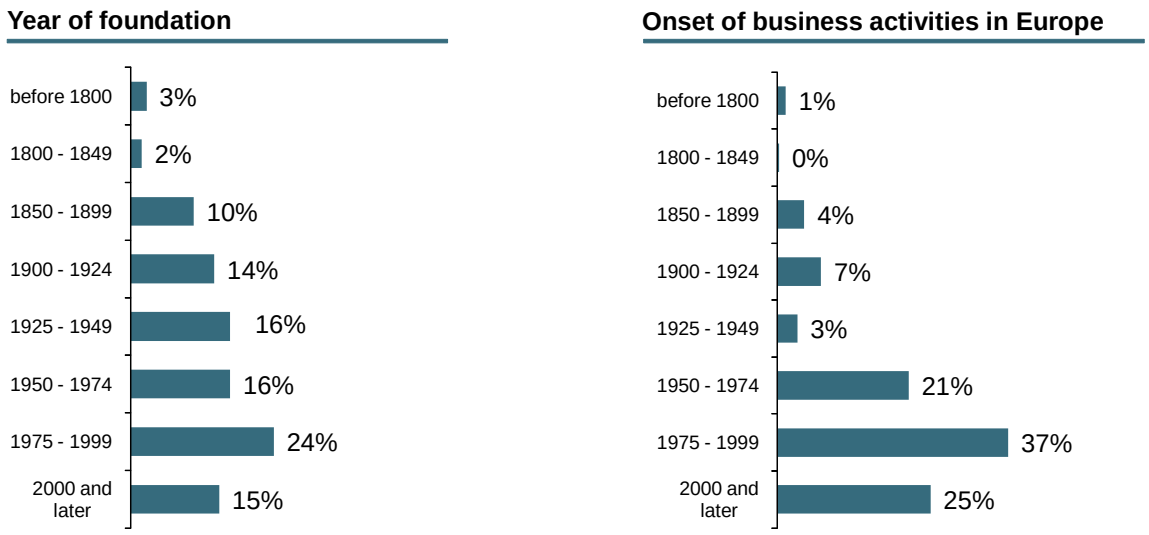


Figure 8: Random group by year of foundation and year of onset of business activities in Europe.

Figure 8 shows that, in the Random group, 39% of companies were founded after 1974, and 62% starting conducting business in Europe during this time. Only 23% were founded in the first half of the 20th century, compared to 69% for the Biggest group as shown in Figure 7.

For the Random group, the median number of employees is between 1 000 and 4 999, which is smaller than in the Biggest group.

Broken down by residence bloc, distributions are as shown in the following three tables:

Random group
By year of foundation
Total and breakdown by residence bloc

Residence bloc	before 1800	1800 - 1849	1850 - 1899	1900 - 1924	1925 - 1949	1950 - 1974	1975 - 1999	2000 and later	Grand total	No. of cases
Total	**3%**	**2%**	**10%**	**14%**	**16%**	**16%**	**24%**	**15%**	**100%**	**498**
EP	4%	2%	11%	13%	10%	16%	29%	14%	100%	300
JA	0%	0%	8%	22%	38%	22%	4%	5%	100%	117
OT	0%	0%	0%	7%	0%	7%	43%	43%	100%	14
US	0%	4%	15%	6%	9%	10%	28%	27%	100%	67

Table 44: Random group broken down by year of foundation and residence bloc

Random group
By number of employees
Total and breakdown by residence bloc

Residence bloc	Individual inventor	1 to 9	10 to 49	50 to 249	250 to 999	1 000 to 4 999	5 000 to 9 999	10 000 to 49 999	50 000 or more	Grand total	No. of cases
Total	**2%**	**6%**	**10%**	**11%**	**14%**	**25%**	**10%**	**14%**	**7%**	**100%**	**523**
EP	3%	8%	12%	15%	16%	21%	8%	11%	7%	100%	319
JA	0%	0%	1%	3%	11%	42%	18%	20%	5%	100%	119
OT	0%	21%	29%	7%	14%	29%	0%	0%	0%	100%	14
US	1%	8%	15%	8%	8%	14%	11%	18%	14%	100%	71

Table 45: Random group broken down by persons employed and residence bloc

Random group
By onset of business activities in Europe
Total and breakdown by residence bloc

Residence bloc	before 1800	1800 - 1849	1850 - 1899	1900 - 1924	1925 - 1949	1950 - 1974	1975 - 1999	2000 and later	Grand total	No. of cases
Total	**1%**	**0%**	**4%**	**7%**	**3%**	**21%**	**37%**	**25%**	**100%**	**366**
EP	2%	0%	6%	8%	4%	19%	37%	24%	100%	249
JA	0%	0%	0%	1%	1%	33%	54%	10%	100%	67
OT	0%	0%	0%	0%	0%	0%	22%	78%	100%	9
US	0%	0%	0%	12%	5%	20%	20%	44%	100%	41

Table 46: Random group broken down by year of onset of business activities in Europe and residence bloc

With respect to the type of organisation, as in previous years, the overwhelming majority of Random group applicants (92.2% this year) are private enterprises, while the second biggest group are educational institutions (3.7% this year) followed by Government R&D (2.1% this year).

11.4 Estimated composition of the population of EPO applicants

The properties and composition of the populations of applicants and applications can be estimated from the Random group. This approach fundamentally follows the *extended structural weights* procedure described in the *Applicant Panel Survey 2006 report*[23] to reduce the skewness towards larger applicants that is caused by the random sampling scheme.

This year, the procedure again uses the fine-tuned procedure described in the *Applicant Panel Survey 2007 report*[24] to calculate resident bloc specific multiplicative factors for the structural weighting components. The formula for the structural weight includes two additional factors to that for the Poisson weight: PopProb, which is the probability of existence in the population of applicants making a certain number of filings per year by

[23] Cf. Applicant Panel Survey 2006 report: p. 18.
[24] Cf. Applicant Panel Survey 2007 report, Annex VII, p. 110.

bloc of residence; and SRSS, which is the sample response rate by size class per bloc of residence.
Table 47 shows a grouped version of bloc-wise PopProb values. Filing count classes are defined by a range of filing counts from lower bound ("lb") to upper bound ("ub"). However, the matrix used in the actual calculations is not grouped, because the EPO database provides the exact number of base-year filings per sample member. Probabilities of inclusion decrease quickly as filing counts increase. This year, as in the previous two years. The bloc-wise approach reflects differences in applicant structure by residence bloc. The results presented in **Table 47** are consistent with the known finding that the blocs with the smallest average numbers of filings per applicant are EPC and Other countries.

Table 48 shows bloc-wise SRSS values based on filing count class. Again filing count classes are defined by a range of filing counts from lower bound ("lb") to upper bound ("ub"), but this time it is the class midpoints that are used in the analysis. This year, as in the previous two years, bloc-specific SRSS values were used. Even more so than for the PopProb values, there are pronounced differences between blocs.

class	lb	ub	EP	JP	OT	US	TOTAL
1	1	1	0.68	0.51	0.74	0.64	0.66
2	2	2	0.14	0.15	0.13	0.15	0.14
3	3	3	0.06	0.08	0.05	0.07	0.06
4	4	5	0.05	0.08	0.04	0.06	0.05
5	6	9	0.03	0.07	0.03	0.04	0.04
6	10	19	0.02	0.06	0.01	0.03	0.03
7	20	39	0.01	0.03	0.01	0.01	0.01
8	40	and higher	0.01	0.03	0.01	0.01	0.01

Table 47: Grouped bloc-wise probabilities of existence (PopProb) of specific filing counts for counts up to 40

class	lb	ub	EP	JP	OT	US	TOTAL
1	1	1	0.3593	0.3659	0.1618	0.1545	0.28629857
2	2	2	0.4403	0.3846	0.0789	0.2059	0.3201581
3	3	3	0.3971	0.5714	0.0714	0.2045	0.32142857
4	4	5	0.3131	0.619	0.1	0.1875	0.29255319
5	6	9	0.4907	0.3333	0.2632	0.1642	0.35348837
6	10	19	0.3962	0.381	0.0625	0.1549	0.29787234
7	20	39	0.3587	0.6429	0.0667	0.1613	0.33649289
8	40	and higher	0.3562	0.3871	0.037	0.2817	0.32344214

Table 48: Bloc-wise SRSS values of the Random sample by filing count class.

The results in **Table 48** are consistent with **Table 31**, which also shows that the highest response rates are found from applicants residing in Japan and the EPC.

As in previous reports, it should be noted that extended structural weights carry very large weight spans – the largest weight being over 100 and the smallest weight less than 0.001.

Thus, results based on extended structural weights need to be treated with extreme care as they can be very heavily influenced by a few, or even a single, high weight case(s).

Extended structural weights are applied for estimating distributions for the whole applicant population by year of foundation and the number of employees, giving the following results:

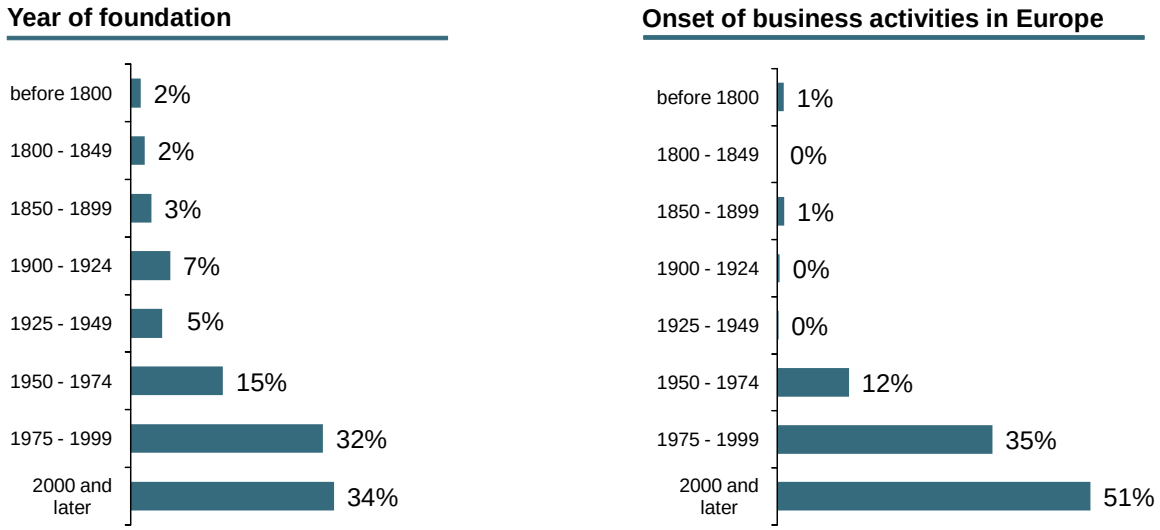


Figure 9: Estimated distribution of the EPO future filings survey population by year of foundation and year of onset of business activities in Europe.

The inference for the whole applicant population is that 66% of applicant companies were founded after 1974 and 86% initiated business activities in Europe after 1974. This makes an even stronger contrast to the data for the Biggest group in Figure 7 than was seen in Figure 8 from the unweighted analysis of the same set of data from the Random group.

Separated by residence bloc, the estimated composition of the applicant distributions can be summarised as follows:

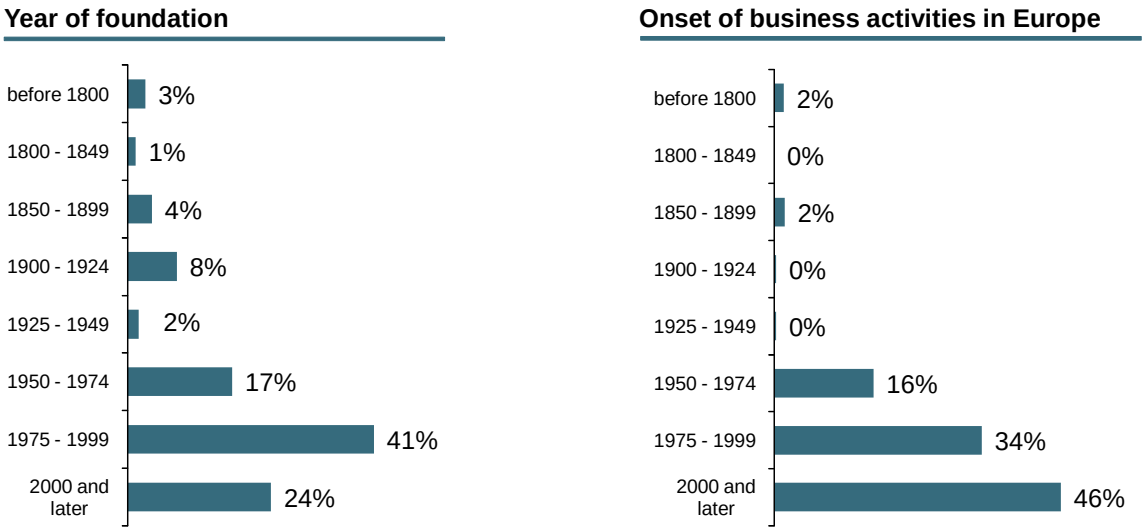


Figure 10: Estimated distribution of the EPO future filings survey population in the EPC (EP) residence bloc by year of foundation and year of onset of business activities in Europe.

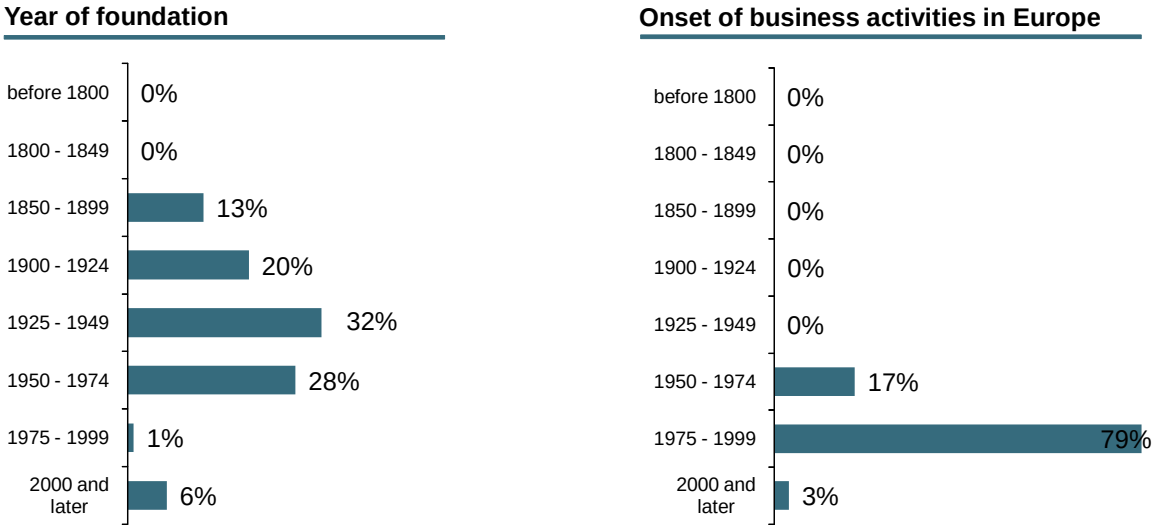


Figure 11: Estimated distribution of the EPO future filings survey population in the Japan (JA) residence bloc by year of foundation and year of onset of business activities in Europe.

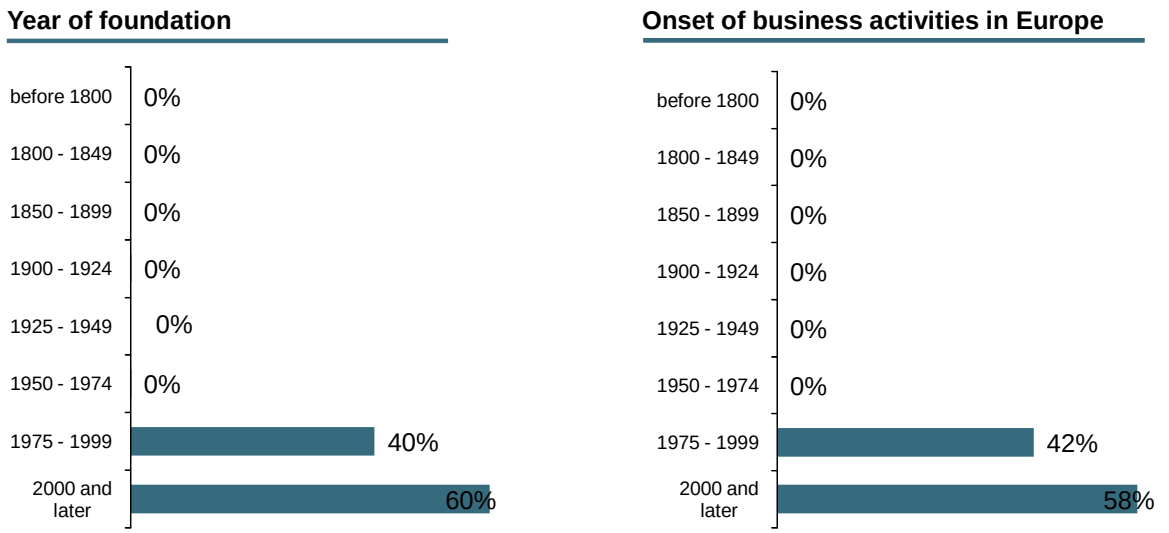


Figure 12: Estimated distribution of the EPO future filings survey population in the Others (OT) residence bloc by year of foundation and year of onset of business activities in Europe.

