

APPLICANT PANEL SURVEY 2008

OF INTENTIONS FOR MAKING PATENT APPLICATIONS AT THE EUROPEAN PATENT OFFICE AND OTHER OFFICES

Munich, April 2009

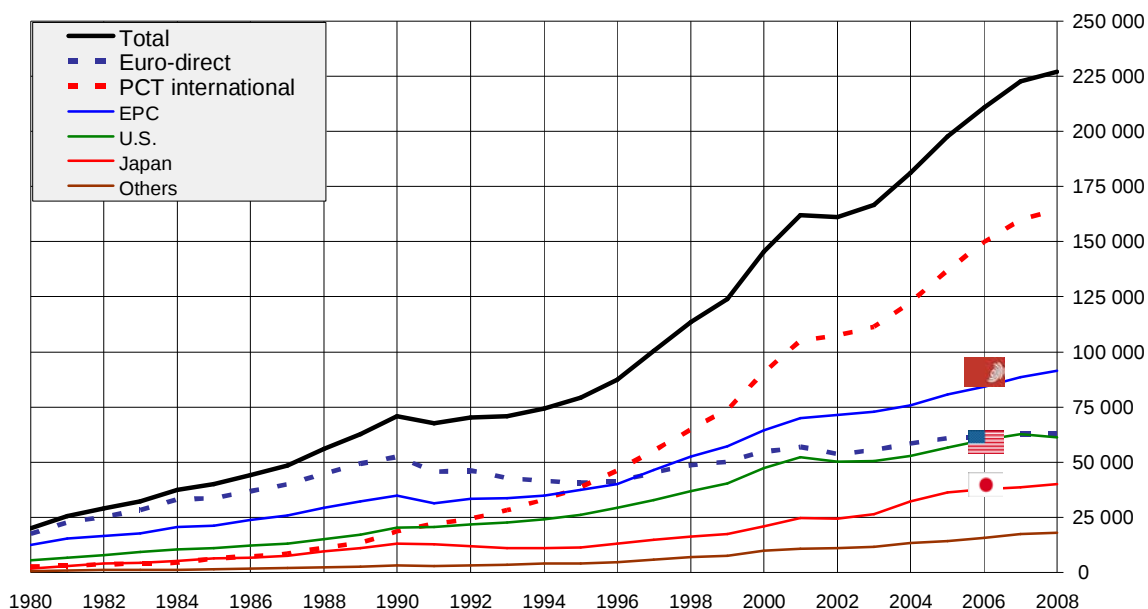
Commentary by the European Patent Office

Each year, the EPO carries out a survey of filing intentions by applicants for European patents. This report concerns the survey that was done in the summer of 2008 by Synovate, the market research firm.

The main use for the survey is to provide information on probable filing developments for the EPO's annual forecasting exercise for budgetary planning purposes. As usual, the surveyed applicants included a Biggest group of about 400 largest clients and a Random group of about 2,000 randomly selected applicants from the general population, with a sampling method that preferentially selected larger applicants. A considerable overlap exists between the Biggest group and the Random group.¹

Numbers of filings at the European Patent Office increased in 2008 at a slightly lower rate than previously.

Total European patent filings



The report highlights the key findings in the first part while details appear in appendices. The main forecasted items are Direct European route filings (Euro-direct), PCT international phase filings (PCT-IP) and Euro-PCT regional phase filings (Euro-PCT-RP). There is an assessment of current results in comparison to those from previous surveys. In the annexes there is a description of survey methodology and response rates, a collection of comments from participants, detailed forecasting results tables and a description of respondent profiles. Then follow analyses of R&D budgets, as well as the effects that hypothetical fee level changes will have on applicants' behaviour and the effects of rule changes (EPC 2000, London Agreement).

¹ In the 2007 survey, a Smallest group was included, but this was not done in 2008.

The survey asks about filing intentions for three calendar years (in the current exercise 2008, 2009 and 2010). The set of forecasts that is identified as being most appropriate is given in Table 10. Then correction factors are incorporated that compensate for previous applicants that may drop out of the system and new applicants that may appear during the forecasted years. As usual, the results are analysed by groups (Biggest and Random) under various breakdowns. Technical breakdowns are considered not only in terms of 14 EPO joint clusters (as in previous surveys) but also now in terms of a more manageable group of 5 mega clusters (groups of joint clusters). Each breakdown produces slightly different forecasts. Formally speaking, an optimum scenario forecast is obtained from the Random group by finding the method that gives the lowest percentage deviation between the lower 95% confidence limit and the central forecast for filings in 2008. As in each year since 2005, the selected scenario this time was found by disregarding the residential blocs of the surveyed applicants.

Although less objective, another way to rank scenarios among the Random group is to take into account not only the percentage deviation but also the closeness of the central forecast for 2008 to the observed number of filings for that year as presently known. An interesting observation is that the analysis ignoring residential blocs and incorporating a correction factor does not perform so well in terms of forecasting the 2008 outturn. A better balance of both ranking scales in 2007 and 2008 surveys is obtained from the analysis including residential blocs but combining Others with EPC-based applicants (Table 16). This gives somewhat lower forecasts of filings for 2009 and 2010 than were obtained in the scenario that was selected. Another interesting observation is that forecasts from the Biggest group (Section 4.2) are also on the whole rather lower than forecasts obtained from the Random group. To some extent this is natural in that Biggest group companies may not need to grow much further in terms of their filings, but it can also reflect an ongoing policy among Biggest companies to concentrate on the quality of applications rather than quantity - for which some evidence appears in Table 70 where it is found that the median R&D expenditure per first patent filing is higher in the biggest Group than in the Random group. It should be emphasised that the alternative methods of forecasting filings are still predicting a positive development in filings for 2009 and 2010 but at a somewhat lower rate of growth.

Apart from the above methodological considerations, it is clear that filing behaviour and perceptions among applicants may have changed since the onset of the main force of the international financial crisis in late 2008. A brief follow-up survey was carried out by telephone in the week starting 12th January 2009. Synovate obtained 56 responses from previous respondents in the Random group resident in the trilateral area.

Interesting comments on the effects of the apparent recession on R&D and patenting activities were obtained in this follow-up. 56% of respondents believed that a current forecast for Total filings (Euro-direct + PCT-IP) would be identical to, or slightly higher than, the one they gave in the previous survey, 33% said slightly lower, 11% considerably lower. From quantitative filings estimates that were provided, a comparative analysis was made between the original survey and the follow-up using the respondents of the new survey only. The raw growth estimates (Q Index and composite Index) appear with equivalent results from the main survey in the following table.

Survey:	Summer 2008			Jan-09
Growth from 2007 to Year:	2008	2009	2010	2009
# observations (n)	44	47	43	46
Q index	<u>0.971</u>	<u>1.029</u>	<u>1.073</u>	<u>0.956</u>
SE(1)	0.045	0.049	0.054	0.051
SE(2)	0.044	0.047	0.052	0.047
Composite index	1.049	1.026	1.125	0.924
Minimum reported growth	0.429	0.286	0.286	0.286
Maximum reported growth	2	3	4	2
Main survey Q index range	1.01 to 1.20	1.03 to 1.15	1.07 to 1.21	

At first sight, the new survey has led to a reduction in optimism for 2009 (Q Index filings growth since 2007: 0.956 vs. 1.029 in previous survey). However, note should be taken of the difference between Summer of 2008 main survey results for the whole previous sample and for this subsample. Also positive correction factors to filings forecasts based on Q Index values account should be added to the resulting estimates for filings.

A comparative analysis suggests that the estimate for total filings in 2009 can be reduced from 251,742 (main survey Random Group with no allocation by residence blocs and incorporating a two-year correction factor) to somewhere in a range between 227,500 and 232,400. While it has to be realised that any kind of quantitative analysis that is based on such a small follow-up survey is questionable on statistical grounds, this estimation suggests that the current financial crisis has an effect on future filings, but that they may still show some positive growth from 2008 to 2009. It is likely that the main future filings survey estimate for total filings in 2010 (265,526) should also be corrected downwards, but to an unclear extent since no data regarding 2010 were collected in the follow-up survey.