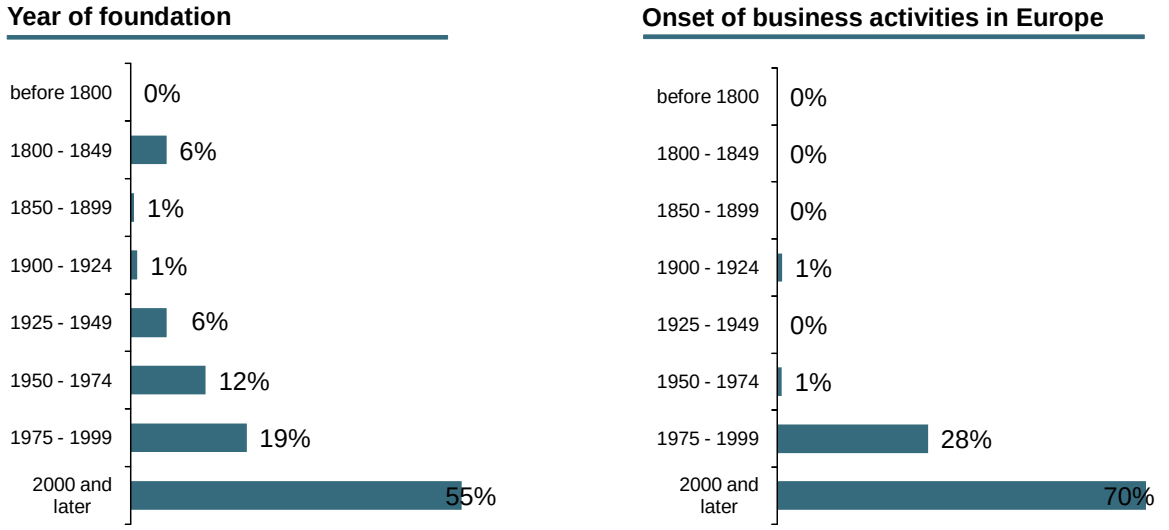


Figure 13: Estimated distribution of the EPO future filings survey population in the US residence bloc by year of foundation and year of onset of business activities in Europe

Notable differences can be inferred between the typical histories of applicants from the various blocs. Some European companies seem to have moved there from abroad since 2000. From Japan, most companies were founded before 1975 but started operating in Europe from then on. Only some US companies were founded before 1975 and almost all came to Europe after this date. No Others companies started or operated in Europe before 1975 according to these findings.

Estimation incorporating structural weights
By year of foundation
Total and breakdown by residence bloc

Residence bloc	before 1800	1800 - 1849	1850 - 1899	1900 - 1924	1925 - 1949	1950 - 1974	1975 - 1999	2000 and later	Total
Total	**1.6%**	**2.3%**	**3.4%**	**6.5%**	**5.2%**	**15.3%**	**31.9%**	**33.7%**	**100%**
EP	2.9%	1.3%	4.0%	8.1%	1.8%	17.3%	40.8%	23.7%	100%
JA	0.0%	0.0%	12.5%	20.1%	32.1%	27.8%	1.0%	6.4%	100%
OT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.5%	59.5%	100%
US	0.0%	5.9%	0.5%	1.1%	5.9%	12.4%	19.2%	54.9%	100%

Table 49: Estimated distribution of EPO applicants by year of foundation and residence bloc

Estimation incorporating structural weights
By number of employees
Total and breakdown by residence bloc

Residence bloc	Individual inventor	1 to 9	10 to 49	50 to 249	250 to 999	1 000 to 4 999	5 000 to 9 999	10 000 to 49 999	50 000 or more	Total
Total	**6.6%**	**23.7%**	**23.9%**	**15.0%**	**9.7%**	**12.4%**	**5.1%**	**3.0%**	**0.7%**	**100%**
EP	8.5%	20.6%	27.0%	15.9%	9.8%	9.5%	7.2%	1.6%	0.0%	100%
JA	0.0%	0.0%	6.2%	7.6%	26.6%	40.0%	6.7%	6.7%	6.3%	100%
OT	0.0%	34.2%	47.3%	2.8%	0.0%	15.7%	0.0%	0.0%	0.0%	100%
US	7.2%	35.9%	10.2%	21.6%	7.9%	8.0%	1.4%	7.2%	0.7%	100%

Table 50: Estimated distribution of EPO applicants by number of employees and residence bloc

Estimation incorporating structural weights
By onset of business activities in Europe
Total and breakdown by residence bloc

Residence bloc	before 1800	1800 - 1849	1850 - 1899	1900 - 1924	1925 - 1949	1950 - 1974	1975 - 1999	2000 and later	Total
Total	**1.0%**	**0.0%**	**1.1%**	**0.4%**	**0.2%**	**11.6%**	**34.9%**	**50.8%**	**100%**
EP	1.6%	0.0%	1.7%	0.3%	0.3%	16.1%	33.6%	46.5%	100%
JA	0.0%	0.0%	0.0%	0.0%	0.0%	17.4%	79.4%	3.2%	100%
OT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.6%	58.4%	100%
US	0.0%	0.0%	0.0%	0.9%	0.0%	0.9%	28.5%	69.8%	100%

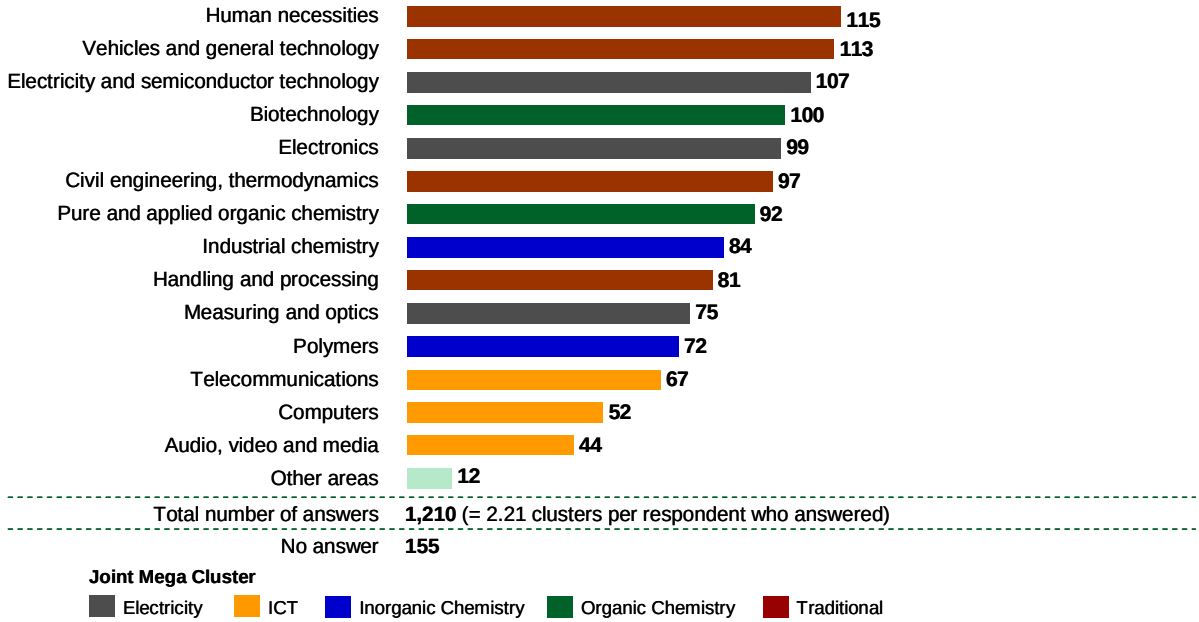
Table 51: Estimated distribution of EPO applicants by year of onset of business activities in Europe and residence bloc

With respect to the type of organisation, as in previous years, the overwhelming majority of EPO applicants (90.1% this year) are private enterprises, while the second biggest group are educational institutions (6.2% this year).

11.5 EPO joint clusters & mega clusters

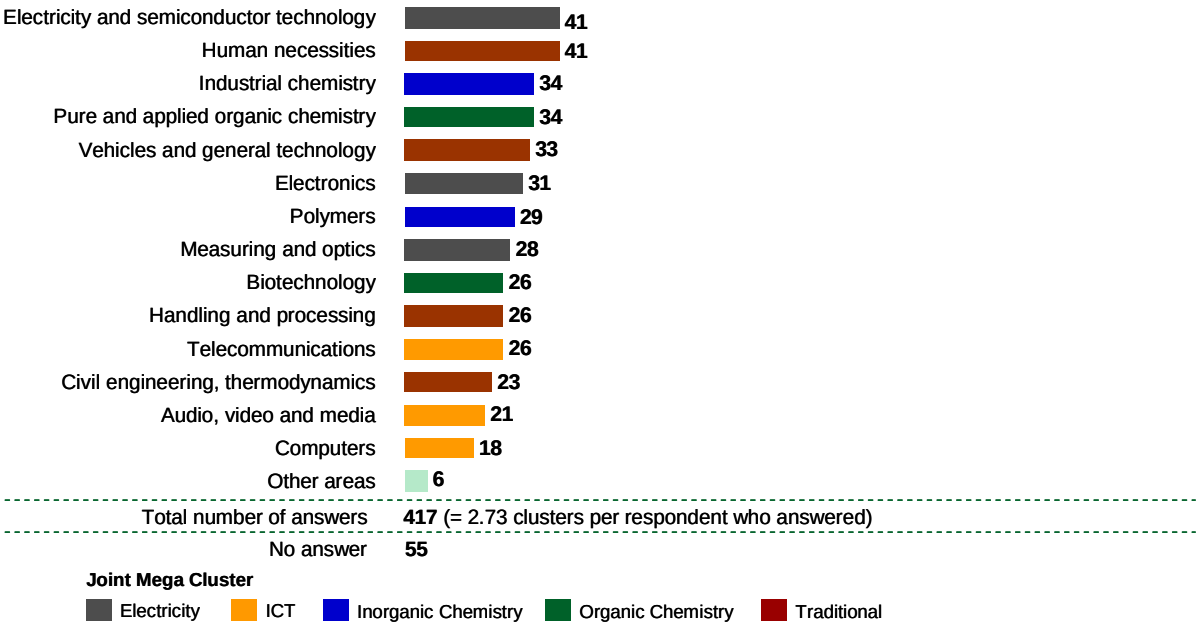
All applicants in the survey were asked to describe themselves in terms of membership of one or more of the EPO joint clusters (questionnaire **Part C**, question e). The following figures provide an overview of the sample composition in terms of joint clusters for the Biggest and Random groups.

Figure 14 shows the number of responses per joint cluster for effectively the whole sample (Biggest and Random groups combined but excluding requests by EPO joint cluster managers). **Figure 15** shows results for the Biggest group alone and **Figure 16** shows results for the Random group alone.



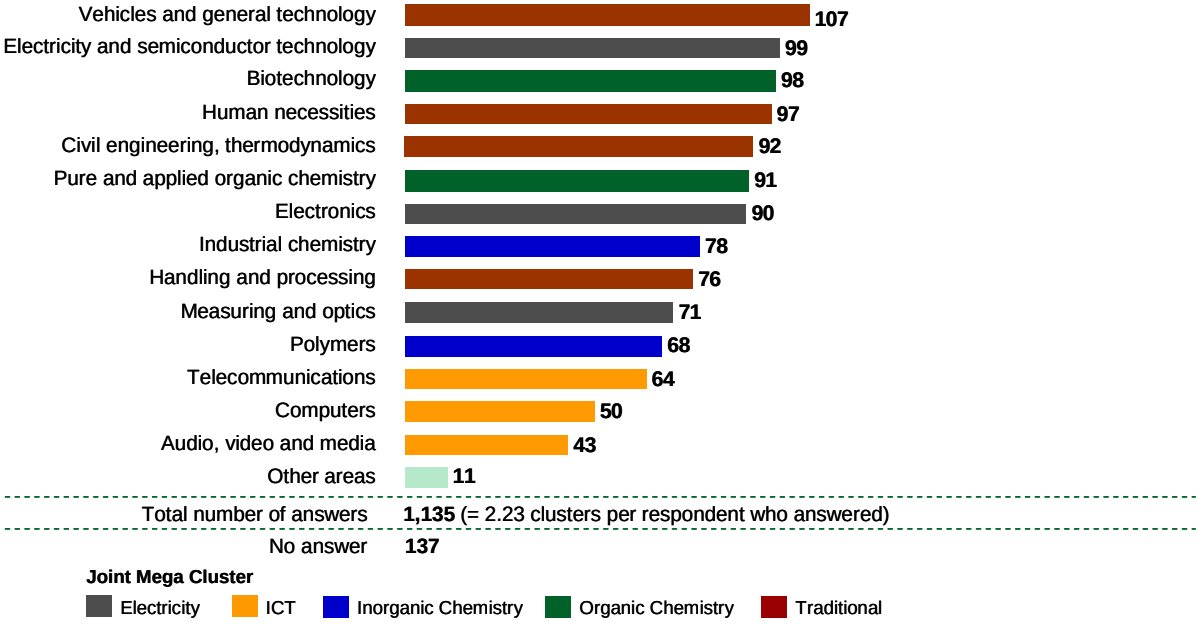
Base: n = 702, all respondents of the Biggest and Random group, multiple answers possible, absolute numbers of responses (unweighted, including ex-post cluster allocation, including deliberately selected addresses by EPO)

Figure 14: Number of responses per joint cluster (entire sample/net number of interviews).



Base: n = 208, all respondents of the Biggest group incl. overlapping members of the Random group, multiple answers possible, absolute numbers of responses (unweighted, including ex-post cluster allocation, excluding deliberately selected addresses by EPO)

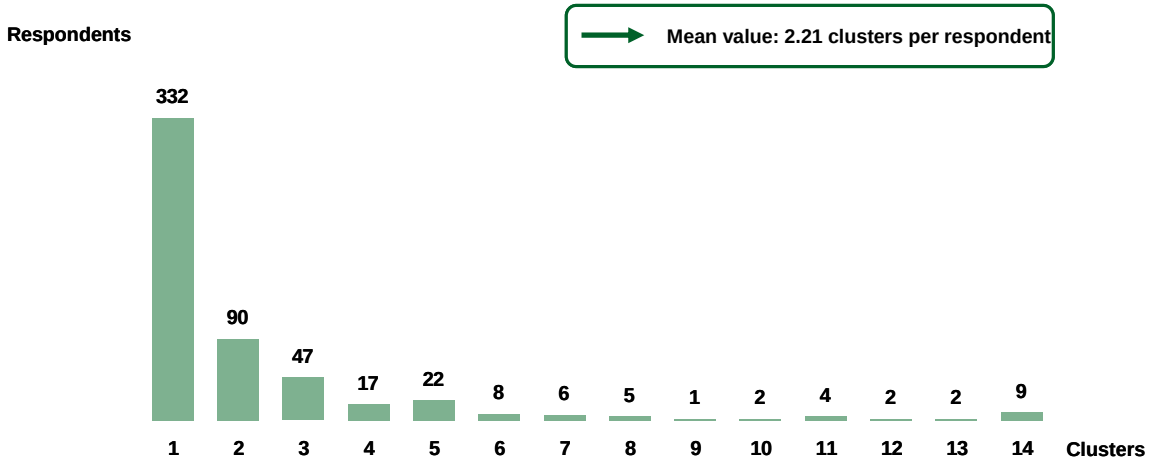
Figure 15: Number of responses per joint cluster (Biggest group including overlapping members of the Random group).



Base: n = 647, all respondents of the Random group incl. overlapping members of the Biggest group, multiple answers possible, absolute numbers of responses (unweighted, including ex-post cluster allocation, excluding deliberately selected addresses by EPO)

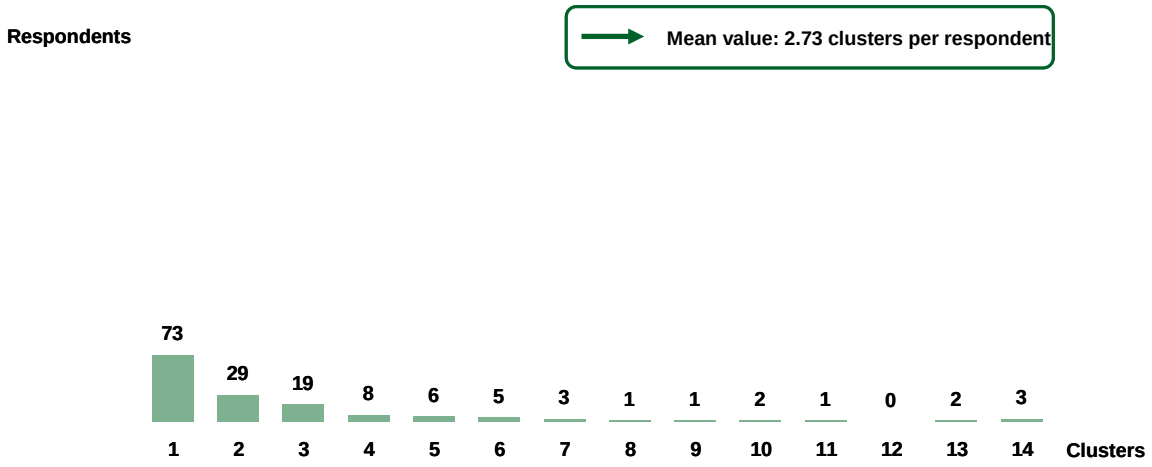
Figure 16: Number of responses per joint cluster (Random group including overlapping members of the Biggest group).

Figure 17 shows the distribution of responses in the Biggest and Random groups combined by the number of joint clusters chosen. On average, the interviewees reported data for 2.21 joint clusters. The Biggest group respondents selected 2.73 joint clusters on average (see **Figure 18**). The Random group respondents reported 2.23 joint clusters (see **Figure 19**). (The Random group in the previous 2008 and 2007 surveys reported data for 2.02 and 1.91 joint clusters on average respectively.) In terms of the five mega clusters (for distribution of joint cluster to joint mega cluster see **Annex III**), the average number of mega clusters per respondent is 1.57 for the entire sample, 1.78 for the Biggest group respondents, and 1.57 for Random group respondents.



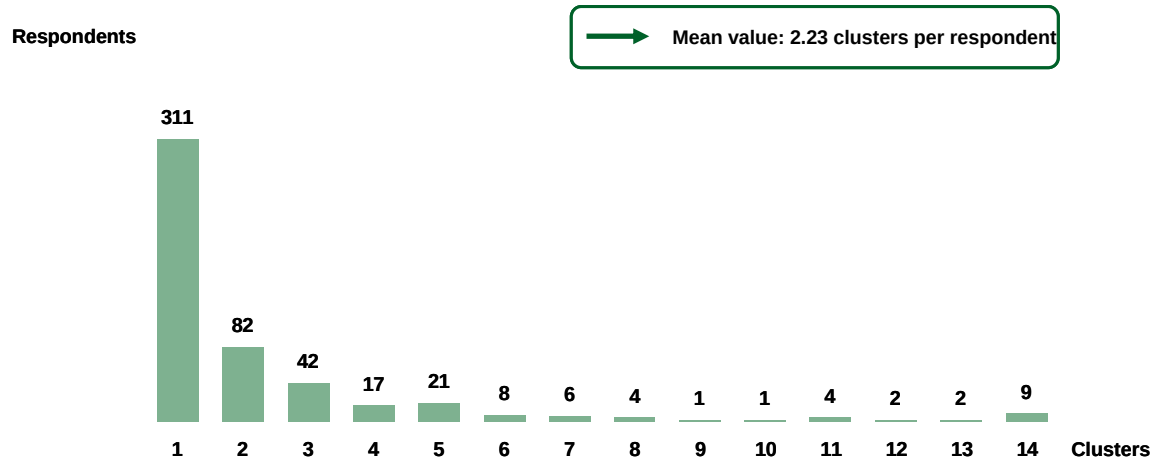
Base: n = 547, all respondents of the Biggest and Random group who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, including deliberately selected addresses by EPO)

Figure 17: Number of joint clusters selected per respondent (entire sample/net number of interviews).



Base: n = 153, all respondents of the Biggest group incl. overlapping members of the Random group who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, excluding deliberately selected addresses by EPO)

Figure 18: Number of joint clusters selected per respondent (Biggest including overlapping members of the Random group).



Base: n = 510, all respondents of the Random group incl. overlapping members of the Biggest group who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, excluding deliberately selected addresses by EPO)

Figure 19: Number of joint clusters selected per respondent (Random group including overlapping members of the Biggest group).

Table 52 to **Table 54** below indicate which combinations of joint clusters and mega clusters are cited most frequently. Each table shows a two-way matrix describing the cluster combinations selected by the interviewees of the Biggest and Random groups combined (**Table 52**), Biggest group (**Table 53**), and Random group (**Table 54**). The tables indicate pairwise combinations but this picture is not absolutely complete, as **Figure 17** to **Figure 19** show that respondents sometimes indicate activities in more than two joint clusters.

MC*	Joint cluster	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Other areas
Ele	1. Electricity/ semiconductor tech	107	62	40	26	27	41	32	27	29	33	30	29	31	36	7
	2. Electronics	62	99	40	28	32	40	25	24	29	30	29	27	31	30	4
	3. Measuring and optics	40	40	75	19	27	34	25	25	25	25	30	28	24	25	5
ICT	4. Audio, video and media	26	28	19	44	22	28	15	14	14	16	17	13	14	16	3
	5. Computers	27	32	27	22	52	31	17	14	20	18	18	16	17	17	4
	6. Telecommunications	41	40	34	28	31	67	19	19	19	24	21	23	21	25	5
InoC	7. Industrial chemistry	32	25	25	15	17	19	84	35	30	36	25	22	30	23	4
	8. Polymers	27	24	25	14	14	19	35	72	32	36	21	23	27	23	4
OrC	9. Biotechnology	29	29	25	14	20	19	30	32	100	48	20	20	32	16	5
	10. Pure/ applied organic chemistry	33	30	25	16	18	24	36	36	48	92	24	19	36	19	4
Trad	11. Civil engineering, thermodynamics	30	29	30	17	18	21	25	21	20	24	97	17	24	26	4
	12. Handling and processing	29	27	28	13	16	23	22	23	20	19	17	81	19	26	4
	13. Human necessities	31	31	24	14	17	21	30	27	32	36	24	19	115	22	3
	14. Vehicles and general technology	36	30	25	16	17	25	23	23	16	19	26	26	22	113	2
	Other areas	7	4	5	3	4	5	4	4	5	4	4	4	3	2	12

* Mega Clusters: Ele=Electricity ICT=ICT InoC= Inorganic Chemistry OrC= Organic Chemistry Trad= Tradition

Base: n = 547, all respondents who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, including deliberately selected addresses by EPO)

Table 52: Number of responses per joint cluster combination (two-way matrix, entire sample/net number of interviews)

MC*	Joint cluster	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Other areas
Ele	1. Electricity/ semiconductor tech	41	19	19	13	13	19	12	12	9	13	13	13	13	13	5
Ele	2. Electronics	19	31	14	15	13	15	6	9	8	10	11	11	10	10	2
Ele	3. Measuring and optics	19	14	28	9	11	16	7	10	7	10	12	12	11	9	4
ICT	4. Audio, video and media	13	15	9	21	11	15	6	6	5	7	7	7	6	6	3
ICT	5. Computers	13	13	11	11	18	15	5	5	5	7	6	7	7	6	2
ICT	6. Telecommunications	19	15	16	15	15	26	7	8	7	9	9	11	9	9	4
InoC	7. Industrial chemistry	12	6	7	6	5	7	34	16	12	15	12	8	12	8	3
InoC	8. Polymers	12	9	10	6	5	8	16	29	12	15	10	10	10	12	2
OrC	9. Biotechnology	9	8	7	5	5	7	12	12	26	17	8	8	12	6	2
OrC	10. Pure/ applied organic chemistry	13	10	10	7	7	9	15	15	17	34	9	9	12	8	2
Trad	11. Civil engineering, thermodynamics	13	11	12	7	6	9	12	10	8	9	23	9	10	9	3
Trad	12. Handling and processing	13	11	12	7	7	11	8	10	8	9	9	26	8	10	4
Trad	13. Human necessities	13	10	11	6	7	9	12	10	12	12	10	8	41	7	3
Trad	14. Vehicles and general technology	13	10	9	6	6	9	8	12	6	8	9	10	7	33	2
	Other areas	5	2	4	3	2	4	3	2	2	2	3	4	3	2	6

* Mega Clusters: Ele=Electricity ICT=ICT InoC= Inorganic Chemistry OrC= Organic Chemistry Trad= Tradition

Base: n = 153, all respondents of the Biggest group incl. overlapping members of the Random group who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, excluding deliberately selected addresses by EPO)

Table 53: Number of responses per joint cluster combination (two-way matrix, Biggest group including overlapping members of the Random group)

MC*	Joint cluster	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Other areas
Ele	1. Electricity/ semiconductor tech	99	58	37	26	26	39	30	25	28	32	26	28	29	34	6
	2. Electronics	58	90	38	27	31	38	25	23	29	29	27	26	29	28	4
	3. Measuring and optics	37	38	71	19	26	32	24	24	25	24	28	26	22	23	4
ICT	4. Audio, video and media	26	27	19	43	22	27	15	14	14	16	17	13	14	16	3
	5. Computers	26	31	26	22	50	30	17	14	20	17	17	16	17	16	4
	6. Telecommunications	39	38	32	27	30	64	18	18	19	23	19	22	20	23	4
InoC	7. Industrial chemistry	30	25	24	15	17	18	78	33	29	36	23	21	28	22	3
	8. Polymers	25	23	24	14	14	18	33	68	31	36	19	22	25	22	3
OrC	9. Biotechnology	28	29	25	14	20	19	29	31	98	48	19	20	31	16	5
	10. Pure/ applied organic chemistry	32	29	24	16	17	23	36	36	48	91	23	19	36	18	4
Trad	11. Civil engineering, thermodynamics	26	27	28	17	17	19	23	19	19	23	92	16	22	24	3
	12. Handling and processing	28	26	26	13	16	22	21	22	20	19	16	76	18	25	3
	13. Human necessities	29	29	22	14	17	20	28	25	31	36	22	18	97	20	2
	14. Vehicles and general technology	34	28	23	16	16	23	22	22	16	18	24	25	20	107	1
	Other areas	6	4	4	3	4	4	3	3	5	4	3	3	2	1	11

* Mega Clusters: Ele=Electricity ICT=ICT InoC= Inorganic Chemistry OrC= Organic Chemistry Trad= Tradition

Base: n = 510, all respondents of the Random group incl. overlapping members of the Biggest group who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, excluding deliberately selected addresses by EPO)

Table 54: Number of responses per joint cluster combination (two-way matrix, Random group including overlapping members of the Biggest group)

12 Annex VI: Analysis of R&D budgets, inventions, first filings, first filings per invention and sales

In **Part C** of the questionnaire, applicants were asked to provide more detailed information about their R&D budgets and the numbers of first patent filings in 2008 throughout the world, both split by joint cluster.

For the questions on R&D budget and sales, currencies had to be specified by the respondents. Therefore, before analysing Part C, the numbers given for R&D budget and sales were recalculated to EUR. Interbank exchange rates current as of January 11, 2010, were applied to the responses to those questions.

Eight different indicators are reported for the results that are reported in the following tables. Four of these are directly taken from the questionnaire, namely: the total number of inventions considered for patent application, the proportion of inventions that led to patent filings, the number of first patent filings, and the average number of first filings per invention. Four indicators are company-specific ratios averaged for all company filings in a specific class. These indicators are: total sales and R&D budgets. The remaining two indicators are ratios derived by apportioning company activities to first filings. These ratios are: total sales per first filing and R&D budget per first filing.

Summary results for each sample grouping are shown in **Table 55.** Bearing in mind the likely asymmetry of some distributions among the population, and also on the grounds of considering the robustness of the estimates, for the random group it is probably more appropriate to compare the weighted medians rather than the weighted means.

A comparison of the Biggest group with the weighted version of the Random group in this table suggests that it is not only the absolute measures that are higher for the Biggest group than the Random group (e.g. total number of inventions considered for patent application). Most ratios are also higher for the Biggest group than for the Random group (e.g. R&D budget by first patent filing). This also occurred in most cases of the previous two years (Table 81 of 2008 report and Table 70 of the 2008 report) and there is a broad degree of similarity between the statistics generated in the two surveys.

Detailed tables are shown in unweighted and weighted versions for the Random group in **Table 56** to **Table 59**. Each set of tables is shown once itemised by mega cluster and once by residence bloc.

For the analyses itemised by mega cluster, **Table 56** contains the unweighted analyses for the Random group and **Table 57** contains the weighted results of the Random group.

For the analyses broken down by residence bloc, **Table 58** contains the unweighted analyses for the Random group and **Table 59** contains the weighted results of the Random group. The explicit question on numbers of first filings per single invention is new to this survey, and comes out overall with medians of 1.00 for the three groupings reported on in Table 55. Although this might have been expected, it was not certain a priori since multiple claims are allowed on one patent application and there may be different patentable aspects of a single invention. Breakdown analysis in **Table 57** indeed suggests that the ratio may be somewhat less than one for Inorganic chemistry and ICT mega clusters.

This year as last year, the technology breakdowns are made by the smaller set of mega clusters while tables in reports up to 2007 were given for the larger set of joint clusters. This aggregation of data via mega clusters should make the statistics more dependable. However, it should be borne in mind that the usage of structural weights produces very large weight spans resulting in highly variable results, so comparisons should be made with caution. These economic analyses were made using all data available for the groups concerned, while in surveys before 2007 some outliers were excluded. The distribution of the measured quantities within the applicant population will also shift slightly from year to year due to changes in economic circumstances.

By sample group

	Statistic	Total number of inventions considered for patent application	Proportion of inventions which lead to patent filings throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2008	Approximate total sales throughout the world in 2008 [EUR]	First Filings per single invention 2008	Approximate R&D budget in 2008 [EUR]
Biggest Unweighted	N	131	132	135	46	184	136	124	46
	MIN	1	16	11 924	588	1	700 000	0.90	50 000
	MAX	18 795	100	16 460 905 350	27 426 045	12 087	4 000 000 000 000	700.00	5 655 745 000
	MEAN	1 076	70	173 611 992	2 710 517	631	43 843 815 855	7.06	796 536 833
	MEDIAN	260	75	20 000 000	870 694	176	4 616 119 594	1.00	312 831 450
	SE	193	2	122 116 011	723 429	102	29 533 713 494	5.64	184 223 518
Random Unweighted	N	435	444	329	132	525	349	408	138
	MIN	1	0	5 514	588	1	15 000	0.30	10 000
	MAX	18 795	100	16 460 905 350	49 989 243	12 087	4 000 000 000 000	700.00	5 655 745 000
	MEAN	406	64	98 792 050	2 154 426	258	18 362 669 437	3.76	338 991 308
	MEDIAN	25	67	12 777 778	435 019	21	662 531 625	1.00	21 579 602
	SE	68	1	50 354 871	485 849	39	11 540 961 795	1.75	78 278 449
Random Weighted	N	435	444	329	132	525	349	408	138
	MIN	1	0	5 514	588	1	15 000	0.30	10 000
	MAX	18 795	100	16 460 905 350	49 989 243	12 087	4 000 000 000 000	700.00	5 655 745 000
	MEAN	46	57	50 479 389	1 246 998	43	826 651 157	1.77	9 030 053
	MEDIAN	4	60	8 616 551	300 000	3	25 000 000	1.00	344 863
	SE	11	2	6 795 776	319 567	10	162 344 648	0.12	6 273 147

Table 55: Main statistics for the various sample groups

Random group
Unweighted

Mega Cluster	Statistic	Total number of inventions considered for patent application	Proportion of inventions which lead to patent filings throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2008	Approximate total sales throughout the world in 2008 [EUR]	First Filings per single invention 2008	Approximate R&D budget in 2008 [EUR]
Electricity	N	117	129	94	47	137	94	102	52
	MIN	1	0	5 514	4	1	23 077	0.02	54
	MAX	6 372	100	16 460 905 350	4 666 667	3 874	427 983 539 095	10.00	2 950 000 000
	MEAN	321	64	204 124 631	947 150	229	7 095 378 218	0.91	150 270 283
	MEDIAN	40	65	10 227 249	518 519	27	565 890 000	0.60	19 347 010
	SE	70	2	174 933 656	155 537	45	4 577 878 165	0.14	59 024 084
Organic Chemistry	N	108	118	87	50	130	87	105	51
	MIN	1	0	0	3 151	1	0	0.00	75 627
	MAX	2 200	100	1 450 509 494	58 243 444	1 967	458 361 000 000	350.00	5 448 827 500
	MEAN	101	70	75 545 749	5 329 468	81	8 243 353 155	4.38	336 528 504
	MEDIAN	15	77	14 561 135	964 759	13	310 376 250	0.97	22 000 000
	SE	24	2	21 744 120	1 601 063	18	5 271 133 431	3.33	130 355 831
Inorganic Chemistry	N	84	92	69	33	103	69	83	34
	MIN	1	0	0	4	1	0	0.01	27
	MAX	1 404	100	16 460 905 350	12 000 000	1 330	181 069 958 848	350.00	1 029 763 440
	MEAN	89	69	291 640 402	1 572 833	80	5 727 529 673	5.15	77 756 431
	MEDIAN	23	73	14 561 135	378 590	17	669 390 130	0.50	14 611 411
	SE	20	3	238 350 939	468 094	17	2 720 693 510	4.22	33 181 868
ICT	N	70	86	54	18	79	54	61	20
	MIN	1	0	5 514	28 000	1	7 692	0.05	28 000
	MAX	4 219	100	666 666 667	8 290 170	4 338	53 500 000 000	15.00	5 310 882 500
	MEAN	405	62	45 381 900	1 654 898	270	5 164 175 017	0.88	464 274 065
	MEDIAN	57	64	7 390 030	623 737	36	935 685 717	0.50	44 843 926
	SE	95	3	15 401 597	514 276	71	1 487 870 225	0.24	266 814 427
Traditional	N	225	244	191	109	265	191	208	115
	MIN	1	0	0	588	1	0	0.00	10 000
	MAX	18 795	100	16 460 905 350	9 181 818	12 087	3 390 946 502 058	95.00	7 268 918 400
	MEAN	266	65	127 619 198	966 206	163	21 708 401 298	2.07	163 234 282
	MEDIAN	20	69	12 528 816	378 590	18	431 207 024	1.00	10 000 000
	SE	88	2	86 264 455	144 578	48	17 763 288 588	0.59	65 320 665
Total	**N**	**604**	**669**	**495**	**257**	**714**	**495**	**559**	**272**
	MEAN	**238**	**66**	**146 887 419**	**1 937 734**	**161**	**12 534 357 421**	**2.62**	**204 699 084**
	MEDIAN	**28**	**69**	**12 171 644**	**535 390**	**21**	**523 781 582**	**0.79**	**17 175 408**