The above considerations leave the impression that filings in 2009 will remain stable with perhaps renewed growth to be expected by 2010. However, a high level of numerical accuracy in quantitative forecasts is not to be expected even from the main survey in more normal times - in Section 3 a historical accuracy rate of up to about 10% from year to year is mentioned. It is essentially the overall sentiments towards future filings as expressed by the respondents that are found in this survey and which cannot easily be emulated by other putatively more accurate regression based-techniques.

In terms of the subsidiary results of the survey, respondent profiles in terms of inferred distributions of year of foundation of applicant enterprises and numbers of employees are given in **Annex VI, Section 12**. Interesting differences are found between the various blocs. Then follow results from the survey on R&D investment activities, inventions and usage of the patent system as well as aspects regarding applicants' evaluation of patenting fees. These analyses make inferences about the underlying population via a weighting scheme and care should be taken due to the relatively small sample sizes on which estimates are sometimes based.

We hope that you will enjoy reading this report. Please provide us with feedback on any of the issues discussed. This will help us to refine our approach and to improve future surveys.

Table of contents

1	INTRODUCTION	7
1.1	Background and objectives	7
1.2	Content and structure of this report	7
1.3	The 2008 survey	8
2	FORECAST OF FUTURE PATENT FILINGS AT EPO	10
3	SUMMARY OF FORECASTS AND COMPARISON WITH PREVIOUS PANEL SURVEYS	11
4	METHODOLOGY AND INDIVIDUAL FORECASTS	18
4.1	Methodology and Structure of Results	18
4.2	Biggest group	19
4.3	Random group	22
4.4	Results broken down by joint cluster	29
4.5	Results broken down by mega cluster	33
5	FORECASTS FOR PCT REGIONAL PHASE APPLICATIONS	37
6	CONCLUSIONS AND OUTLOOK	40
7	ANNEX I: METHODOLOGICAL APPROACH, DATA COLLECTION PROCEDURE, AND QUESTIONNAIRE	41
7.1	Parent population and target persons	41
7.2	Questionnaire	42
7.3	Data collection procedure	48
7.3.1	International research of up-to-date telephone numbers	48
7.3.2	Telephone contact interviews	48
7.3.3	Main interviews	49
7.3.4	Experiences during fieldwork	50
7.4	Plausibility checks	50
7.5	Non-response analysis and response rates	52
7.5.1	Address qualification	52
7.5.2	Losses	52

7.5.3	Response rates	52
8	ANNEX II: COMMENTS RECEIVED FROM PARTICIPANTS	58
8.1	Multiple Comments	58
8.1.1	General multiple comments (selection)	58
8.1.2	(Multiple) comments in part B (selection, absolute frequency of comments)	58
8.2	Individual Comments (selection)	58
8.2.1	Individual comments on the questionnaire/the survey	58
8.2.2	Individual comments on patenting strategy and development	59
8.2.3	Individual comments on London Agreement	59
8.2.4	Individual comments on fees and costs (as well as effects on patenting strategy)	60
8.2.5	Individual comments on EPO quality	60
9	ANNEX III: AMALGAMATION OF JOINT CLUSTERS TO MEGA CLUSTERS	62
10	ANNEX IV: DETAILED FORECASTING RESULTS	63
11	ANNEX V: FORECASTS FOR APPLICATIONS AT OTHER PATENT OFFICES (NATIONAL APPLICATIONS AND PCT NATIONAL PHASE APPLICATIONS).	71
12	ANNEX VI: RESPONDENT PROFILE	74
12.1	All respondents	74
12.2	Respondents from the Biggest group	74
12.3	Respondents from the Random group	76
12.4	Estimated composition of the population of EPO applicants	77
12.5	EPO joint clusters	82
13	ANNEX VII: ANALYSIS OF R&D BUDGETS, INVENTIONS, FIRST FILINGS, SALES AND EXPENDITURES	89
14	ANNEX VIII: IMPORTANCE OF FEES FOR FILING BEHAVIOUR	95
15	ANNEX IX: EFFECT OF PATENT RULE CHANGES ON FILING BEHAVIOUR	99
16	ANNEX X: ESTIMATING BIRTH & DEATH EFFECTS IN THE APPLICANT POPULATION	101
17	ANNEX XI: SIZES OF POPULATIONS AND SAMPLES FOR THE 2008 EPO APPLICANT PANEL SURVEY	104

Index of figures

Figure 1: Comparison of forecasts since 2003 (Random group with no subsidiary breakdown, 2007 forecast based on the Random & Smallest groups)	13
Figure 2: Comparison of forecasts since 2003 (Random group broken down by residence bloc)	14
Figure 3: Comparison of birth/death corrected forecasts since 2003 (Random group without subsidiary breakdown)	16
Figure 4: Comparison of birth/death forecasts since 2003 (Random group broken down by residence bloc)	17
Figure 5: Forecasts for EPO filings – Biggest group with no subsidiary breakdown	20
Figure 6: Forecasts for EPO filings – Random group without breakdown by residence bloc (dotted lines illustrate 95% confidence limits)	22
Figure 7: Forecasts for EPO filings based on breakdown by joint cluster for the Random group (dotted lines illustrating 95% confidence limits)	29
Figure 8: Forecasts for EPO filings based on breakdown by mega cluster for the Random group (dotted lines illustrating 95% confidence limits).	34
Figure 9: Biggest group by year of foundation and numbers of employees	74
Figure 10: Random group by year of foundation and number of employees	76
Figure 11: Estimated distribution of the EPO applicant population by year of foundation and number of employees	79
Figure 12: Estimated distribution of the EPO applicant population in the EPC (EP) residence bloc by year of foundation and number of employees	80
Figure 13: Estimated distribution of the EPO applicant population in the Japan (JA) residence bloc by year of foundation and number of employees	80
Figure 14: Estimated distribution of the EPO applicant population in the Others (OT) residence bloc by year of foundation and number of employees	81
Figure 15: Estimated distribution of the EPO applicant population in the US residence bloc by year of foundation and number of employees	81
Figure 16: Number of responses per joint cluster (entire sample/net number of interviews)	83
Figure 17: Number of responses per joint cluster (Biggest including overlapping members of the Random group)	83
Figure 18: Number of responses per joint cluster (Random including overlapping members of the Biggest group)	84
Figure 19: Number of joint clusters selected per respondent (entire sample/net number of interviews)	84
Figure 20: Number of joint clusters selected per respondent (Biggest including overlapping members of the Random group)	85
Figure 21: Number of joint clusters selected per respondent (Random including overlapping members of the Biggest group)	85