Table 56: Main statistics for activities in various sectors – Random group (unweighted)

Random group
Cases weighted with structural weight

Mega Cluster	Statistic	Total number of inventions considered for patent application	Proportion of inventions which lead to patent filings throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2008	Approximate total sales throughout the world in 2008 [EUR]	First Filings per single invention 2008	Approximate R&D budget in 2008 [EUR]
Electricity	N	117	129	94	47	137	94	102	52
	MIN	1	0	5 514	4	1	23 077	0.02	54
	MAX	6 372	100	16 460 905 350	4 666 667	3 874	427 983 539 095	10.00	2 950 000 000
	MEAN	55	55	48 678 790	543 179	56	781 900 609	0.95	2 462 318
	MEDIAN	4	60	6 200 000	250 000	2	66 102 929	1.00	250 000
	SE	18	3	13 498 918	114 380	16	175 469 192	0.09	2 574 790
Organic Chemistry	N	108	118	87	50	130	87	105	51
	MIN	1	0	0	3 151	1	0	0.00	75 627
	MAX	2 200	100	1 450 509 494	58 243 444	1 967	458 361 000 000	350.00	5 448 827 500
	MEAN	10	66	35 257 800	2 397 170	20	184 344 119	0.99	7 244 970
	MEDIAN	3	65	413 835	300 000	4	413 835	1.00	689 725
	SE	3	2	10 390 074	694 728	5	308 724 790	0.10	6 336 188
Inorganic Chemistry	N	84	92	69	33	103	69	83	34
	MIN	1	0	0	4	1	0	0.01	27
	MAX	1 404	100	16 460 905 350	12 000 000	1 330	181 069 958 848	350.00	1 029 763 440
	MEAN	32	64	4 828 528	704 221	37	602 418 902	0.88	20 942 593
	MEDIAN	3	60	431 986	344 863	1	4 000 000	0.67	344 863
	SE	8	3	1 951 314	218 206	10	164 506 900	0.13	21 231 678
ICT	N	70	86	54	18	79	54	61	20
	MIN	1	0	5 514	28 000	1	7 692	0.05	28 000
	MAX	4 219	100	666 666 667	8 290 170	4 338	53 500 000 000	15.00	5 310 882 500
	MEAN	66	65	83 756 836	696 020	52	1 473 177 181	0.68	29 453 944
	MEDIAN	5	75	8 262 866	702 020	4	206 917 500	0.50	2 015 820
	SE	20	3	26 457 039	145 894	13	409 205 506	0.05	13 391 639
Traditional	N	225	244	191	109	265	191	208	115
	MIN	1	0	0	588	1	0	0.00	10 000
	MAX	18 795	100	16 460 905 350	9 181 818	12 087	3 390 946 502 058	95.00	7 268 918 400
	MEAN	22	51	38 854 734	312 830	19	343 176 159	1.95	1 388 560
	MEDIAN	3	50	3 000 000	168 915	3	11 000 000	1.00	500 000
	SE	5	2	6 915 453	40 137	4	93 516 000	0.23	651 199
Total	**N**	**604**	**669**	**495**	**257**	**714**	**495**	**559**	**272**
	MEAN	**33**	**58**	**40 243 488**	**837 565**	**32**	**557 983 261**	**1.29**	**7 199 799**
	MEDIAN	**3**	**59**	**3 369 304**	**269 177**	**3**	**40 000 452**	**0.90**	**579 844**

Table 57: Main statistics for activities in various sectors – Random group (weighted)

Random group
Unweighted

Residence bloc	Statistic	Total number of inventions considered for patent application	Proportion of inventions which lead to patent filings throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2008	Approximate total sales throughout the world in 2008 [EUR]	First Filings per single invention 2008	Approximate R&D budget in 2008 [EUR]
EP	N	268	276	189	78	315	204	258	84
	MIN	1	0	7 692	588	1	15 000	1.00	10 000
	MAX	8 200	100	16 460 905 350	27 426 045	4 985	4 000 000 000 000	100.00	5 348 078 800
	MEAN	154	62	141 185 203	1 982 333	96	25 680 540 999	2.33	273 550 879
	MEDIAN	15	65	16 666 667	536 398	13	199 050 000	1.00	3 700 000
	SE	42	2	87 357 397	451 118	22	19 719 865 067	0.54	86 291 510
JP	N	97	96	94	36	118	97	75	36
	MIN	5	10	5 514	37 859	2	114 334	0.30	151 436
	MAX	18 795	100	1 076 181 805	17 306 949	12 087	151 435 800 000	700.00	1 211 486 400
	MEAN	1 201	74	39 492 870	1 265 840	781	8 989 838 444	11.12	202 971 506
	MEDIAN	350	80	7 491 295	385 778	264	2 347 254 900	1.00	89 347 122
	SE	261	2	13 042 788	503 611	150	2 108 944 430	9.32	47 478 484
OT	N	13	14	6	2	17	6	13	2
	MIN	1	0	63 023	3 151	1	1 034 588	1.00	75 627
	MAX	387	100	56 040 156	13 577	127	1 448 422 500	3.00	1 724 313
	MEAN	59	59	20 128 830	8 364	15	326 574 350	1.19	899 970
	MEDIAN	8	60	6 039 161	8 364	5	30 077 612	1.00	899 970
	SE	32	9	10 881 173	5 213	7	235 357 545	0.16	824 343
US	N	57	58	40	16	75	42	62	16
	MIN	1	0	127 334	3 267	1	413 835	1.00	13 795
	MAX	4 500	100	305 630 436	49 989 243	2 774	41 659 390 000	4.00	5 655 745 000
	MEAN	315	60	49 636 961	5 260 951	170	7 042 083 201	1.38	1 030 859 536
	MEDIAN	26	60	22 480 814	893 897	30	1 771 213 800	1.00	250 159 809
	SE	102	4	10 516 155	3 126 221	49	1 606 278 948	0.10	466 271 266
Total	**N**	**435**	**444**	**329**	**132**	**525**	**349**	**408**	**138**
	MEAN	**406**	**64**	**98 792 050**	**2 154 426**	**258**	**18 362 669 437**	**3.76**	**338 991 308**
	MEDIAN	**91**	**67**	**14 558 204**	**530 653**	**71**	**982 410 804**	**1.00**	**54 577 198**

Table 58: Main statistics for activities by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence bloc	Statistic	Total number of inventions considered for patent application	Proportion of inventions which lead to patent filings throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2008	Approximate total sales throughout the world in 2008 [EUR]	First Filings per single invention 2008	Approximate R&D budget in 2008 [EUR]
EP	N	268	276	189	78	315	204	258	84
	MIN	1	0	7 692	588	1	15 000	1.00	10 000
	MAX	8 200	100	16 460 905 350	27 426 045	4 985	4 000 000 000 000	100.00	5 348 078 800
	MEAN	9	52	69 539 794	1 746 700	13	504 679 495	2.11	2 482 389
	MEDIAN	4	50	12 000 000	300 000	2	14 000 000	1.00	400 000
	SE	1	2	10 948 942	502 048	2	196 467 595	0.20	1 883 829
JP	N	97	96	94	36	118	97	75	36
	MIN	5	10	5 514	37 859	2	114 334	0.30	151 436
	MAX	18 795	100	1 076 181 805	17 306 949	12 087	151 435 800 000	700.00	1 211 486 400
	MEAN	391	74	23 918 870	469 307	381	3 138 150 110	1.31	58 833 123
	MEDIAN	80	75	8 616 551	378 590	69	1 135 768 500	1.00	3 785 895
	SE	70	2	3 922 907	153 104	63	485 907 617	0.15	30 582 908
OT	N	13	14	6	2	17	6	13	2
	MIN	1	0	63 023	3 151	1	1 034 588	1.00	75 627
	MAX	387	100	56 040 156	13 577	127	1 448 422 500	3.00	1 724 313
	MEAN	19	46	586 913	3 478	8	1 387 090	1.39	127 312
	MEDIAN	3	50	517 294	3 151	4	1 034 588	1.00	75 627
	SE	9	7	861 110	1 817	2	6 498 251	0.21	287 299
US	N	57	58	40	16	75	42	62	16
	MIN	1	0	127 334	3 267	1	413 835	1.00	13 795
	MAX	4 500	100	305 630 436	49 989 243	2 774	41 659 390 000	4.00	5 655 745 000
	MEAN	21	66	18 200 186	192 694	21	376 319 986	1.42	1 373 301
	MEDIAN	4	85	15 327 222	165 534	5	1 379 450	1.00	344 863
	SE	6	5	5 113 065	198 925	5	110 749 351	0.09	19 428 937
Total	**N**	**435**	**444**	**329**	**132**	**525**	**349**	**408**	**138**
	MEAN	**96**	**58**	**49 005 847**	**1 183 543**	**97**	**1 212 518 452**	**1.84**	**17 019 859**
	MEDIAN	**21**	**60**	**11 228 415**	**300 637**	**18**	**324 039 223**	**1.00**	**1 272 183**

Table 59: Main statistics for activities by residence bloc – Random group (weighted).

A histogram of R&D spending for the Biggest group is shown in **Figure 20**, for the Random group (unweighted) in **Figure 21** and for the Random group using structural weights in **Figure 22**. Note the lower categories (reduced evenly by one power of ten) for the histogram in **Figure 22**, resolutely demonstrating the profound effect of structurally weighting Random group applicants.

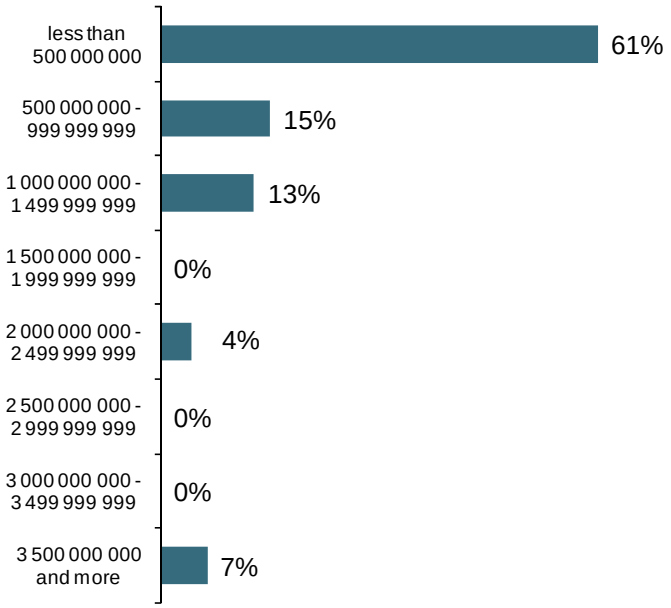


Figure 20: Histogram of annual R&D spending in EUR for Biggest group applicants.

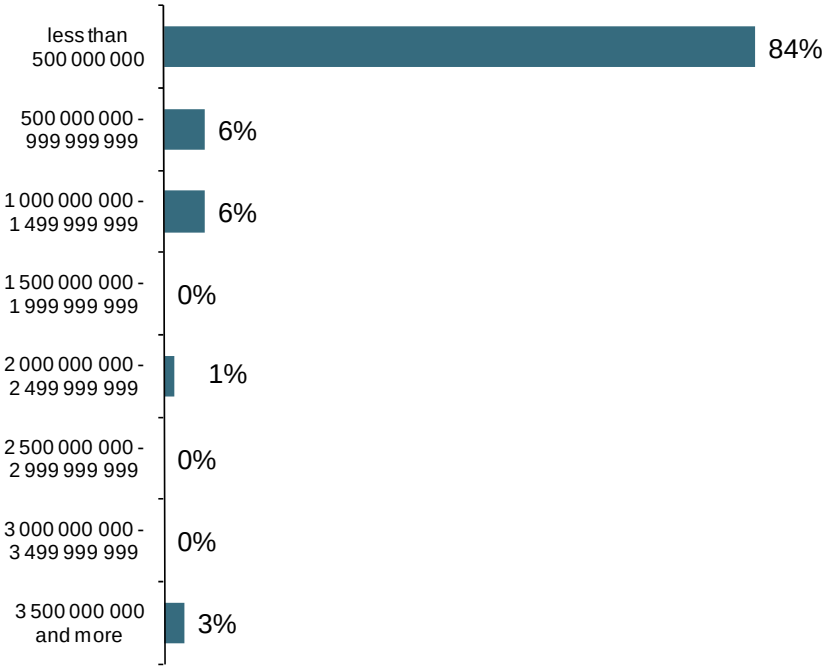


Figure 21: Histogram of annual R&D spending in EUR for Random group applicants (unweighted).

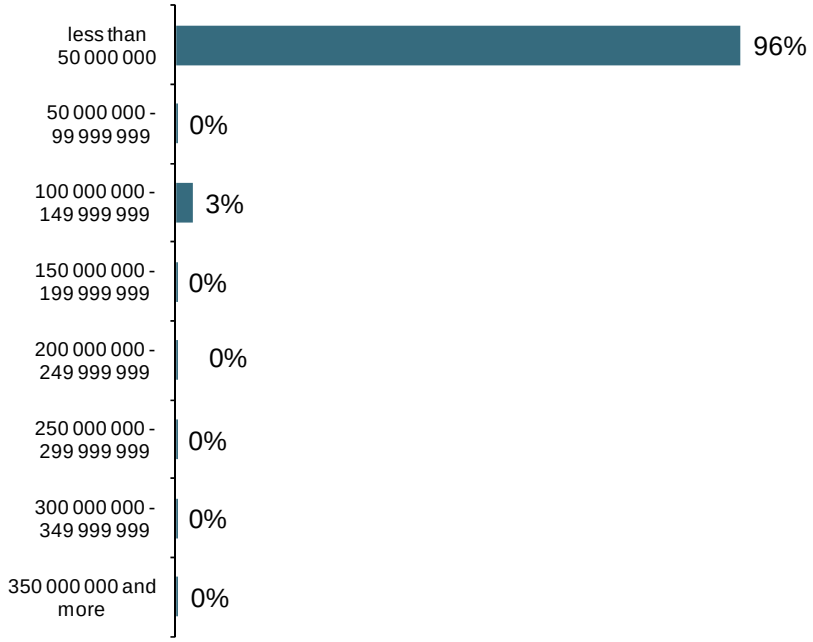


Figure 22: Histogram of annual R&D spending in EUR for Random group applicants (weighted using structural weights).

13 Annex VII: Effect of the worldwide recession on R&D budgets - Questionnaire Part C (h)

The question was: *To what extent do you think that the current worldwide recession has an impact on the level of your R&D budget?* (See items in following tables - Comments were also requested).

Table 60 to **Table 63** display the results. From the weighted analyses, in total, 55% of applicants report a slight or considerable decrease, with 26% reporting a considerable decrease. The effect is most profound for applicants from the US residence bloc, with 78% reporting at least a slight decrease and 48% reporting a considerable decrease. Regarding the mega cluster breakdown, respondents active in the "Traditional" cluster appear least affected, while respondents active in "Inorganic Chemistry" most often report a considerable decrease in R&D budgets.