Index of tables

Table 1: Predicted growth rates for Euro-direct and PCT-IP filings by forecasting methods	11
Table 2: Predicted total numbers of Euro-direct and PCT-IP filings by forecasting method	11
Table 3: Comparison of forecasts since 2003 (Random group with no subsidiary breakdown)	13
Table 4: Comparison of forecasts since 2003 (Random group broken down by residence bloc)	14
Table 5: Birth/Death corrected predicted total numbers of Euro-direct and PCT-IP filings by forecasting method	15
Table 6: Comparison of birth/death corrected forecasts since 2003 (Random group with no subsidiary breakdown)	16
Table 7: Comparison of birth/death corrected forecasts since 2003 (Random group with residence bloc breakdown)	17
Table 8: Forecasts for EPO filings – Biggest group with no subsidiary breakdown	20
Table 9: Forecasts for EPO filings – Biggest group, broken down by residence bloc	21
Table 10: Forecasts for EPO filings – Random group with no subsidiary breakdown	23
Table 11: Forecasts for EPO filings – Random group broken down by residence bloc	24
Table 12: Forecasts for EPO filings – Random group with no subsidiary breakdown (Euro-direct and PCT-IP filings combined)	24
Table 13: Forecasts for EPO filings – Random group, broken down by residence bloc (Euro-direct and PCT-IP filings combined)	25
Table 14: Forecasts for EPO filings – Random group, broken down by residence bloc (first and subsequent filings combined for US residence bloc only)	25
Table 15: Forecasts for EPO filings – Random group with no subsidiary breakdown (excluding companies with qualifying comments)	26
Table 16: Forecasts for EPO - Random group, broken down by residence bloc ("Other" incorporated in EPC)	27
Table 17: Forecasts for EPO - Random group, broken down by residence bloc ("Other" incorporated in EPC; excluding companies with qualifying comments)	28
Table 18 (part I): Forecasts for EPO filings at the EPO – Biggest group (first and subsequent filings, broken down by joint cluster)	30
Table 19 (part I): Forecasts for EPO filings at the EPO – Random group (first and subsequent filings, broken down by joint cluster)	32
Table 20: Forecasts for EPO filings at the EPO – Biggest group broken down by mega cluster	35
Table 21: Forecasts for EPO filings at the EPO – Random group broken down by mega cluster	36
Table 22: Overview of predicted growth rates for Euro-PCT-RP applications by forecasting methods	37
Table 23: Overview of predicted filing numbers for Euro-PCT-RP applications by forecasting methods	38
Table 24: Forecasts for Euro-PCT-RP applications (no subsidiary breakdown; composite index based on Biggest group)	38
Table 25: Forecasts for Euro-PCT-RP applications (breakdown by residence bloc; composite index based on Biggest group)	38
Table 26: Forecasts for Euro-PCT-RP applications (no subsidiary breakdown; Q Index based on Random group)	38

Table 27: Forecasts for Euro-PCT-RP applications (broken down by residence bloc; Q Index based on Random group)	39
Table 28: Forecasts for Euro-PCT-RP applications (broken down by joint cluster; Q Index based on Random group)	39
Table 29: Population size (applicants for Euro-direct and PCT-IP for the Random group)	41
Table 30: Overview of sample and responses received	49
Table 31: Non-response statistics – Biggest (incl. overlapping members of the Random group)	54
Table 32: Non-response statistics – Random (incl. overlapping members of the Biggest group)	55
Table 33: Respondent structure	56
Table 34: Reasons for non-response – Biggest (incl. overlapping members of the Random group)	57
Table 35: Reasons for non-response – Random (incl. overlapping members of the Biggest group)	57
Table 36: Amalgamation of joint clusters to mega clusters	62
Table 37: Detailed forecasting results (no further breakdown) – Biggest group [used in Table 8]	63
Table 38: Detailed forecasting results broken down by residence bloc – Biggest group [used in Table 9]	63
Table 39: Detailed forecasting results (no further breakdown) – Random group [used in Table 10]	64
Table 40: Detailed forecasting results broken down by residence bloc – Random group [used in Table 11 and Table 14]	64
Table 41: Detailed forecasting results – Random group, no breakdown, Euro-direct and PCT-IP filings combined [used in Table 12]	64
Table 42: Detailed forecasting results – Random group broken down by residence bloc, Euro-direct and PCT-IP filings combined [used in Table 13]	65
Table 43: Detailed forecasting results – Random group broken down by residence bloc, Euro-direct and PCT-IP filings combined [used together with Table 40 in Table 14]	65
Table 44: Detailed forecasting results (no further breakdown), excluding companies with qualifying comments – Random group [used in Table 15]	65
Table 45: Detailed forecasting results broken down by residence bloc, "Other" incorporated in EPC – Random group [used in Table 16]	66
Table 46: Detailed forecasting results broken down by residence bloc, excluding companies with qualifying comments, "Other" incorporated in EPC – Random group [used in Table 17]	66
Table 47: Detailed forecasting results broken down by joint cluster – Biggest group [used in Table 18 and Table 18 (part II)]	67
Table 48: Detailed forecasting results broken down by joint cluster – Random group [used in Table 19 parts I and II]	68
Table 49: Detailed forecasting results broken down by mega cluster – Biggest group [used in Table 20]	69
Table 50: Detailed forecasting results broken down by mega cluster – Random group [used in Table 21]	69
Table 51: Detailed forecasting results for PCT applications entering the regional phase at the EPO – Biggest group [used in Table 24 and Table 25]	70
Table 52: Detailed forecasting results for PCT applications entering the regional phase at the EPO – Random group [used in Table 26 and Table 27]	70
Table 53: Detailed forecasting results for PCT applications entering the regional phase at the EPO broken down by joint cluster – Random group [used in Table 28]	70

Table 54: Detailed forecasting results for national applications (excluding PCT), no breakdown – Random group	71
Table 55: Detailed forecasting results for national applications (excluding PCT), broken down by residence bloc – Random group	72
Table 56: Detailed forecasting results for PCT applications entering the national phase at USPTO – Random group	73
Table 57: Detailed forecasting results for PCT applications entering the national phase at JPO – Random group	73
Table 58: Detailed forecasting results for PCT applications entering the national phase at DPMA – Random group	73
Table 59: Biggest group by year of foundation and residence bloc	75
Table 60: Biggest group by number of employees and residence bloc	75
Table 61: Random group broken down by year of foundation and residence bloc	76
Table 62: Random group broken down by persons employed and residence bloc	77
Table 63: Bloc-wise probabilities of existence (PopProb) of specific filing counts for counts up to 40	78
Table 64: Bloc-wise SRSS values of the Random sample by filing count class.	79
Table 65: Estimated distribution of EPO applicants by year of foundation and residence bloc	82
Table 66: Estimated distribution of EPO applicants by number of employees and residence blocs	82
Table 67: Number of responses per joint cluster combination (two-way matrix, entire sample/net number of interviews)	86
Table 68: Number of responses per joint cluster combination (two-way matrix, Biggest including overlapping members of the Random group)	87
Table 69: Number of responses per joint cluster combination (two-way matrix, Random including overlapping members of the Biggest group)	88
Table 70: Main statistics for the various sample groups	90
Table 71: Main statistics for activities in various sectors – Random group (unweighted)	91
Table 72: Main statistics for activities in various sectors – Random group (weighted)	92
Table 73: Main statistics for activities by residence bloc – Random group (unweighted)	93
Table 74: Main statistics for activities by residence bloc – Random group (weighted).	94
Table 75: Influence of specific fees on filing decisions by residence bloc – Random group (unweighted)	95
Table 76: Influence of specific fees on filing decisions by residence bloc – Random group (weighted)	96
Table 77: Influence of specific fees on filing decisions by mega cluster – Random group (unweighted)	96
Table 78: Influence of specific fees on filing decisions by mega cluster – Random group (weighted)	97
Table 79: Influence of fee increases or decreases on filing decisions by mega cluster – Random group (unweighted)	97
Table 80: Influence of fee increases or decreases on filing decisions by mega cluster – Random group (weighted)	98
Table 81: Influence of fee increases or decreases on filing decisions by residence bloc – Random group (unweighted)	98
Table 82: Influence of fee increases or decreases on filing decisions by residence bloc – Random group (weighted)	98
Table 83: Effects of rule changes on filing behaviour – Random group (unweighted)	99
Table 84: Effects of rule changes on filing behaviour – Random group (weighted)	100

1 Introduction

1.1 Background and objectives

Since 1996, the European Patent Office (EPO) has carried out an annual "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 2008, the thirteenth in the series of surveys took place. The interviews and data collection were undertaken by Synovate (formerly Roland Berger Market Research), providing the EPO with the benefit of joint experience previously gained in similar surveys from 2001 to 2007. For the fifth year in succession, Synovate was also in charge of the data analysis and interpretation in 2008.

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 (EPC², 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 5 rather more meaningful "mega clusters".

1.2 Content and structure of this report

This year's report was restructured compared to previous reports. The primary goal of the restructuring was to move the most important information consistently to the front of the report and place background information and analytical details in Annexes. All of the information and detail of previous years has been kept.

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, Euro-direct and PCT international phase filings (PCT-IP), and 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).

Section 1.3 outlines the characteristics of this year's survey and sample groups. **Section 2** provides high-level summaries of predicted filing totals and growth rates for 2008, 2009 and 2010 based on this year's 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 this year's 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

² European Patent Convention (EPC) contracting states

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**.

Annex I, Section 7 contains the complete survey methodology report as well as this year's questionnaire, and details the data validation procedures employed with the data received. **Annex II, Section 8** reports on the comments to the survey received from respondents. **Annex III, Section 9** explains the amalgamation of joint clusters into mega clusters for the purpose of forecasting and reporting on auxiliary data based on a mega cluster breakdown. **Annex IV, Section 10** contains the full and detailed growth rate forecasting tables used to produce the forecasts presented in **Section 4**. **Annex V, Section 11** provides forecasts for applications at other national patent offices (national filings and national phase PCT filings). **Annex VI, Section 12** provides summary statistics and a profile of respondents based on economic characteristics of the responding individuals or institutions. **Annex VII, Section 13** analyses R&D budgets and operating and capital expenditures of applicants and reports on indicators based on these figures. **Annex VIII, Section 14** reports on the probable effects of changes to filing fees on numbers of applications and **Annex IX, Section 15** reports on the effects of two recent rule changes to the EPO patenting process. **Annex X, Section 16** gives details on the estimation of birth/death effects which are used in Section 3 to deal with structural shortfalls of the actual empirical survey. Finally, **Annex XI, Section 17** reports on population and sample sizes of the 2008 survey.

1.3 The 2008 survey

The design of the 2008 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 separate sample for Smallest applicants that was added to the 2007 survey was not included in the 2008 survey.

The total number of applicants involved was 2,164³, with most of the Biggest group also appearing in the Random group. The survey covered applicants for about 25% of the applications at the EPO (Euro-direct and PCT-IP filing numbers of Random sample relating to population, see **Annex XI, Section 17**).

The survey was carried out via telephone and mail interviews with pre-established contact persons. Questionnaires were sent out from the end of May 2008, with interviews being completed by mid-September. In total, 772 interviews were completed in 2008.

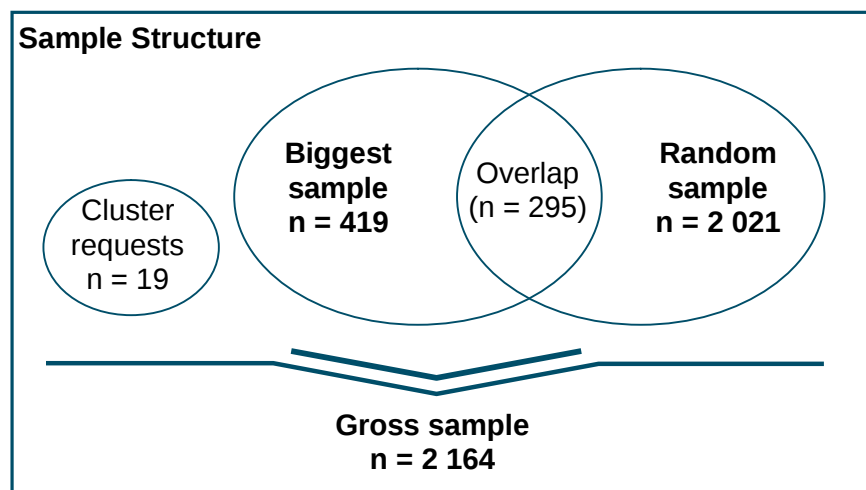
In the first stage, valid addresses were found for 2,077 applicants. After removing double cases that were either identical with, or included in, other addresses, 1,776 addresses were left. Contacts were established for 1,696 applicants. The overall response rate in terms of the numbers of valid addresses was 37.2% (772 out of 2,077), lower than in the previous 2007 survey for the comparable groups but with a higher absolute number of responses.

The EPO provided two **gross samples** of applicants drawn from the EPO database of applications (EPASYS) in early 2008.⁴

³ This total includes 19 addresses requested by EPO joint cluster managers.

⁴ All gross sample data considered 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 2,021 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
- "Biggest": This sample comprises the 419 largest applicants and is designed to allow for separate analysis of the intentions of the biggest applicants.



These samples were drawn separately, although Random and Biggest groups contain an overlap of 295 large applicants which is part of both groups. The EPO also added another 19 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 are a residual group of many countries but the sampling scheme for the Random group again gives them adequate representation.

The questionnaire used for data collection was broadly similar to the one used in 2007. It contained a full matrix of questions on patent filings and expectations for patent filings for the coming three years, in this case for 2008, 2009 and 2010, itemised by first and subsequent filings, not only at the EPO but also in other main worldwide patent systems.⁵ Apart from the main questions on predicting numbers of patent filings, questions were asked to elicit information on R&D expenditures and 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 as well as operating/capital expenditure. New questions on the effect of recent patenting rule changes as well as of fee levels and fee changes on filing behaviour were included in this year's survey.

For details on parent population, target persons, questionnaire topics, data collection procedure, and response statistics refer to **Annex I, Section 7**.

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 the interviewees had difficulties calculating growth rates from a single base year. However, for the results in the report, we adopted the convention of indicating growth rates with respect to a base year (in this case 2007).

2 Forecast of future patent filings at EPO

Based on the recommended forecast method derived in **Section 3**, the **overall survey forecast for total filings in 2008 is 226,978**, with approximate 95% confidence limits of 219,446 to 234,509, resulting in a deviation of $\pm 3.3\%$. This forecast agrees almost precisely with the current estimate of actual 2008 filings currently at 227,000. The estimated percentage of PCT-IP filings amongst total filings for 2008 is 71.8%, compared to an actual value of 72.4%. For 2009, the recommended forecast method predicts **240,574** total filings with approximate 95% confidence limits of **231,547** and **249,601**. For 2010, the recommended method estimates **251,198** total filings with approximate 95% confidence limits of **240,746** and **261,649**.

These filing estimates are obtained by estimating a growth rate for each year and applying this growth rate to the actual number of 2007 filings. The estimated growth rates based on the recommended forecast method were calculated at +2.2% for 2008, +8.3% for 2009, and +13.1% for 2010.

This year, the concept of incorporating correction factors, based on birth and death effects of the entire population of applicants, was again used and the main filing predictions are given both with and without applying estimated birth and death effects. The correction factors take into account the fact that the survey design cannot properly account for applicants completely dropping out or newly appearing. See **Annex X, Section 16** for further explanation.

Using the one-year-ahead birth/death correction factor of +4,867 filings, **the corrected forecast for total filings in 2008 is 231,845**. While this estimate overshoots the number of actual total filings in 2008, the actual value still easily fits into the 95% confidence limits of the corrected forecasts. For 2009 and applying the two-year-ahead birth/death correction factor of +11,168, **the corrected forecast for total filings in 2009 is 251,742**. For 2010, application of the three-year-ahead birth/death correction factor of +15,328 leads to **a corrected forecast for total filings in 2010 of 266,526**. Predictions incorporating birth and death effects rely solely on historical data to estimate those effects. As such, in order for these estimates to be valid, one has to assume that the underlying process generating these effects has remained stable for the prediction years. Given the global financial crisis unfolding, this assumption should be taken with an additional grain of salt this year.

Overall, results from 2008 are quite similar to the results of 2007 and earlier years (except for 2006) in terms of volatility and accuracy. However, in contrast to 2007 predictions, this year's one-year-ahead predictions are considerably more pessimistic in terms of expected growth. Some pessimism with respect to two and three-year-ahead growth is also observable although to a lower extent than is apparent for the one-year-ahead predictions.

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 2007) can be estimated at 4.7% in 2008, 8.4% in 2009, and 10.8% in 2010. For the Random group, growth rates can be estimated at 5.3% in 2008, 11.7% in 2009, and 15.0% in 2010. As for Euro-direct and PCT international phase 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.