Random group
Unweighted

Residence Bloc	Valid N	Considerable decrease of R&D budget	Slight decrease of R&D budget	No change of R&D budget	Slight increase of R&D budget	Considerable increase of R&D budget
Total	**471**	**23%**	**38%**	**30%**	**7%**	**1%**
EP	**282**	**20%**	**36%**	**34%**	**8%**	**2%**
JA	**107**	**36%**	**40%**	**20%**	**5%**	**0%**
OT	**14**	**7%**	**36%**	**43%**	**14%**	**0%**
US	**68**	**21%**	**46%**	**26%**	**6%**	**1%**

Table 60: Effect of the worldwide recession on R&D budgets broken down by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence Bloc	Valid N	Considerable decrease of R&D budget	Slight decrease of R&D budget	No change of R&D budget	Slight increase of R&D budget	Considerable increase of R&D budget
Total	**471**	**26%**	**29%**	**35%**	**9%**	**2%**
EP	**282**	**17%**	**26%**	**44%**	**11%**	**3%**
JA	**107**	**29%**	**36%**	**27%**	**8%**	**0%**
OT	**14**	**18%**	**37%**	**26%**	**18%**	**0%**
US	**68**	**48%**	**30%**	**22%**	**1%**	**0%**

Table 61: Effect of the worldwide recession on R&D budgets broken down by residence bloc – Random group (weighted)

Random group
Unweighted

Mega Cluster	Valid N	Considerable decrease of R&D budget	Slight decrease of R&D budget	No change of R&D budget	Slight increase of R&D budget	Considerable increase of R&D budget
Electricity	**136**	**27%**	**40%**	**24%**	**8%**	**1%**
Organic Chemistry	**125**	**16%**	**37%**	**38%**	**8%**	**1%**
Inorganic Chemistry	**96**	**22%**	**41%**	**29%**	**8%**	**0%**
ICT	**87**	**30%**	**41%**	**18%**	**10%**	**0%**
Traditional	**255**	**24%**	**40%**	**27%**	**7%**	**2%**

Table 62: Effect of the worldwide recession on R&D budgets broken down by mega cluster – Random group (unweighted)

Random group
Cases weighted with structural weight

Mega Cluster	Valid N	Considerable decrease of R&D budget	Slight decrease of R&D budget	No change of R&D budget	Slight increase of R&D budget	Considerable increase of R&D budget
Electricity	**136**	**26%**	**37%**	**30%**	**8%**	**0%**
Organic Chemistry	**125**	**22%**	**29%**	**45%**	**4%**	**0%**
Inorganic Chemistry	**96**	**31%**	**40%**	**27%**	**2%**	**0%**
ICT	**87**	**26%**	**38%**	**31%**	**5%**	**0%**
Traditional	**255**	**14%**	**26%**	**42%**	**13%**	**4%**

Table 63: Effect of the worldwide recession on R&D budgets broken down by mega cluster – Random group (weighted)

14 Annex VIII: Factors influencing filing decisions

In this year's **Part D** of the questionnaire, respondents were asked about the potential influence of various factors on filing decisions and about the perceived benefits of EPO's fee structure, through which low entrance fees are subsidised by renewal fee income and which employs a step-by-step fee structure. Finally, respondents were also asked to judge the usefulness of differentiating fees dependent upon the complexity of the application.

The response rate to this part of the questionnaire was good. However, some respondents did not understand the purpose of Part D and its contribution to the overall survey. Some also had difficulties in responding to Part D (a) due to the following reasons:

- The ranking instruction was not clear whether all aspects should be ranked from 1 to 6 or each aspect should be rated by 1-6 scale
- Difficulty in comparing all aspects as they were all equally important/none was important/each application was different
- The question was not relevant to their organisation

For this section, results are reported broken down by mega clusters as well as by residence blocs. Comments that are given on the results relate exclusively to the tables labelled *Random group (weighted)*.

14.1 Factors influencing filing decisions – Questionnaire Part D (a)

The question was: *How much do the following factors influence your decision to file a European patent application? Please rank the following in the order of importance (1 = highest, 6 = lowest) by allocating each ranking figure only once.* (See items in following tables - Alternative rankings to be given "Normally" and "In the current worldwide recession").

Table 64 to **Table 67** contain the results. The factor "market demand and activities of competitor" was considered the most important factor under normal circumstances as well as during the current recession. The factor "need to attract financing" drops in importance in the current recession when compared to its perceived importance in normal circumstances.

Random group
Unweighted

Residence Bloc	Factor	Normal Importance Ranking								Importance Ranking during current recession							
		Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank	Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank
Total																	
	Recognition of R&D activities	**461**	**12%**	**23%**	**26%**	**13%**	**13%**	**13%**	**3.31**	**435**	**11%**	**20%**	**22%**	**17%**	**16%**	**14%**	**3.51**
	Need to nurture innovations	**462**	**16%**	**27%**	**22%**	**12%**	**14%**	**9%**	**3.07**	**434**	**13%**	**23%**	**21%**	**16%**	**16%**	**10%**	**3.28**
	Market demand and activities of competitors	**478**	**64%**	**19%**	**8%**	**3%**	**3%**	**3%**	**1.70**	**448**	**61%**	**16%**	**11%**	**5%**	**3%**	**4%**	**1.86**
	Need to attract financing	**462**	**6%**	**9%**	**11%**	**13%**	**10%**	**51%**	**4.67**	**434**	**8%**	**7%**	**11%**	**11%**	**12%**	**51%**	**4.67**
	Levels of patent search and examination fees	**467**	**5%**	**12%**	**22%**	**21%**	**31%**	**9%**	**3.88**	**444**	**9%**	**17%**	**21%**	**18%**	**27%**	**8%**	**3.60**
	Attorney costs and other partenting costs	**466**	**6%**	**15%**	**24%**	**26%**	**20%**	**10%**	**3.67**	**442**	**12%**	**22%**	**21%**	**20%**	**16%**	**9%**	**3.31**
EP																	
	Recognition of R&D activities	**275**	**13%**	**18%**	**31%**	**12%**	**13%**	**13%**	**3.34**	**257**	**11%**	**18%**	**25%**	**15%**	**16%**	**16%**	**3.56**
	Need to nurture innovations	**276**	**20%**	**31%**	**21%**	**10%**	**8%**	**10%**	**2.84**	**256**	**19%**	**25%**	**21%**	**13%**	**11%**	**11%**	**3.04**
	Market demand and activities of competitors	**282**	**57%**	**24%**	**9%**	**4%**	**3%**	**3%**	**1.82**	**261**	**55%**	**19%**	**12%**	**6%**	**3%**	**4%**	**1.96**
	Need to attract financing	**274**	**6%**	**9%**	**14%**	**18%**	**11%**	**43%**	**4.47**	**256**	**9%**	**8%**	**14%**	**15%**	**13%**	**41%**	**4.38**
	Levels of patent search and examination fees	**276**	**7%**	**12%**	**23%**	**17%**	**30%**	**11%**	**3.83**	**261**	**13%**	**17%**	**20%**	**16%**	**25%**	**9%**	**3.48**
	Attorney costs and other partenting costs	**274**	**6%**	**13%**	**22%**	**26%**	**23%**	**10%**	**3.76**	**258**	**12%**	**20%**	**19%**	**22%**	**18%**	**10%**	**3.44**
JA																	
	Recognition of R&D activities	**106**	**15%**	**37%**	**20%**	**14%**	**11%**	**3%**	**2.78**	**104**	**14%**	**27%**	**18%**	**23%**	**13%**	**4%**	**3.06**
	Need to nurture innovations	**106**	**5%**	**23%**	**28%**	**16%**	**24%**	**5%**	**3.45**	**104**	**2%**	**20%**	**24%**	**20%**	**27%**	**7%**	**3.70**
	Market demand and activities of competitors	**112**	**78%**	**10%**	**9%**	**1%**	**1%**	**2%**	**1.43**	**110**	**72%**	**11%**	**13%**	**2%**	**1%**	**2%**	**1.55**
	Need to attract financing	**107**	**2%**	**6%**	**5%**	**8%**	**5%**	**75%**	**5.33**	**105**	**3%**	**4%**	**5%**	**5%**	**8%**	**76%**	**5.39**
	Levels of patent search and examination fees	**108**	**2%**	**6%**	**22%**	**24%**	**40%**	**6%**	**4.10**	**106**	**3%**	**10%**	**24%**	**22%**	**38%**	**4%**	**3.92**
	Attorney costs and other partenting costs	**109**	**1%**	**17%**	**23%**	**34%**	**15%**	**10%**	**3.74**	**107**	**8%**	**27%**	**22%**	**23%**	**11%**	**7%**	**3.24**
OT																	
	Recognition of R&D activities	**13**	**15%**	**31%**	**8%**	**15%**	**0%**	**31%**	**3.46**	**12**	**17%**	**17%**	**17%**	**17%**	**8%**	**25%**	**3.58**
	Need to nurture innovations	**13**	**23%**	**8%**	**15%**	**8%**	**23%**	**23%**	**3.69**	**12**	**25%**	**0%**	**8%**	**17%**	**25%**	**25%**	**3.92**
	Market demand and activities of competitors	**14**	**57%**	**21%**	**7%**	**0%**	**7%**	**7%**	**2.00**	**13**	**54%**	**23%**	**0%**	**8%**	**8%**	**8%**	**2.15**
	Need to attract financing	**13**	**23%**	**8%**	**15%**	**8%**	**8%**	**38%**	**3.85**	**12**	**25%**	**8%**	**8%**	**8%**	**8%**	**42%**	**3.92**
	Levels of patent search and examination fees	**14**	**0%**	**29%**	**29%**	**7%**	**29%**	**7%**	**3.57**	**13**	**0%**	**38%**	**23%**	**8%**	**23%**	**8%**	**3.38**
	Attorney costs and other partenting costs	**14**	**7%**	**29%**	**7%**	**29%**	**21%**	**7%**	**3.50**	**13**	**8%**	**38%**	**23%**	**8%**	**15%**	**8%**	**3.08**
US																	
	Recognition of R&D activities	**67**	**6%**	**18%**	**18%**	**13%**	**18%**	**27%**	**4.00**	**62**	**3%**	**16%**	**18%**	**18%**	**23%**	**23%**	**4.08**
	Need to nurture innovations	**67**	**13%**	**24%**	**18%**	**16%**	**21%**	**7%**	**3.30**	**62**	**8%**	**24%**	**21%**	**18%**	**21%**	**8%**	**3.44**
	Market demand and activities of competitors	**70**	**74%**	**11%**	**6%**	**1%**	**4%**	**3%**	**1.59**	**64**	**67%**	**9%**	**6%**	**6%**	**3%**	**8%**	**1.92**
	Need to attract financing	**68**	**7%**	**13%**	**9%**	**4%**	**16%**	**50%**	**4.59**	**61**	**7%**	**8%**	**10%**	**5%**	**18%**	**52%**	**4.77**
	Levels of patent search and examination fees	**69**	**0%**	**22%**	**17%**	**30%**	**20%**	**10%**	**3.80**	**64**	**2%**	**25%**	**23%**	**23%**	**17%**	**9%**	**3.58**
	Attorney costs and other partenting costs	**69**	**12%**	**16%**	**36%**	**14%**	**14%**	**7%**	**3.26**	**64**	**22%**	**20%**	**28%**	**9%**	**14%**	**6%**	**2.92**

Table 64: Factors influencing filing decisions broken down by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence Bloc	Factor	Normal Importance Ranking								Importance Ranking during current recession							
		Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank	Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank
Total																	
	Recognition of R&D activities	**461**	**12%**	**19%**	**19%**	**12%**	**14%**	**25%**	**3.72**	**435**	**11%**	**16%**	**13%**	**18%**	**21%**	**22%**	**3.89**
	Need to nurture innovations	**462**	**21%**	**13%**	**25%**	**12%**	**14%**	**15%**	**3.31**	**434**	**20%**	**12%**	**23%**	**18%**	**11%**	**16%**	**3.33**
	Market demand and activities of competitors	**478**	**51%**	**23%**	**12%**	**6%**	**4%**	**3%**	**1.99**	**448**	**45%**	**21%**	**12%**	**10%**	**6%**	**7%**	**2.33**
	Need to attract financing	**462**	**17%**	**19%**	**12%**	**15%**	**10%**	**27%**	**3.64**	**434**	**14%**	**11%**	**19%**	**14%**	**11%**	**31%**	**3.91**
	Levels of patent search and examination fees	**467**	**6%**	**19%**	**20%**	**19%**	**25%**	**11%**	**3.71**	**444**	**11%**	**26%**	**20%**	**12%**	**23%**	**9%**	**3.35**
	Attorney costs and other partenting costs	**466**	**9%**	**19%**	**26%**	**14%**	**19%**	**13%**	**3.54**	**442**	**15%**	**30%**	**19%**	**10%**	**16%**	**10%**	**3.12**
EP																	
	Recognition of R&D activities	**275**	**17%**	**21%**	**28%**	**9%**	**12%**	**14%**	**3.21**	**257**	**15%**	**17%**	**21%**	**16%**	**16%**	**15%**	**3.48**
	Need to nurture innovations	**276**	**24%**	**20%**	**24%**	**9%**	**8%**	**14%**	**2.99**	**256**	**24%**	**19%**	**21%**	**15%**	**8%**	**13%**	**3.02**
	Market demand and activities of competitors	**282**	**44%**	**26%**	**11%**	**11%**	**4%**	**3%**	**2.13**	**261**	**43%**	**20%**	**11%**	**14%**	**7%**	**5%**	**2.38**
	Need to attract financing	**274**	**10%**	**14%**	**14%**	**26%**	**11%**	**25%**	**3.90**	**256**	**10%**	**7%**	**20%**	**22%**	**12%**	**28%**	**4.05**
	Levels of patent search and examination fees	**276**	**10%**	**13%**	**20%**	**11%**	**32%**	**14%**	**3.84**	**261**	**17%**	**17%**	**20%**	**8%**	**30%**	**8%**	**3.42**
	Attorney costs and other partenting costs	**274**	**10%**	**17%**	**21%**	**11%**	**23%**	**17%**	**3.69**	**258**	**15%**	**27%**	**16%**	**9%**	**19%**	**15%**	**3.33**
JA																	
	Recognition of R&D activities	**106**	**10%**	**26%**	**24%**	**9%**	**23%**	**8%**	**3.33**	**104**	**9%**	**17%**	**8%**	**33%**	**17%**	**16%**	**3.78**
	Need to nurture innovations	**106**	**23%**	**9%**	**27%**	**16%**	**25%**	**0%**	**3.12**	**104**	**8%**	**16%**	**19%**	**31%**	**25%**	**1%**	**3.52**
	Market demand and activities of competitors	**112**	**59%**	**8%**	**27%**	**7%**	**0%**	**0%**	**1.81**	**110**	**64%**	**7%**	**22%**	**7%**	**0%**	**0%**	**1.71**
	Need to attract financing	**107**	**0%**	**15%**	**7%**	**1%**	**0%**	**76%**	**5.16**	**105**	**0%**	**7%**	**15%**	**1%**	**0%**	**76%**	**5.23**
	Levels of patent search and examination fees	**108**	**7%**	**14%**	**29%**	**24%**	**23%**	**2%**	**3.48**	**106**	**7%**	**16%**	**37%**	**15%**	**23%**	**2%**	**3.37**
	Attorney costs and other partenting costs	**109**	**0%**	**27%**	**22%**	**28%**	**15%**	**8%**	**3.55**	**107**	**8%**	**48%**	**7%**	**14%**	**21%**	**1%**	**2.96**
OT																	
	Recognition of R&D activities	**13**	**19%**	**40%**	**1%**	**3%**	**0%**	**37%**	**3.37**	**12**	**23%**	**27%**	**1%**	**4%**	**23%**	**23%**	**3.45**
	Need to nurture innovations	**13**	**23%**	**0%**	**3%**	**18%**	**19%**	**37%**	**4.21**	**12**	**28%**	**0%**	**4%**	**23%**	**0%**	**45%**	**4.03**
	Market demand and activities of competitors	**14**	**50%**	**16%**	**16%**	**0%**	**3%**	**16%**	**2.37**	**13**	**40%**	**19%**	**0%**	**18%**	**3%**	**18%**	**2.81**
	Need to attract financing	**13**	**55%**	**18%**	**19%**	**1%**	**0%**	**7%**	**1.91**	**12**	**68%**	**0%**	**23%**	**1%**	**0%**	**8%**	**1.89**
	Levels of patent search and examination fees	**14**	**0%**	**40%**	**19%**	**18%**	**4%**	**18%**	**3.42**	**13**	**0%**	**72%**	**0%**	**0%**	**5%**	**23%**	**3.06**
	Attorney costs and other partenting costs	**14**	**0%**	**40%**	**0%**	**18%**	**40%**	**1%**	**3.61**	**13**	**0%**	**49%**	**23%**	**0%**	**27%**	**1%**	**3.07**
US																	
	Recognition of R&D activities	**67**	**1%**	**8%**	**7%**	**19%**	**19%**	**46%**	**4.86**	**62**	**0%**	**9%**	**1%**	**22%**	**29%**	**38%**	**4.84**
	Need to nurture innovations	**67**	**14%**	**8%**	**32%**	**14%**	**20%**	**13%**	**3.58**	**62**	**14%**	**2%**	**37%**	**16%**	**16%**	**15%**	**3.62**
	Market demand and activities of competitors	**70**	**62%**	**25%**	**7%**	**0%**	**6%**	**0%**	**1.65**	**64**	**43%**	**27%**	**14%**	**1%**	**7%**	**7%**	**2.25**
	Need to attract financing	**68**	**19%**	**30%**	**8%**	**6%**	**13%**	**25%**	**3.40**	**61**	**8%**	**21%**	**16%**	**8%**	**16%**	**30%**	**3.92**
	Levels of patent search and examination fees	**69**	**0%**	**25%**	**18%**	**30%**	**21%**	**6%**	**3.65**	**64**	**7%**	**29%**	**21%**	**21%**	**16%**	**7%**	**3.31**
	Attorney costs and other partenting costs	**69**	**13%**	**12%**	**42%**	**14%**	**7%**	**12%**	**3.25**	**64**	**23%**	**21%**	**27%**	**14%**	**7%**	**7%**	**2.83**