Comparison of forecasts: Growth from 2007
Euro-direct and PCT-IP

Group	Breakdown	Year					
		2008		2009		2010	
		Growth rate	Deviation*	Growth rate	Deviation*	Growth rate	Deviation*
Biggest	None	2.6%		3.9%		7.0%	
Biggest	Residence bloc	2.0%		3.2%		6.6%	
Biggest	EPO joint cluster	1.1%		4.7%		9.6%	
Biggest	EPO mega cluster	-1.9%		0.5%		4.4%	
Random	None	2.2%	3.3%	8.3%	3.8%	13.1%	4.2%
Random	Residence bloc	3.7%	4.2%	13.6%	4.4%	19.7%	6.6%
Random	None (Euro-direct and PCT-IP filings combined)	1.1%	3.3%	6.4%	3.5%	10.9%	4.2%
Random	Residence bloc (ED and PCT-IP filings combined)	0.6%	4.8%	8.3%	5.3%	15.1%	9.6%
Random	Residence bloc (First and Subsequent filings combined for US residence bloc)	1.6%	9.5%	10.6%	9.5%	16.9%	12.8%
Random	None (excluding companies with comments)	-0.8%	4.8%	4.4%	5.2%	8.4%	5.7%
Random	Residence bloc ("other" incorp. in EP)	1.3%	3.5%	7.8%	3.8%	12.3%	4.2%
Random	Residence bloc ("Other" incorporated in EPC, excluding companies with comments)	-1.7%	5.2%	4.6%	5.2%	8.1%	5.7%
Random	EPO joint cluster	3.3%	2.8%	11.3%	3.4%	15.8%	3.8%
Random	EPO mega cluster	2.6%	3.1%	10.7%	3.6%	15.9%	4.0%

*) **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

Group	Breakdown	Year								
		2008			2009			2010		
		Predicted filings	LCL	UCL	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL
Biggest	None	227 711			230 606			237 601		
Biggest	Residence bloc	226 555			229 257			236 759		
Biggest	EPO joint cluster	224 591			232 392			243 350		
Biggest	EPO mega cluster	217 853			223 233			231 809		
Random	None	226 978	219 446	234 509	240 574	231 547	249 601	251 198	240 746	261 649
Random	Residence bloc	230 307	220 620	239 993	252 147	241 147	263 147	265 864	248 366	283 361
Random	None (Euro-direct and PCT-IP filings combined)	224 378	216 961	231 795	236 212	227 844	244 579	246 206	235 830	256 581
Random	Residence bloc (ED and PCT-IP filings combined)	223 479	212 702	234 256	240 487	227 849	253 124	255 531	231 047	280 016
Random	Residence bloc (First and Subsequent filings combined for US residence bloc)	225 570	204 185	246 955	245 665	222 348	268 982	259 511	226 318	292 704
Random	None (excluding companies with comments)	220 167	209 707	230 626	231 765	219 662	243 869	240 733	227 118	254 348
Random	Residence bloc ("other" incorp. in EP)	224 908	216 943	232 873	239 307	230 329	248 286	249 249	238 782	259 717
Random	Residence bloc ("Other" incorporated in EPC, excluding companies with comments)	218 315	207 023	229 606	232 351	220 246	244 457	239 990	226 371	253 610
Random	EPO joint cluster	229 343	222 866	235 819	247 237	238 881	255 592	257 122	247 273	266 970
Random	EPO mega cluster	227 903	220 846	234 430	245 774	236 819	253 794	257 284	246 948	266 281
Actual Filings		227 000								

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

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 is informative 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 goes to the Random group.

Comparing the scenarios with no residence bloc breakdowns or other corrections, estimates of one-year-ahead growth based on the Biggest group this year are slightly more optimistic than those of the Random group. However, as in 2007, estimates for two and three-year-ahead growth based on the Biggest group show lower forecasts than those based on the Random group. This may reflect different perceptions about the way that the

current world economic crisis may play out. It may also be a reflection of the Biggest group companies' greater maturity and thus more moderate growth expectations.

The Random group estimate without any breakdown matches the actual 2008 filing number almost exactly and, accordingly, its confidence bands easily encompass the true 2008 filing number.

Considering which forecasting method to use, our recommendation continues to be to use the estimate derived without any further breakdowns. Apart from the very good agreement with the actual number of 2008, this method has also usually had the lowest estimates of deviation for all forecast years. The filing estimates using the recommended prediction method are **226,978 for 2008, 240,574 for 2009, and 251,198 for 2010**. This recommendation has the added advantage of ensuring the highest level of comparability to the previous year's survey, as it was the preferred method of estimation last year as well.

To put the comparison of the two different itemisation scenarios in perspective, **Figure 1** and **Table 3** as well as **Figure 2** and **Table 4** compare the forecasting results of previous panel surveys since 2003 without and with residence bloc breakdown respectively.

The **precision of predictions** from previous years' panels 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 forecasted numbers are given as percentage values of the actual filings in brackets. Overall, the forecast deviation in terms of the percentage of actual filings remains between 90% and 105% in almost all cases, which underlines the high level of forecasting precision. With the notable exception of last year's estimates for 2008, the previous forecasts all underestimated the actual number of filings. Concerning the forecasting method, in retrospect, the estimates based on the Random group with no subsidiary itemisation were more accurate than the estimates based on a breakdown by residence bloc for the survey years 2003, 2005, 2007, and now 2008. The opposite is true for the survey years 2004 and particularly 2006, where the estimates based on a breakdown by residence bloc achieved a higher level of accuracy. However, the presented graphs and tables illustrate that the difference between the two methods in terms of forecasting accuracy is rather small.

Given that both forecasting methods calculating growth rates for the Random group (no subsidiary breakdown and itemisation by residence bloc) have previously proven to be very reliable in yielding similar results, it is recommended to continue monitoring the performance of both methods in subsequent surveys.

Comparison of forecasts since 2003 based on Random Sample with no subsidiary breakdown

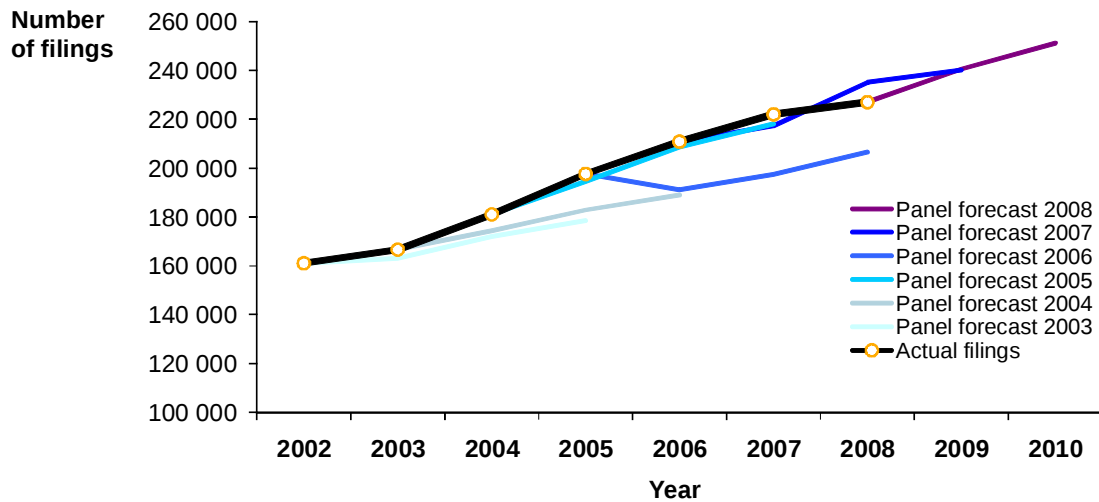


Figure 1: Comparison of forecasts since 2003 (Random group with no subsidiary breakdown)

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

Number of filings* forecasted based on ...	Forecasting Year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
... 2003 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit	161 086 (=actual)	163 158 (98%) 154 959 171 357	171 936 (95%) 161 742 182 129	178 477 (90%) 166 359 190 594					
... 2004 panel survey (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 panel survey (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 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit				197 600 (=actual)	191 215 (91%) 178 179 204 250	197 344 (89%) 178 579 216 109	206 595 (91%) 185 533 227 658		
... 2007 panel survey (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 (N/A) 231 081 249 180	
... 2008 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit						222 046 (=actual)	226 978 (100%) 219 446 234 509	240 574 (N/A) 231 547 249 601	251 198 (N/A) 240 746 261 649
Actual filings	161 086	166 651	181 109	197 600	210 849	222 046	227 000	N/A	N/A

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

Table 3: Comparison of forecasts since 2003 (Random group with no subsidiary breakdown⁶)

⁶ N.B. In **Table 3**, **Table 4**, **Table 6** and **Table 7**, the 2007 panel survey forecasts are based on the Random and Smallest group.

Comparison of forecasts since 2003 based on Random sample with breakdown by residence bloc

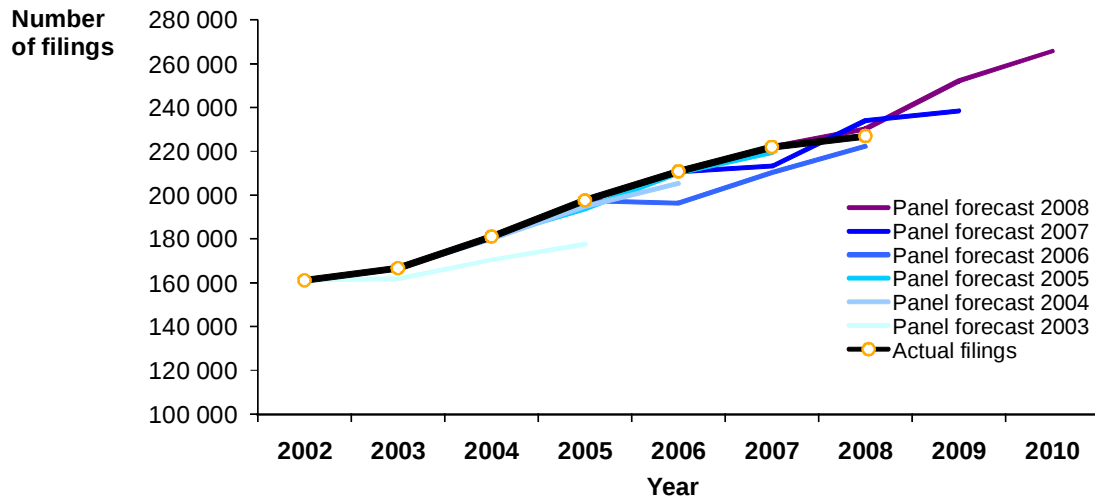


Figure 2: Comparison of forecasts since 2003 (Random group broken down by residence bloc)

Comparison of forecasts since 2003 based on Random sample with breakdown by residence bloc

Number of filings* forecasted based on ...	Forecasting Year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
... 2003 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit	161 086 (=actual)	161 783 (97%) 154 069 169 496	170 462 (94%) 160 786 180 138	177 649 (90%) 165 849 189 449					
... 2004 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit		166 651 (=actual)	179 952 (99%) 158 112 201 791	194 919 (99%) 164 308 225 531	205 385 (97%) 173 259 237 511				
... 2005 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit			181 109 (=actual)	193 715 (98%) 184 032 203 398	210 044 (100%) 197 450 222 637	219 381 (99%) 204 851 233 910			
... 2006 panel survey (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 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit					210 849 (=actual)	213 284 (96%) 205 369 221 199	234 077 (103%) 225 782 242 372	238 587 (N/A) 227 169 250 006	
... 2008 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit						222 046 (=actual)	230 307 (101%) 220 620 239 993	252 147 (N/A) 241 147 263 147	265 864 (N/A) 248 366 283 361
Actual filings	161 086	166 651	181 109	197 600	210 849	222 046	227 000	N/A	N/A

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

Table 4: Comparison of forecasts since 2003 (Random group broken down by residence bloc)

Due to the design of the survey, growth estimates and predicted filing totals based purely on these survey data cannot properly account for birth and death effects in the true EPO applicant population. Specifically, it is a prerequisite to have made at least one filing in the previous year in order to be available and eligible for participation in the survey.

One can, however, attempt to calculate such birth/death correction factors with data available at EPO and consequently come up with one-year, two-year and three-year-ahead correction factors to add to (or subtract from) the filing predictions of the survey. See

Annex X, Section 16 for details on this procedure. It should be noted that the procedure has slightly changed from the one that was used in the previous survey.

Applying the suggested respective correction factors to this year's filing predictions results in altered predictions as given in **Table 5**. The corrected filing estimates using the recommended prediction method are **231,845 for 2008, 251,742 for 2009, and 266,526 for 2010**.

Birth/death correction factors can also be applied retroactively to previous years' forecasts in order to counter the yearly survey's inability to directly estimate these effects. **Figure 3** and **Table 6** show corrected estimated filing totals based on survey estimates without subsidiary breakdown and after addition of the survey-year-specific correction factors. **Figure 4** and **Table 7** show the corrected estimated filing totals based on survey estimates with residence bloc breakdown and survey-year-specific correction factors. It is clear that the use of the correction factors has coped to some extent with the underestimation problems in the surveys carried out for 2003 to 2006. However, as further discussed in **Annex X, Section 16**, the corrections are not a panacea and care must still be taken to consider the margin of error of each forecast as represented by the confidence limits. Thus, **Table 5** suggests total filings of 266,526 in 2010 with confidence limits of 256,074 and 276,977. This is still quite a large span in terms of budget planning at EPO. Also it assumes growth of the applicant population in the future at similar rates to the past – an assumption that may not turn out to hold in the current world financial crisis.

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

		Year								
		2008			2009			2010		
Group	Breakdown	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL
Birth / Death Correction Factor		4 867	4 867	4 867	11 168	11 168	11 168	15 328	15 328	15 328
Biggest	None	232 578			241 774			252 929		
Biggest	Residence bloc	231 422			240 425			252 087		
Biggest	EPO joint cluster	229 458			243 560			258 678		
Biggest	EPO mega cluster	222 720			234 401			247 137		
Random	None	231 845	224 313	239 376	251 742	242 715	260 769	266 526	256 074	276 977
Random	Residence bloc	235 174	225 487	244 860	263 315	252 315	274 315	281 192	263 694	298 689
Random	None (Euro-direct and PCT-IP filings combined)	229 245	221 828	236 662	247 380	239 012	255 747	261 534	251 158	271 909
Random	Residence bloc (ED and PCT-IP filings combined)	228 346	217 569	239 123	251 655	239 017	264 292	270 859	246 375	295 344
Random	Residence bloc (ED and PCT-IP filings combined, First and Subsequent filings combined for US residence bloc)	227 362	216 408	238 317	250 859	238 025	263 693	270 450	245 827	295 072
Random	None (excluding companies with comments)	225 034	214 574	235 493	242 933	230 830	255 037	256 061	242 446	269 676
Random	Residence bloc ("other" incorp. in EP)	229 775	221 810	237 740	250 475	241 497	259 454	264 577	254 110	275 045
Random	Residence bloc ("Other" incorporated in EPC, excluding companies with comments)	223 182	211 890	234 473	243 519	231 414	255 625	255 318	241 699	268 938
Random	EPO joint cluster	234 210	227 733	240 686	258 405	250 049	266 760	272 450	262 601	282 298
Random	EPO mega cluster	232 770	225 713	239 297	256 942	247 987	264 962	272 612	262 276	281 609
Actual Filings		227 000								

Table 5: Birth/Death corrected predicted total numbers of Euro-direct and PCT-IP filings by forecasting method

Comparison of forecasts since 2003 based on Random Sample with no subsidiary breakdown
(with birth / death corrections available at time of survey applied)