Table 65: Factors influencing filing decisions broken down by residence bloc – Random group (weighted)

Random group
Unweighted

Mega Cluster	Factor	Normal Importance Ranking								Importance Ranking during current recession							
		Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank	Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank
Electricity																	
	Recognition of R&D activities	**136**	**9%**	**29%**	**21%**	**12%**	**16%**	**13%**	**3.38**	**130**	**8%**	**25%**	**19%**	**15%**	**17%**	**16%**	**3.56**
	Need to nurture innovations	**137**	**18%**	**25%**	**25%**	**11%**	**12%**	**9%**	**3.01**	**129**	**16%**	**22%**	**22%**	**18%**	**16%**	**8%**	**3.19**
	Market demand and activities of competitors	**141**	**64%**	**18%**	**11%**	**4%**	**3%**	**1%**	**1.66**	**133**	**62%**	**13%**	**14%**	**5%**	**2%**	**4%**	**1.83**
	Need to attract financing	**138**	**6%**	**7%**	**9%**	**13%**	**9%**	**57%**	**4.82**	**129**	**8%**	**7%**	**9%**	**8%**	**11%**	**58%**	**4.81**
	Levels of patent search and examination fees	**140**	**5%**	**18%**	**18%**	**22%**	**29%**	**8%**	**3.76**	**134**	**12%**	**17%**	**21%**	**19%**	**25%**	**5%**	**3.45**
	Attorney costs and other partenting costs	**139**	**9%**	**17%**	**23%**	**23%**	**19%**	**8%**	**3.50**	**133**	**14%**	**25%**	**20%**	**20%**	**14%**	**7%**	**3.16**
Organic Chemistry																	
	Recognition of R&D activities	**124**	**13%**	**27%**	**23%**	**12%**	**8%**	**18%**	**3.29**	**114**	**9%**	**25%**	**23%**	**15%**	**11%**	**18%**	**3.49**
	Need to nurture innovations	**126**	**21%**	**25%**	**18%**	**9%**	**19%**	**8%**	**3.03**	**114**	**16%**	**23%**	**23%**	**11%**	**19%**	**9%**	**3.21**
	Market demand and activities of competitors	**127**	**63%**	**17%**	**11%**	**6%**	**1%**	**3%**	**1.74**	**114**	**63%**	**14%**	**9%**	**7%**	**1%**	**6%**	**1.87**
	Need to attract financing	**124**	**4%**	**11%**	**14%**	**15%**	**14%**	**43%**	**4.51**	**112**	**6%**	**10%**	**13%**	**12%**	**14%**	**46%**	**4.54**
	Levels of patent search and examination fees	**123**	**3%**	**12%**	**19%**	**20%**	**33%**	**14%**	**4.07**	**115**	**4%**	**15%**	**22%**	**20%**	**28%**	**11%**	**3.86**
	Attorney costs and other partenting costs	**123**	**7%**	**12%**	**17%**	**28%**	**21%**	**14%**	**3.85**	**114**	**11%**	**16%**	**20%**	**24%**	**18%**	**11%**	**3.54**
Inorganic Chemistry																	
	Recognition of R&D activities	**99**	**7%**	**23%**	**25%**	**16%**	**12%**	**16%**	**3.52**	**93**	**4%**	**24%**	**20%**	**19%**	**17%**	**15%**	**3.67**
	Need to nurture innovations	**100**	**16%**	**34%**	**17%**	**14%**	**11%**	**8%**	**2.94**	**93**	**14%**	**26%**	**22%**	**16%**	**14%**	**9%**	**3.16**
	Market demand and activities of competitors	**104**	**71%**	**13%**	**9%**	**6%**	**0%**	**2%**	**1.57**	**96**	**71%**	**8%**	**9%**	**6%**	**0%**	**5%**	**1.72**
	Need to attract financing	**99**	**8%**	**8%**	**11%**	**12%**	**11%**	**49%**	**4.59**	**92**	**11%**	**8%**	**9%**	**12%**	**10%**	**51%**	**4.55**
	Levels of patent search and examination fees	**101**	**2%**	**17%**	**22%**	**19%**	**29%**	**12%**	**3.91**	**96**	**8%**	**17%**	**24%**	**19%**	**24%**	**8%**	**3.58**
	Attorney costs and other partenting costs	**100**	**4%**	**17%**	**21%**	**25%**	**18%**	**15%**	**3.81**	**95**	**7%**	**25%**	**21%**	**21%**	**15%**	**11%**	**3.42**
ICT																	
	Recognition of R&D activities	**90**	**9%**	**29%**	**24%**	**14%**	**10%**	**13%**	**3.28**	**88**	**8%**	**23%**	**23%**	**18%**	**15%**	**14%**	**3.50**
	Need to nurture innovations	**92**	**16%**	**20%**	**26%**	**8%**	**16%**	**14%**	**3.30**	**88**	**11%**	**17%**	**23%**	**15%**	**19%**	**15%**	**3.58**
	Market demand and activities of competitors	**93**	**59%**	**20%**	**14%**	**3%**	**2%**	**1%**	**1.72**	**89**	**56%**	**10%**	**18%**	**6%**	**3%**	**7%**	**2.10**
	Need to attract financing	**91**	**10%**	**7%**	**13%**	**15%**	**12%**	**43%**	**4.42**	**87**	**8%**	**7%**	**14%**	**9%**	**16%**	**46%**	**4.56**
	Levels of patent search and examination fees	**92**	**3%**	**12%**	**23%**	**21%**	**30%**	**11%**	**3.96**	**90**	**6%**	**19%**	**23%**	**23%**	**21%**	**8%**	**3.59**
	Attorney costs and other partenting costs	**92**	**9%**	**14%**	**18%**	**25%**	**26%**	**8%**	**3.68**	**90**	**16%**	**21%**	**19%**	**20%**	**19%**	**6%**	**3.22**
Traditional																	
	Recognition of R&D activities	**247**	**11%**	**23%**	**27%**	**14%**	**13%**	**12%**	**3.31**	**236**	**9%**	**19%**	**21%**	**20%**	**17%**	**13%**	**3.57**
	Need to nurture innovations	**248**	**15%**	**29%**	**23%**	**13%**	**12%**	**7%**	**2.99**	**235**	**15%**	**23%**	**18%**	**18%**	**16%**	**9%**	**3.25**
	Market demand and activities of competitors	**253**	**64%**	**19%**	**8%**	**4%**	**2%**	**3%**	**1.69**	**240**	**62%**	**15%**	**11%**	**5%**	**2%**	**4%**	**1.83**
	Need to attract financing	**249**	**6%**	**8%**	**12%**	**14%**	**10%**	**51%**	**4.65**	**236**	**9%**	**8%**	**12%**	**10%**	**11%**	**50%**	**4.55**
	Levels of patent search and examination fees	**252**	**6%**	**12%**	**25%**	**18%**	**32%**	**8%**	**3.84**	**241**	**10%**	**17%**	**22%**	**17%**	**28%**	**6%**	**3.53**
	Attorney costs and other partenting costs	**250**	**6%**	**15%**	**22%**	**27%**	**19%**	**11%**	**3.72**	**239**	**12%**	**23%**	**21%**	**19%**	**14%**	**11%**	**3.34**

Table 66: Factors influencing filing decisions by mega cluster – Random group (unweighted)

Random group
Cases weighted with structural weight

Mega Cluster	Factor	Normal Importance Ranking								Importance Ranking during current recession							
		Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank	Valid N	Highest Importance 1	2	3	4	5	Lowest Importance 6	Average Importance Rank
Electricity																	
	Recognition of R&D activities	**136**	**23%**	**18%**	**13%**	**6%**	**17%**	**24%**	**3.47**	**130**	**23%**	**19%**	**10%**	**14%**	**10%**	**24%**	**3.40**
	Need to nurture innovations	**137**	**22%**	**10%**	**34%**	**14%**	**5%**	**14%**	**3.12**	**129**	**22%**	**11%**	**32%**	**24%**	**5%**	**6%**	**2.97**
	Market demand and activities of competitors	**141**	**49%**	**28%**	**7%**	**8%**	**9%**	**0%**	**2.00**	**133**	**39%**	**21%**	**18%**	**8%**	**9%**	**5%**	**2.42**
	Need to attract financing	**138**	**15%**	**12%**	**11%**	**24%**	**6%**	**31%**	**3.86**	**129**	**18%**	**4%**	**17%**	**19%**	**3%**	**39%**	**4.04**
	Levels of patent search and examination fees	**140**	**4%**	**34%**	**21%**	**15%**	**17%**	**10%**	**3.35**	**134**	**5%**	**35%**	**23%**	**11%**	**16%**	**10%**	**3.28**
	Attorney costs and other partenting costs	**139**	**11%**	**23%**	**32%**	**8%**	**16%**	**10%**	**3.28**	**133**	**12%**	**34%**	**21%**	**2%**	**23%**	**8%**	**3.15**
Organic Chemistry																	
	Recognition of R&D activities	**124**	**11%**	**15%**	**20%**	**12%**	**10%**	**32%**	**3.90**	**114**	**5%**	**11%**	**17%**	**15%**	**26%**	**27%**	**4.28**
	Need to nurture innovations	**126**	**22%**	**4%**	**22%**	**17%**	**30%**	**5%**	**3.43**	**114**	**17%**	**6%**	**27%**	**15%**	**21%**	**14%**	**3.59**
	Market demand and activities of competitors	**127**	**45%**	**25%**	**14%**	**15%**	**1%**	**0%**	**2.01**	**114**	**46%**	**27%**	**6%**	**15%**	**1%**	**5%**	**2.14**
	Need to attract financing	**124**	**8%**	**38%**	**13%**	**13%**	**21%**	**7%**	**3.22**	**112**	**10%**	**23%**	**18%**	**11%**	**25%**	**12%**	**3.56**
	Levels of patent search and examination fees	**123**	**10%**	**20%**	**19%**	**6%**	**32%**	**13%**	**3.68**	**115**	**12%**	**25%**	**23%**	**5%**	**23%**	**11%**	**3.34**
	Attorney costs and other partenting costs	**123**	**10%**	**11%**	**24%**	**16%**	**17%**	**22%**	**3.84**	**114**	**13%**	**17%**	**28%**	**13%**	**18%**	**10%**	**3.34**
Inorganic Chemistry																	
	Recognition of R&D activities	**99**	**2%**	**22%**	**15%**	**13%**	**10%**	**38%**	**4.22**	**93**	**1%**	**3%**	**18%**	**18%**	**48%**	**13%**	**4.45**
	Need to nurture innovations	**100**	**17%**	**15%**	**8%**	**19%**	**25%**	**16%**	**3.67**	**93**	**15%**	**22%**	**10%**	**28%**	**7%**	**18%**	**3.44**
	Market demand and activities of competitors	**104**	**51%**	**11%**	**25%**	**13%**	**0%**	**0%**	**2.02**	**96**	**41%**	**10%**	**7%**	**24%**	**0%**	**18%**	**2.85**
	Need to attract financing	**99**	**40%**	**24%**	**7%**	**9%**	**2%**	**19%**	**2.64**	**92**	**33%**	**13%**	**27%**	**10%**	**3%**	**15%**	**2.82**
	Levels of patent search and examination fees	**101**	**4%**	**36%**	**24%**	**15%**	**14%**	**7%**	**3.21**	**96**	**27%**	**33%**	**16%**	**1%**	**15%**	**8%**	**2.71**
	Attorney costs and other partenting costs	**100**	**1%**	**17%**	**13%**	**24%**	**32%**	**12%**	**4.06**	**95**	**12%**	**28%**	**25%**	**12%**	**12%**	**9%**	**3.12**
ICT																	
	Recognition of R&D activities	**90**	**12%**	**22%**	**15%**	**16%**	**8%**	**27%**	**3.67**	**88**	**13%**	**25%**	**8%**	**20%**	**8%**	**25%**	**3.60**
	Need to nurture innovations	**92**	**22%**	**14%**	**28%**	**9%**	**11%**	**15%**	**3.19**	**88**	**18%**	**15%**	**32%**	**17%**	**5%**	**12%**	**3.13**
	Market demand and activities of competitors	**93**	**46%**	**30%**	**13%**	**7%**	**0%**	**3%**	**1.95**	**89**	**47%**	**20%**	**9%**	**8%**	**4%**	**12%**	**2.35**
	Need to attract financing	**91**	**15%**	**4%**	**21%**	**19%**	**10%**	**31%**	**3.98**	**87**	**8%**	**1%**	**29%**	**12%**	**14%**	**36%**	**4.33**
	Levels of patent search and examination fees	**92**	**0%**	**20%**	**17%**	**18%**	**29%**	**16%**	**4.03**	**90**	**4%**	**21%**	**19%**	**18%**	**25%**	**13%**	**3.77**
	Attorney costs and other partenting costs	**92**	**6%**	**14%**	**26%**	**20%**	**24%**	**11%**	**3.74**	**90**	**11%**	**21%**	**16%**	**15%**	**31%**	**8%**	**3.57**
Traditional																	
	Recognition of R&D activities	**247**	**11%**	**17%**	**27%**	**14%**	**8%**	**23%**	**3.61**	**236**	**11%**	**14%**	**15%**	**27%**	**11%**	**21%**	**3.77**
	Need to nurture innovations	**248**	**20%**	**19%**	**29%**	**8%**	**13%**	**12%**	**3.08**	**235**	**22%**	**18%**	**20%**	**19%**	**6%**	**15%**	**3.13**
	Market demand and activities of competitors	**253**	**51%**	**21%**	**9%**	**10%**	**3%**	**7%**	**2.12**	**240**	**47%**	**18%**	**10%**	**13%**	**5%**	**8%**	**2.33**
	Need to attract financing	**249**	**22%**	**17%**	**8%**	**14%**	**7%**	**32%**	**3.62**	**236**	**27%**	**8%**	**18%**	**10%**	**8%**	**30%**	**3.53**
	Levels of patent search and examination fees	**252**	**4%**	**25%**	**21%**	**6%**	**35%**	**9%**	**3.70**	**241**	**9%**	**30%**	**16%**	**3%**	**36%**	**5%**	**3.42**
	Attorney costs and other partenting costs	**250**	**7%**	**25%**	**21%**	**17%**	**12%**	**18%**	**3.58**	**239**	**10%**	**36%**	**18%**	**8%**	**10%**	**18%**	**3.27**

Table 67: Factors influencing filing decisions by mega cluster – Random group (weighted)

14.2 Entrance fees subsidised by renewal fees – Questionnaire Part D (b)

The question was: *In the current fee system of EPO and most national patent offices, relatively low entrance fees for new patent applications are subsidised by renewal fee income that is collected for successful patents that remain in force. Do you think that this system ... benefits applicants for patents? ... still benefits society in general?* (Yes/no and reasons requested).

Table 68 to **Table 71** contain the results. Most applicants agree that these are beneficial to applicants and to society in general. There are no remarkable differences in assessments in the residence bloc or mega cluster breakdowns.