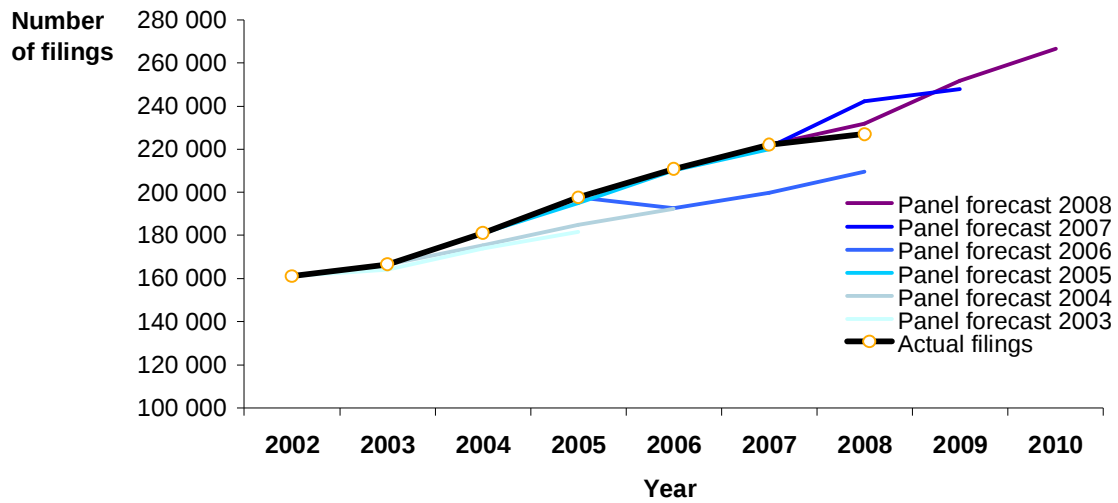


Figure 3: Comparison of birth/death corrected forecasts since 2003 (Random group without subsidiary breakdown)

Comparison of forecasts since 2003 based on Random Sample without subsidiary breakdown
(with birth / death corrections available at time of survey applied)

Number of filings* forecasted based on ...	Forecasting Year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
... 2003 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit	161 086 (=actual)	164 117 (98%) 155 918 172 316	173 984 (96%) 163 790 184 177	181 668 (92%) 169 550 193 785					
... 2004 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit		166 651 (=actual)	175 428 (97%) 165 222 185 633	185 027 (94%) 172 422 197 633	192 244 (91%) 178 371 206 117				
... 2005 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit			181 109 (=actual)	195 072 (99%) 186 723 203 422	210 273 (100%) 199 484 221 061	220 022 (99%) 207 520 232 524			
... 2006 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit				197 600 (=actual)	192 707 (91%) 179 671 205 742	199 711 (90%) 180 946 218 476	209 650 (92%) 188 588 230 713		
... 2007 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit					210 849 (=actual)	220 699 (99%) 213 216 228 182	242 264 (107%) 234 567 249 961	247 883 (N/A) 238 833 256 932	
... 2008 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit						222 046 (=actual)	231 845 (102%) 230 614 245 677	251 742 (N/A) 246 875 264 929	266 526 (N/A) 240 746 261 649
Actual filings	161 086	166 651	181 109	197 600	210 849	222 046	227 000	N/A	N/A

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

Table 6: Comparison of birth/death corrected forecasts since 2003 (Random group with no subsidiary breakdown)

Comparison of forecasts since 2003 based on Random sample with breakdown by residence bloc
(with birth / death corrections available at time of survey applied)

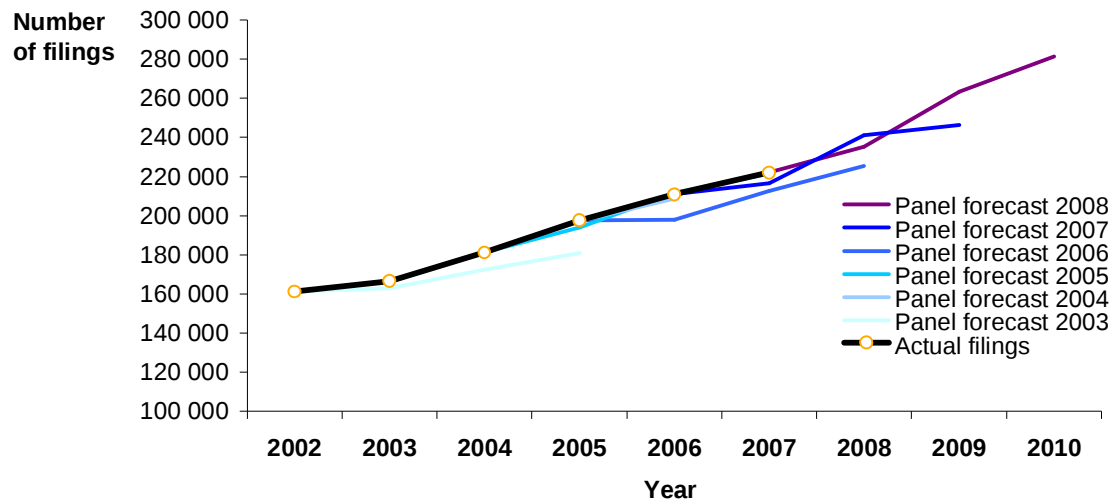


Figure 4: Comparison of birth/death forecasts since 2003 (Random group broken down by residence bloc)

Comparison of forecasts since 2003 based on Random sample with breakdown by residence bloc
(with birth / death corrections available at time of survey applied)

Number of filings* forecasted based on ...	Forecasting Year								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
... 2003 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit	161 086 (=actual)	162 742 (98%) 155 028 170 455	172 510 (95%) 162 834 182 186	180 840 (92%) 169 040 192 640					
... 2004 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit		166 651 (=actual)	180 924 (100%) 159 084 202 763	197 113 (100%) 166 502 227 725	208 672 (99%) 176 546 240 798				
... 2005 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit			181 109 (=actual)	194 114 (98%) 184 431 203 797	211 545 (100%) 198 951 224 138	221 396 (100%) 206 866 235 925			
... 2006 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit				197 600 (=actual)	197 894 (94%) 179 790 215 998	212 803 (96%) 189 418 236 188	225 326 (99%) 199 902 250 749		
... 2007 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit					210 849 (=actual)	216 539 (98%) 208 624 224 454	241 285 (106%) 232 990 249 580	246 339 (N/A) 234 921 257 758	
... 2008 panel survey (in % of actual filings) Lower confidence limit Upper confidence limit						222 046 (=actual)	235 174 (104%) 231 788 251 161	263 315 (N/A) 256 475 278 475	281 192 (N/A) 248 366 283 361
Actual filings	161 086	166 651	181 109	197 600	210 849	222 046	227 000	N/A	N/A

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

Table 7: Comparison of birth/death corrected forecasts since 2003 (Random group with residence bloc breakdown)

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 joint cluster are discussed in **Section 4.4** and results using mega cluster breakdowns are given in **Section 4.5**.⁷ For all tables in the following sections, corresponding tables with details on the numbers of cases can be found in **Annex IV, Section 10**.

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 **Section B** of the questionnaire are used to measure patent growth rates. For the Biggest group, growth rates are calculated as a **composite index**.⁸ Growth rates in the Random group are calculated as a **Q Index**.⁹

As in previous years, a natural logarithmic transformation was applied to the data before calculating the Q Index.¹⁰ 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 fpc are given in the Applicant Panel Survey 2006 report¹¹. The fpc 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	0.15
JA	0.29
OT	0.01
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 XI, Section 17**). 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.

When analysing data subsets, e.g. itemisations by residence blocs or joint clusters, cases arise where the sample size falls below a critical threshold of five or fewer respondents. In such cases, both the composite index and Q Index are replaced by an average growth value taken from the corresponding analysis on the next available level of aggregation. In

⁷ See Annex III, Section 9 for an explanation of mega clusters.

⁸ Cf. Applicant Panel Survey 2001 report: Annex III.

⁹ Cf. Applicant Panel Survey 2002 report: Section IV.1, Annex IV.

¹⁰ Cf. Applicant Panel Survey 2002 report: Annex IV.