Random group
Unweighted

Residence Bloc	Applicant assessment	Valid N	Yes	No
Total				
	Does fee subsidy system benefit applicants for patents	**460**	**84%**	**16%**
	Does fee subsidy system still benefit society in general	**420**	**82%**	**18%**
EP				
	Does fee subsidy system benefit applicants for patents	**268**	**86%**	**14%**
	Does fee subsidy system still benefit society in general	**242**	**79%**	**21%**
JA				
	Does fee subsidy system benefit applicants for patents	**107**	**81%**	**19%**
	Does fee subsidy system still benefit society in general	**100**	**88%**	**12%**
OT				
	Does fee subsidy system benefit applicants for patents	**14**	**86%**	**14%**
	Does fee subsidy system still benefit society in general	**12**	**92%**	**8%**
US				
	Does fee subsidy system benefit applicants for patents	**71**	**77%**	**23%**
	Does fee subsidy system still benefit society in general	**66**	**83%**	**17%**

Table 68: Assessment of EPO fee system broken down by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence Bloc	Applicant assessment	Valid N	Yes	No
Total				
	Does fee subsidy system benefit applicants for patents	**460**	**90%**	**10%**
	Does fee subsidy system still benefit society in general	**420**	**88%**	**12%**
EP				
	Does fee subsidy system benefit applicants for patents	**268**	**91%**	**9%**
	Does fee subsidy system still benefit society in general	**242**	**85%**	**15%**
JA				
	Does fee subsidy system benefit applicants for patents	**107**	**83%**	**17%**
	Does fee subsidy system still benefit society in general	**100**	**77%**	**23%**
OT				
	Does fee subsidy system benefit applicants for patents	**14**	**100%**	**0%**
	Does fee subsidy system still benefit society in general	**12**	**100%**	**0%**
US				
	Does fee subsidy system benefit applicants for patents	**71**	**87%**	**13%**
	Does fee subsidy system still benefit society in general	**66**	**92%**	**8%**

Table 69: Assessment of EPO fee system broken down by residence bloc – Random group (weighted)

Random group
Unweighted

Mega Cluster	Applicant assessment	Valid N	Yes	No
Electricity				
	Does fee subsidy system benefit applicants for patents	**139**	**81%**	**19%**
	Does fee subsidy system still benefit society in general	**129**	**78%**	**22%**
Organic Chemistry				
	Does fee subsidy system benefit applicants for patents	**123**	**82%**	**18%**
	Does fee subsidy system still benefit society in general	**118**	**84%**	**16%**
Inorganic Chemistry				
	Does fee subsidy system benefit applicants for patents	**100**	**87%**	**13%**
	Does fee subsidy system still benefit society in general	**93**	**85%**	**15%**
ICT				
	Does fee subsidy system benefit applicants for patents	**89**	**78%**	**22%**
	Does fee subsidy system still benefit society in general	**82**	**79%**	**21%**
Traditional				
	Does fee subsidy system benefit applicants for patents	**246**	**84%**	**16%**
	Does fee subsidy system still benefit society in general	**222**	**79%**	**21%**

Table 70: Assessment of EPO fee system broken down by mega cluster – Random group (unweighted)

Random group
Cases weighted with structural weight

Mega Cluster	Applicant assessment	Valid N	Yes	No
Electricity				
	Does fee subsidy system benefit applicants for patents	**139**	**87%**	**13%**
	Does fee subsidy system still benefit society in general	**129**	**90%**	**10%**
Organic Chemistry				
	Does fee subsidy system benefit applicants for patents	**123**	**81%**	**19%**
	Does fee subsidy system still benefit society in general	**118**	**89%**	**11%**
Inorganic Chemistry				
	Does fee subsidy system benefit applicants for patents	**100**	**94%**	**6%**
	Does fee subsidy system still benefit society in general	**93**	**99%**	**1%**
ICT				
	Does fee subsidy system benefit applicants for patents	**89**	**91%**	**9%**
	Does fee subsidy system still benefit society in general	**82**	**90%**	**10%**
Traditional				
	Does fee subsidy system benefit applicants for patents	**246**	**93%**	**7%**
	Does fee subsidy system still benefit society in general	**222**	**83%**	**17%**

Table 71: Assessment of EPO fee system broken down by mega cluster – Random group (weighted)

14.3 System of step-by-step payments – Questionnaire Part D (c)

The question was: *At EPO, procedural fees for filing, search, examination and grant have to be paid step by step, while withdrawal of the application is possible at any stage. Do you think that the system of step-by-step payments has proved advantageous for you?* (Yes/no and reasons requested).

Table 72 to **Table 75** contain the results. Most applicants agree that this system has proved advantageous. Relatively speaking, applicants from the Japanese residence bloc and those operating within the Electricity mega cluster seem to be a little less enthused by the step-by-step system.

Random group
Unweighted

Has the system of step-by-step payments proved advantageous to you?

Residence Bloc	Valid N	Yes	No
Total	**474**	**90%**	**10%**
EP	**274**	**93%**	**7%**
JA	**111**	**86%**	**14%**
OT	**15**	**93%**	**7%**
US	**74**	**85%**	**15%**

Table 72: Assessment of EPO step-by-step payment system broken down by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Has the system of step-by-step payments proved advantageous to you?

Residence Bloc	Valid N	Yes	No
Total	**474**	**92%**	**8%**
EP	**274**	**95%**	**5%**
JA	**111**	**85%**	**15%**
OT	**15**	**97%**	**3%**
US	**74**	**87%**	**13%**

Table 73: Assessment of EPO step-by-step payment system broken down by residence bloc – Random group (weighted)

Random group
Unweighted

Has the system of step-by-step payments proved advantageous to you?

Mega Cluster	Valid N	Yes	No
Electricity	**143**	**84%**	**16%**
Organic Chemistry	**126**	**90%**	**10%**
Inorganic Chemistry	**102**	**92%**	**8%**
ICT	**92**	**87%**	**13%**
Traditional	**253**	**92%**	**8%**

Table 74: Assessment of EPO step-by-step payment system broken down by mega cluster – Random group (unweighted)

Random group
Cases weighted with structural weight

Has the system of step-by-step payments proved advantageous to you?

Mega Cluster	Valid N	Yes	No
Electricity	**143**	**82%**	**18%**
Organic Chemistry	**126**	**95%**	**5%**
Inorganic Chemistry	**102**	**99%**	**1%**
ICT	**92**	**93%**	**7%**
Traditional	**253**	**88%**	**12%**

Table 75: Assessment of EPO step-by-step payment system broken down by mega cluster – Random group (weighted)

14.4 Fee incentives and disincentives – Questionnaire Part D (d)

The question sought agreement or disagreement with two statements regarding the assessment of differential fees, dependent upon the complexity of application processing (See items in following tables - comments were also requested).

Table 76 to **Table 79** contain the results. When looking at the structurally weighted version of the analyses, on the whole, roughly a two-thirds majority of applicants agrees that differential

fees are practical. In general, applicants are even more positively inclined towards fee incentives for applications which are easy to process, than towards additional fees for more complex applications (although not for applicants from the mega cluster Inorganic Chemistry). Applicants from the US residence bloc are somewhat more sceptical regarding differential fees, where a majority opposes higher fees for more complex applications.

Random group
Unweighted

Residence Bloc	Agreement with statement	Valid N	Agree	Do not agree
Total				
	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**477**	**65%**	**35%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**472**	**65%**	**35%**
EP				
	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**280**	**66%**	**34%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**273**	**64%**	**36%**
JA				
	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**106**	**67%**	**33%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**108**	**74%**	**26%**
OT				
	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**15**	**80%**	**20%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**15**	**67%**	**33%**
US				
	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**76**	**59%**	**41%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**76**	**55%**	**45%**

Table 76: Assessment of differentiated fee levels broken down by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence Bloc	Agreement with statement	Valid N	Agree	Do not agree
Total	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**477**	**70%**	**30%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**472**	**64%**	**36%**
EP	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**280**	**76%**	**24%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**273**	**71%**	**29%**
JA	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**106**	**62%**	**38%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**108**	**79%**	**21%**
OT	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**15**	**82%**	**18%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**15**	**84%**	**16%**
US	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**76**	**57%**	**43%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**76**	**38%**	**62%**

Table 77: Assessment of differentiated fee levels broken down by residence bloc – Random group (weighted)

Random group
Unweighted

Mega Cluster	Agreement with statement	Valid N	Agree	Do not agree
Electricity	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**141**	**62%**	**38%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**140**	**61%**	**39%**
Organic Chemistry	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**129**	**68%**	**32%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**125**	**65%**	**35%**
Inorganic Chemistry	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**102**	**62%**	**38%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**100**	**65%**	**35%**
ICT	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**89**	**72%**	**28%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**88**	**65%**	**35%**
Traditional	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**255**	**65%**	**35%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**253**	**66%**	**34%**

Table 78: Assessment of differentiated fee levels by mega cluster – Random group (unweighted)

Random group
Cases weighted with structural weight

Mega Cluster	Agreement with statement	Valid N	Agree	Do not agree
Electricity	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**141**	**65%**	**35%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**140**	**57%**	**43%**
Organic Chemistry	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**129**	**81%**	**19%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**125**	**78%**	**22%**
Inorganic Chemistry	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**102**	**68%**	**32%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**100**	**77%**	**23%**
ICT	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**89**	**85%**	**15%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**88**	**69%**	**31%**
Traditional	Practical to use fee incentives to reward applicants when patent applications prove to be easy to process	**255**	**73%**	**27%**
	Additional fees to be paid after more complicated procedures can influence the way patent applications are filed	**253**	**64%**	**36%**

Table 79: Assessment of differentiated fee levels by mega cluster – Random group (weighted)

15 Annex IX: Estimating birth & death effects in the applicant population

The method that is used to calculate correction factors was explained in Annex VIII of the 2007 survey report (with a revision in Annex X of the 2008 survey report). A further slight modification to the data this time was that Euro-direct applications that can be identified as divisionals were excluded from the counts. The information reported here was extracted from the database in November 2009.

The calculation is shown first for Total filings (ED + Euro-PCT-RP), with summary results also given further below for Euro-PCT-RP and Euro-direct filings considered separately.

The following table describes the carryover of all applicants (filers) for Total filings from each year to all others considered in the period.

Recurrent applicants (excluding divisionals) for Total filings (Euro-direct + Euro-PCT-RP)

		Also filed in 2002	2003	2004	2005	2006	2007	2008
Filers in	**2002**	**31 046**	**10 575**	**9 688**	**8 538**	**7 590**	**6 725**	**5 902**
	2003	**10 575**	**32 658**	**11 275**	**9 901**	**8 870**	**7 840**	**6 801**
	2004	**9 688**	**8 538**	**33 539**	**11 431**	**10 214**	**8 910**	**7 736**
	2005	**8 538**	**9 901**	**11 431**	**34 458**	**11 712**	**10 358**	**8 966**
	2006	**7 590**	**8 870**	**10 214**	**11 712**	**36 368**	**12 469**	**10 720**
	2007	**6 725**	**7 840**	**8 910**	**10 358**	**12 469**	**38 573**	**13 023**
	2008	**5 902**	**6 801**	**7 736**	**8 966**	**10 720**	**13 023**	**40 638**

A similar table can be made to include the numbers of applications (filings) that were made in each case by the re-filers and pre-filers.

Recurrent applications (excluding divisionals) Total filings (Euro-direct + Euro-PCT-RP)

		Also filed in 2002	2003	2004	2005	2006	2007	2008
Filings in	2002	102 844	76 871	73 653	69 404	64 909	60 205	56 518
	2003	83 262	112 346	85 042	80 489	75 929	81 999	66 781
	2004	83 720	89 351	118 609	90 017	85 415	79 703	74 786
	2005	81 619	86 895	92 289	122 890	93 274	87 956	82 703
	2006	76 645	71 136	87 206	95 152	128 902	97 496	91 580
	2007	69 435	75 090	78 991	87 444	97 765	134 603	100 499
	2008	61 458	66 477	70 591	77 585	87 409	98 829	139 584

The following table shows the numbers of applications (filings) that are made by applicants in the test year who did not file in the base year.

Non recurrent applications (excluding divisionals) Total filings (Euro-direct + Euro-PCT-RP)

		Did not file in 2002	2003	2004	2005	2006	2007	2008
Filings in	2002	0	25 973	29 191	33 440	37 935	42 639	46 326
	2003	29 084	0	27 304	31 857	36 417	30 347	45 565
	2004	34 889	29 258	0	28 592	33 194	38 906	43 823
	2005	41 271	35 995	30 601	0	29 616	34 934	40 187
	2006	52 257	57 766	41 696	33 750	0	31 406	37 322
	2007	65 168	59 513	55 612	47 159	36 838	0	34 104
	2008	78 126	73 107	68 993	61 999	52 175	40 755	0

The correction factor (CF') for a future year is given as

CF' = (# applications year i+j from applicants that did not file in year i) -

((# applications year i from applicants that did not file in year i+j) x

((# applications in year i+j in population)/(# applications in year i in population))

In principle, these correction factors can be used to augment the filings forecasts from a survey. However, a problem is that the future CF' values are not yet known when a survey is run. Therefore, it was previously suggested that CF's should be used retrospectively. The most recently available one-year ahead CF' is taken as the one-year CF' for future projection, the most recently available two-year ahead CF' is taken as the two-year CF' for future projection, etc. The resulting set of CF's are collected in the following table (which tracks data back to Survey Year 2001).

Survey Year	Base Year	Correction factors for Total filings (Euro-direct+Euro-PCT-RP) Survey Year	Survey Year + 1	Survey Year + 2
2001	2000	837	2 164	4 840
2002	2001	1 011	2 025	3 499
2003	2002	750	1 483	2 296
2004	2003	711	1 138	2 166
2005	2004	432	1 223	1 119
2006	2005	1 226	1 148	1 313
2007	2006	2 685	5 702	15 982
2008	2007	4 043	8 895	10 866
2009	2008	5 389	11 760	16 353

It should be noted that this table differs to some extent from the analogous table that was presented in Annex X of the 2008 survey report, because of the removal of divisional filings and slight database variations since then.

It is possible to calculate analogous CF's that are based on alternative or subsidiary counts. The table below shows CF' results for the current survey incorporating values for Euro-direct filings and for Euro-PCT-RP filings, considered separately from each other. Then appear also the differences between the CF's for Total filings and the sums of the CF's for Euro-direct and Euro-PCT-RPs individually.

	Survey Year	Survey Year + 1	Survey Year + 2
Base year for calculation	2007	2006	2005
Total filings (Euro-direct+Euro-PCT-RP)	5 389	11 760	16 353
Euro-direct filings	2 840	5 939	6 676
Euro-PCT-RP filings	3 109	5 521	9 308
Difference Total - (ED + PCT-RP)	-560	300	369

These discrepancies are acceptably small. With the originally defined definition of correction factors (CF as in Annex VIII of the 2007 survey report), the difference term is always slightly negative, but after the correction for overall population growth of applications in CF' this does not necessarily occur.

When looking at ways to apply correction factors in the current survey, it should be recognised that the method described above depends on taking historical developments as a way to project into the future. In 2009, there was a clear disturbance in the system in that numbers of filings have decreased compared to 2008, unlike in earlier years where continuous growth was experienced. The only previous year in recent history where filings declined was 2002 compared to 2001. Therefore, it is relevant to compare calculated

correction factors with out-turns in order to assess their usability, in particular taking account of forecasts made in survey year 2001 for 2001, 2002 and 2003.

The following table calculates forward correction factors as experienced beyond base years due to the subsequent out-turns. However, data are missing on this for the most recent surveys. Since the out-turns already take account of the growth of the overall numbers of applications in the population, the forward correction factors are calculated by the original formula that does not include the population growth terms.

$CF_{forward}$ = (# applications year i+j from applicants that did not file in year i) -

(# applications year i from applicants that did not file in year i+j)

		Forward correction factors for Total filings (Euro-direct+Euro-PCT-RP)		
Survey Year	Base Year	Survey Year	Survey Year + 1	Survey Year + 2
2001	2000	3 087	2 707	6 437
2002	2001	-293	2 648	4 744
2003	2002	3 111	5 698	7 831
2004	2003	1 954	4 138	21 349
2005	2004	2 009	8 502	16 706
2006	2005	4 134	12 225	21 812
2007	2006	5 432	14 853	5 959
2008	2007	6 651	-62	NA
2009	2008	NA	NA	NA

The following graph shows the deviations between the historically based correction factors given earlier and the forward correction factors seen later in the out-turns.

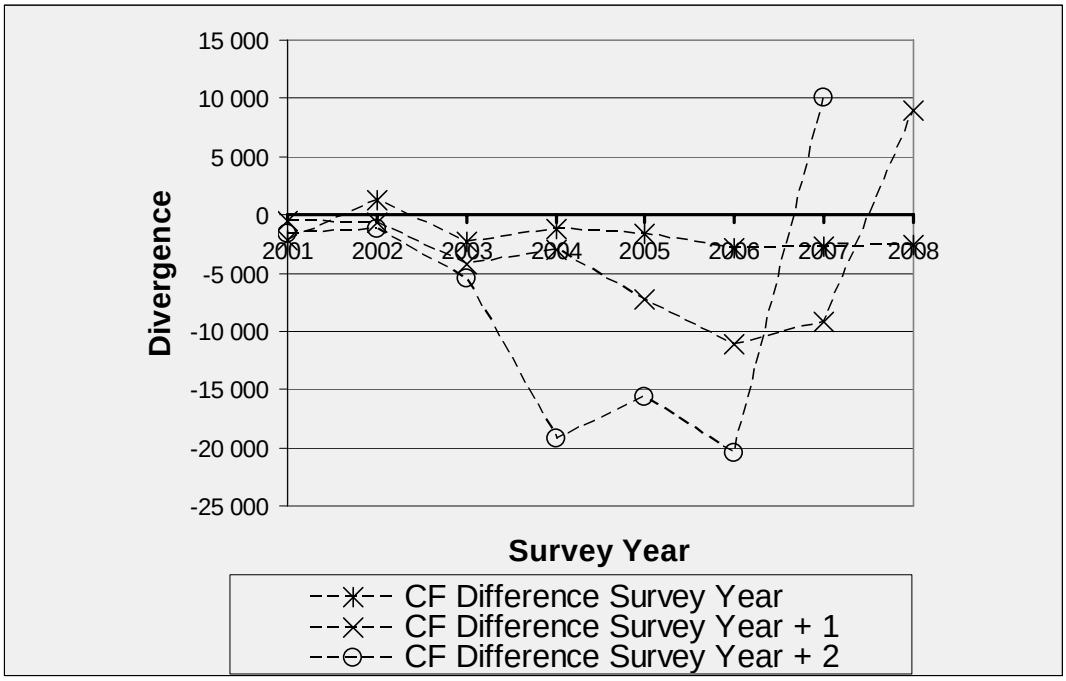


Figure 23: Differences between augmented correction factors at survey time (CF') and retrospectively determined correction factors from the out-turns (CF) of former surveys.

Generally speaking, over the period considered the differences are negative, that is the CF' values have underestimated the balance of applications coming from new applicants compared to the drop-out of old applicants. The correction factor for the survey year seems to be particularly accurate and the only real mark of the previous downturn is that the survey year CF divergence was slightly positive in 2002. The survey year +1 difference was a little out at about -10 000 in 2006 but then swung the other way to about +10 000 in 2008. The survey year +2 divergence, however, behaved quite badly with severe underestimates down to
- 20 000 from 2004 to 2006 (a period of renewed rapid growth) swinging to +10 000 in 2007 and probably will track higher for 2008 when data become properly known due to the recent recession.

The conclusion of this analysis would seem to be that the Survey year correction factor can be used at any time without problem. The survey year +2 correction factor can show wild swings and probably indicates lack of precision in forecasting ability from the survey two years ahead in general. The survey year +1 correction factor can be used in times of perceived steady growth, but is also subject to mood swings. In the current situation it seems better not to use correction factors at all until the system can be judged to have calmed down enough to give the prospect of another period of steady growth or decline.

16 Annex X: Sizes of Populations and Samples for the 2009 EPO Future Filings Survey

	Euro-applications in 2008	**Euro-applicants in 2008**
	Total (Euro-direct + Euro-PCT-RP)	Total (Euro-direct + Euro-PCT-RP)
1. Population in 2008*	146 645	42 264
Sample: Biggest group		
2. Number asked*	69 769	419
as percentage of 1.	47.6%	1.0%
Number of quantitative responses (questionnaires)	35 140	202
as percentage of 1.	24.0%	0.5%
as percentage of 2.	50.4%	48.2%

* From the EPO database (EPASYS)

	Euro-applications in 2008				**Euro-applicants in 2008**			
	Euro-direct	PCT-IP	Total (Euro-direct + PCT-IP)	Euro-PCT-RP	Euro-direct	PCT-IP	Total (Euro-direct + PCT-IP)	Euro-PCT-RP
1. Population in 2008*	63 128	157 594	220 794	83 733	18 444	49 918	63 967	27 903
Sample: Random group								
2. Number asked*	27 762	34 690	62 453	32 616	1 231	908	1 505	1 500
as percentage of 1.	44.0%	22.0%	28.3%	39.0%	6.7%	1.8%	2.4%	5.4%
Number of quantitative responses (questionnaires)	20 370	33 928	54 298	19 502	449	470	572	450
as percentage of 1.	32.3%	21.5%	24.6%	23.3%	2.4%	0.9%	0.9%	1.6%
as percentage of 2.	73.4%	97.8%	86.9%	59.8%	36.5%	51.8%	38.0%	30.0%

* From the EPO database (EPASYS)

17 Annex XI: Experimental analysis of the Random Group using respondent-based weights

The traditional method that is used in this report to analyse the Random Group involves Poisson weights that take account of the probability of inclusion of the respondent within the sample asked, as measured via the number of filings made in the base year according to the EPO database[25].

The Poisson weight for each respondent is calculated as

$$q_i = \frac{A_i}{1 - e^{-n^+(\frac{A_i}{A})}}$$

where n^+ is the number of extractions made for sampling purposes, A is the total number of recorded filings in the base year and A_i is the known number of applications made by the i-th sampled applicant in the base year[26].

In the traditional weighting scheme, A_i comprises database records of Euro-direct filings + Euro-PCT-RP filings. As can be seen in Annex I, the respondents give their own estimates of base-year filings in Section B of the questionnaire. This is the sum of Euro-direct filings for 2008 in question B (a) and Euro-PCT-RP filings for 2008 in question B(l).

An idea that will be tested here is to substitute the reported base-year filings total by the respondent for the previously used database count in the term A_i. A full set of analogous response tables for the Random group analyses were generated under this assumption as follows:

Comparison of forecasts: Growth from 2008
Euro-direct and PCT-IP

		Year					
		2009		2010		2011	
Group	**Breakdown**	Growth rate	Deviation*	Growth rate	Deviation*	Growth rate	Deviation*
Biggest	None	-6.9%		-4.3%		-2.5%	
Biggest	Residence bloc	-7.6%		-4.6%		-2.3%	
Random	None	-5.1%	3.6%	0.1%	3.9%	4.0%	4.5%
Random	None (winsorized)	-5.1%	3.6%	0.1%	3.9%	4.0%	4.5%
Random	None (Euro-direct and PCT-IP filings combined)	-7.3%	3.3%	-2.8%	3.7%	0.7%	4.1%
Random	None (excluding companies with comments)	-6.5%	5.7%	-0.1%	6.5%	5.1%	8.0%
Random	Residence bloc	-3.0%	3.9%	4.1%	4.5%	10.1%	5.7%
Random	Residence bloc (winsorized)	-4.0%	3.4%	3.3%	3.8%	9.2%	5.1%
Random	Residence bloc (ED and PCT-IP filings combined)	-5.2%	4.2%	-0.7%	4.5%	3.4%	4.8%
Random	Residence bloc (excluding companies with comments)	-2.6%	5.5%	6.9%	7.6%	13.8%	8.3%
Biggest	EPO mega cluster	-4.7%		-1.6%		0.4%	
Random	EPO mega cluster	-5.4%	3.6%	-0.3%	3.9%	3.6%	4.6%
Random	EPO mega cluster and residence bloc	-9.0%	4.4%	-4.0%	5.0%	0.0%	5.5%

*) **Deviation** corresponds to the distance from the forecasted filings to the lower 95% confidence limit (as % of the forecasted filings)

[25] See . Applicant Panel Survey 2001 report: Annex III; and Applicant Panel Survey 2002 report: Section IV.1, Annex IV.

[26] For the 2009 survey, A = 146 559, n^+ = 2 900.

Comparison of forecasts: Predicted total filings
Euro-direct and PCT-IP
LCL/UCL indicates lower/upper 95% confidence limit

		Year								
		2009			2010			2011		
Group	**Breakdown**	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL
Biggest	None	210 694			216 608			220 645		
Biggest	Residence bloc	209 136			215 876			221 127		
Random	None	214 764	207 091	222 438	226 484	217 618	235 350	235 304	224 695	245 912
Random	None (winsorized)	212 129	205 871	218 387	224 392	217 479	231 304	233 243	224 650	241 835
Random	None (Euro-direct and PCT-IP filings combined)	209 751	202 908	216 594	219 937	211 825	228 049	227 973	218 621	237 326
Random	None (excluding companies with comments)	211 607	199 509	223 704	226 008	211 245	240 772	237 770	218 643	256 897
Random	Residence bloc	219 499	210 939	228 058	235 618	225 104	246 131	249 270	235 109	263 431
Random	Residence bloc (winsorized)	217 150	209 827	224 473	233 761	224 951	242 571	247 199	234 696	259 702
Random	Residence bloc (ED and PCT-IP filings combined)	214 495	205 400	223 590	224 630	214 589	234 670	233 909	222 679	245 140
Random	Residence bloc (excluding companies with comments)	220 489	208 312	232 667	241 990	223 478	260 502	257 651	236 235	279 066
Biggest	EPO mega cluster	215 618			222 711			227 105		
Random	EPO mega cluster	214 116	206 320	221 091	225 558	216 676	233 365	234 476	223 626	243 616
Random	EPO mega cluster and residence bloc	205 988	197 013	214 962	217 159	206 392	227 927	226 229	213 798	238 660
Actual Filings		213 017								

These results can be contrasted with those using the traditional weighting method as described in **Table 1** and **Table 2**. In terms of the preferred estimation method this year the modified results are as follows (see **Table 9** for comparison):

Random group
No subsidiary breakdown
Q-Indices
Euro-direct and Euro-PCT-IP filings combined

S.E. indicates standard error of logarithm
LCL/UCL indicates lower/upper 95% confidence limit
Deviation in % of forecast means (predicted filings - LCL)/predicted filings

			Year													
			2008	2009					2010				2011			
Filing type	**Filing route**	**Res. bloc**	Actual filings	Cases 09	Q-index 09	S.E. 09	Predicted filings	Actual filings	Cases 10	Q-index 10	S.E. 10	Predicted filings	Cases 11	Q-index 11	S.E. 11	Predicted filings
First	All	**Total**	**36 107**	152	1.0117	0.0499	**36 531**	**34 258**	143	1.0754	0.0635	**38 830**	136	1.1307	0.0732	**40 826**
		LCL					32 954					33 981				34 942
		UCL					40 108					43 678				46 710
Subsequent	All	**Total**	**190 203**	288	0.9107	0.0172	**173 220**	**178 759**	255	0.9522	0.0183	**181 107**	245	0.9839	0.0198	**187 147**
		LCL					167 386					174 604				179 878
		UCL					179 054					187 611				194 416
Grand total		**Total**	**226 310**				**209 751**	**213 017**				**219 937**				**227 973**
		LCL					202 908					211 825				218 621
		UCL					216 594					228 049				237 326
Growth from 2008							**-7.3%**	**-5.9%**				**-2.8%**				**0.7%**
Deviation in % of forecast							**3.3%**					**3.7%**				**4.1%**

In general, the new method gives deviations that are somewhat lower than the traditional method and forecasts that show a greater degree of agreement between methods. This is to be expected in the sense that sizes of entities that are identified by the database may not correspond exactly to the sizes of respondent companies. This can be either because of responses given for larger or smaller company parts (allowed for at the beginning of the questionnaire), because the respondent has applied for EPO patents under several different names that appear distinct in the database, or because either or both the database and the respondent do not have full up-to-date information on the exact number of base-year filings.

On the whole, respondents tend to reply on behalf of larger entities than those identified from the database. This has a favourable effect in terms of the relatively large coverage percentage of the application population by responses as shown in **Annex X**. Thus, respondent weighting presumably allocates more nearly correct weights in connection with applicant sizes than traditional weighting does. It is known that growth indices from smaller applicants are more variable than those from large applicants, and these may generally be more downweighted in the respondent weighting scheme.

However, even though these results are interesting, it is not considered particularly safe to move to a respondent weighting scheme for regular use in future surveys. The traditional weights retain an essential relationship with the sampling scheme that is used on the database, thus justifying calculation of finite population corrections and standard error terms. Also the usage of respondent weighting might bring forward a possibility of bias due to respondents artificially inflating database counts, a practice that they have no real incentive to pursue but that nevertheless could be possible as a kind of "cuckoo effect" to dominate the survey results by a kind of competitive urge to inflate base year filing numbers beyond real levels attained.[27]

[27] An "inverse cuckoo effect" could also be imagined by which dominant patentees might not wish for their given estimates to be reflected in the average calculated growth rates. It should be emphasised that both directions of biasing effects represent possibilities and we would not expect normal respondents to wish to do this.

18 Annex XII: Experimental analysis of the effects of partial non-response

A persistent problem with surveys of this type is that the intentions towards future filings by sample members that choose not to respond to the survey are unknown. Respondents expecting to increase their filings can be termed *optimistic*, and those intending to decrease their filings can be termed *pessimistic*. If there was a tendency for pessimistic applicants to choose not to respond at a higher rate than for optimistic applicants (or vice versa), this would lead to a biased average growth rate estimate and thus to biased forecasts.

Traditional methods to estimate such non-response bias usually involve further attempts to contact non-responders later on with simplified questions. This was, however, not attempted in the present survey.

Another source of possible bias will be investigated here regarding average growth rate estimates out to later years 2010 and 2011 in the current survey. The following table is based on responses recorded within the Random group. It shows the separate breakdowns of responders optimistic/neutral and pessimistic for 2009 and 2010 regarding the numbers that then declined to give estimates for the following year (for 2010 and 2011, respectively). These analyses consider responses for Total filings (sum of Euro direct and PCT-IP, where either or both are reported).

	Filing forecasts given for 2009	Missing filing forecasts for 2010		
	N	N	%	Chi Sq. p-value
Optimistic or neutral for growth 2008 to 2009	109	6	5.5%	0.031
Pessimistic for growth 2008 to 2009	105	15	14.3%	
	Filing forecasts given for 2009	Missing filing forecasts for 2011		
	N	N	%	Chi Sq. p-value
Optimistic or neutral for growth 2008 to 2010	110	2	1.8%	0.130
Pessimistic for growth 2008 to 2010	85	5	5.9%	

The chi square tests of association given in the above table suggest that there is evidence of an increased propensity for non-response among pessimists for 2009. However, no significant further bias is evident for responses regarding 2011, probably due to most respondents for 2010 going on to respond also for 2011.

Given that there may be a partial non-response bias for 2010 leading to upwardly biased growth rate estimates for 2010 compared to 2008, the following calculation seeks to obtain a conservative corrected estimate of filings in 2010 and 2011 that takes account of the bias. Missing estimates for 2010 and 2011 from the partial non-responders were filled-in by assuming that the given response for the previous year remains unchanged in the later missing year(s). That is, no further pessimism or optimism was assumed for the later missing years for that applicant. This allows most likely for "pessimism for 2009 linked to drop-out" to be transmitted to better corrected overall estimates for growth to 2010 and 2011.

The following table shows the effects of these assumptions on growth rate estimates calculated for all methods applied in this report for both Biggest and Random groups.

		Year					
		2009		2010		2011	
Group	Breakdown	Normal growth rate	Imputed growth rate	Normal growth rate	Imputed growth rate	Normal growth rate	Imputed growth rate
Biggest	None	-6.9%	-6.9%	-4.3%	-5.5%	-2.5%	-3.0%
Biggest	Residence bloc	-7.6%	-7.6%	-4.6%	-5.9%	-2.3%	-3.3%
Random	None	-3.2%	-3.2%	2.8%	1.8%	7.2%	6.7%
Random	None (winsorized)	-3.2%	-3.2%	2.8%	1.8%	7.2%	6.7%
Random	None (Euro-direct and PCT-IP filings combined)	-7.6%	-7.6%	-2.4%	-3.8%	1.9%	1.5%
Random	None (excluding companies with comments)	-3.7%	-3.7%	3.7%	3.1%	10.0%	9.3%
Random	Residence bloc	-2.0%	-2.0%	6.1%	4.5%	11.8%	11.1%
Random	Residence bloc (winsorized)	-3.4%	-3.4%	5.0%	3.0%	10.6%	9.8%
Random	Residence bloc (ED and PCT-IP filings combined)	-5.5%	-5.5%	0.2%	-1.1%	4.5%	4.3%
Random	Residence bloc (excluding companies with comments)	-0.4%	-0.4%	9.6%	7.6%	16.7%	15.7%
Biggest	EPO mega cluster	-4.7%	-4.7%	-1.6%	-2.5%	0.4%	0.0%
Random	EPO mega cluster	-3.3%	-3.3%	2.4%	1.0%	6.8%	6.1%
Random	EPO mega cluster and residence bloc	-7.9%	-7.9%	-1.6%	-3.7%	2.7%	1.9%

This table contains both normal growth rates (as in **Table 1**) and imputed growth rates using the corrected calculation. Note that there are no differences between these methods for estimates of growth to 2009.

Growth rates are modified downwards to some extent, particularly for 2010. The favoured method in this report is "Random group / Residence bloc (ED and PCT-IP filings combined)". The corrections that are obtained by this method are as follows.

Year	2009	2010	2011
Random group	209 040	220 901	230 515
Corrected for partial non-response	209 040	217 743	229 749
Partial non-response corrected LCL assuming same variability	201 933	210 340	221 938
Partial non-response corrected UCL assuming same variability	216 148	225 147	237 561

Equivalent standard errors have been assumed for the corrected responses as for the original estimates. This is because it cannot safely be assumed that standard errors calculated including synthetic data for 2010 and 2011 are valid (most likely they will be too low because of the synthetically increased sample sizes).

Since it was noticed in the study that filings forecasts for the Biggest group were somewhat lower than those obtained from the Random group, it is also interesting to compare Random group and Biggest group after making the partial non-response corrections in both cases. Here are the equivalent corrections for the Biggest group.

Year	2009	2010	2011
Biggest group	210 694	216 608	220 645
Corrected for partial non-response	210 694	213 955	219 498

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