¹¹ Cf. Applicant Panel Survey 2006 report: Annex VII, page 79.

the results tables, the replacement of growth indices with average 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 base year 2007 in order to generate explicit forecasts. Data on Euro-direct, PCT-IP and Euro-PCT-RP filings for 2007 and 2008 were supplied by the EPO on February 8, 2009, 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, joint clusters 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 14 joint clusters. As the Random group constitutes a random sample across applications, the responses can be disaggregated by joint cluster as an alternative to the breakdown by residence bloc. Itemisation of the responses by both factors simultaneously is not provided, as there would not have been enough data in the subdivided groups to allow for reliable growth estimates.

In many cases, the responses on growth forecasts in the questionnaire (**Section 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**¹² 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**.

As a means of analysing and reducing distortions by outliers, the technique of **winsorisation** was applied.¹³ 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. The winsorisation analyses show that no individual outliers are excessively distorting the results. Overall, the exercise supports the growth forecasts obtained. However, the resulting tables do not contribute further insights and are not included in this report.

Nonparametric bootstrapping was carried out to validate the stability of the forecast results in terms of the analytically calculated standard errors of the growth indices¹⁴. 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.

4.2 Biggest group

The Biggest group is based on a sample of 419 selected applicants for Euro-direct filings and Euro-PCT-RP filings, of which 190 responded to the Applicant Panel Survey 2008 (45.3%).

¹² For details on qualifying comments see section 7.4

¹³ Cf. Applicant Panel Survey 2006: Section 7.5.

¹⁴ Cf. Applicant Panel Survey 2006: Section 7.5.

It was considered appropriate to calculate growth rates for the Biggest group as a composite index (CI).¹⁵ Detailed information on the forecasts by filing type and route are shown in **Table 8** and **Fig. 5** (no subsidiary breakdown). **Table 9** shows details of the forecasts by filing type 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 5**. The numbers of patent filings are based on the forecasts with no subsidiary breakdown.

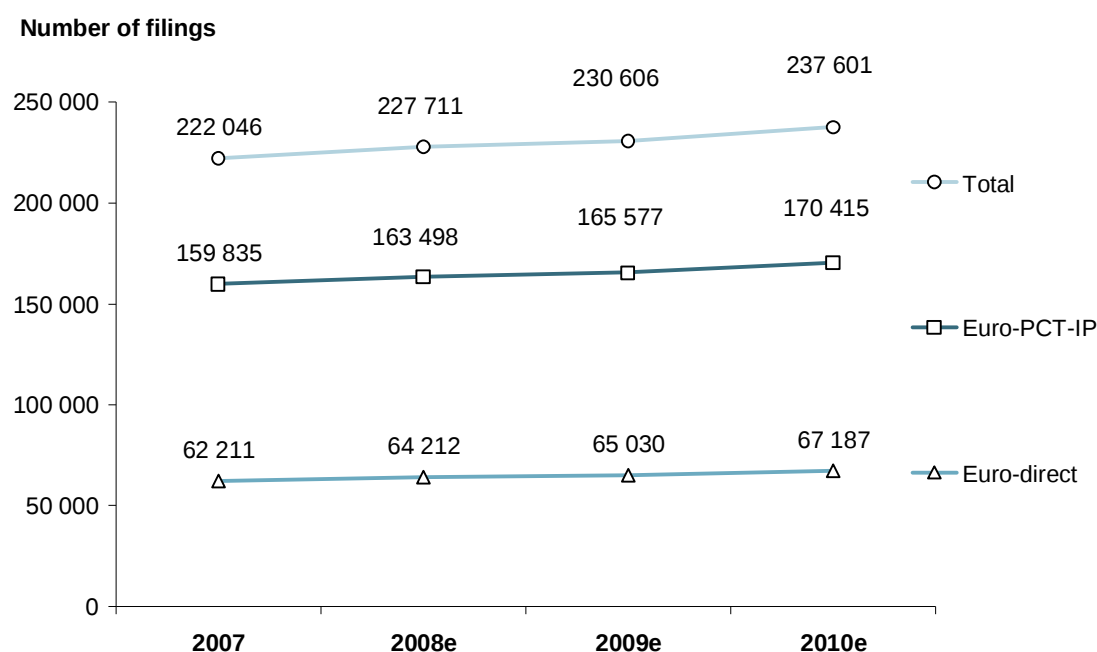


Figure 5: Forecasts for EPO filings – Biggest group with no subsidiary breakdown

Biggest group
No subsidiary breakdown
Composite indices

			Year							
Filing type	Filing route	Res. bloc	2007	2008		2009		2010		
			Actual filings	Index 08	Predicted filings	Actual filings	Index 09	Predicted filings	Index 10	Predicted filings
First	Euro-direct	Total	19 714	1.0046	19 806	20 787	1.0678	21 050	1.1018	21 721
	Euro-PCT-IP	Total	14 015	1.0118	14 181	14 873	0.9860	13 819	1.0082	14 129
Subsequent	Euro-direct	Total	42 497	1.0449	44 407	41 901	1.0349	43 980	1.0699	45 466
	Euro-PCT-IP	Total	145 820	1.0240	149 318	149 439	1.0407	151 758	1.0718	156 285
All	Euro-direct	Total	62 211		64 212	62 688		65 030		67 187
	Euro-PCT-IP	Total	159 835		163 498	164 312		165 577		170 415
Grand total			Total		227 711	227 000		230 606		237 601
Growth from 2007					2.6%			3.9%		7.0%
Implied % Euro-PCT-IP				72.0%	71.8%	72.4%		71.8%		71.7%

Table 8: Forecasts for EPO filings – Biggest group with no subsidiary breakdown

¹⁵ Cf. Applicant Panel Survey 2001 report: Annex III.

Biggest group
Breakdown by residence bloc
Composite indices

			Year							
			2007	2008			2009		2010	
Filing type	Filing route	Res. bloc	Actual filings	Index 08	Predicted filings	Actual filings	Index 09	Predicted filings	Index 10	Predicted filings
First	Euro-direct	EP	16 877	1.0111	17 064	17 784	1.0854	18 318	1.1174	18 858
		JA	335	0.9479	318	366	0.9658	324	0.9853	330
		OT	1 229	1.0046 *	1 235	1 314	1.0678 *	1 312	1.1018 *	1 354
		US	1 273	1.0046 *	1 279	1 323	1.0678 *	1 359	1.1018 *	1 403
		Total	19 714		19 895	20 787		21 313		21 944
First	Euro-PCT-IP	EP	3 708	1.0621	3 938	4 088	0.9644	3 576	0.9813	3 639
		JA	2 639	1.0131	2 674	3 191	1.0399	2 744	1.0689	2 821
		OT	5 759	1.0118 *	5 827	5 818	0.9860 *	5 679	1.0082 *	5 806
		US	1 909	0.7826	1 494	1 775	0.8133	1 553	0.8160	1 558
		Total	14 015		13 933	14 873		13 552		13 823
Subsequent	Euro-direct	EP	18 867	1.0698	20 185	18 569	1.0302	19 436	1.0572	19 946
		JA	10 566	1.0125	10 699	10 576	1.0617	11 218	1.0871	11 486
		OT	4 993	1.0449 *	5 217	4 451	1.0349 *	5 167	1.0699 *	5 342
		US	8 071	1.0160	8 200	8 305	1.0056	8 116	1.0843	8 752
		Total	42 497		44 301	41 901		43 937		45 526
Subsequent	Euro-PCT-IP	EP	50 166	1.0363	51 985	51 166	1.0151	50 925	1.0340	51 873
		JA	25 104	1.0507	26 377	25 724	1.1005	27 628	1.1158	28 011
		OT	18 341	1.0240 *	18 781	22 888	1.0407 *	19 088	1.0718 *	19 657
		US	52 209	0.9823	51 284	49 661	1.0116	52 814	1.0711	55 923
		Total	145 820		148 427	149 439		150 455		155 465
All	Euro-direct	EP	35 744		37 248	36 353		37 754		38 804
		JA	10 901		11 016	10 942		11 541		11 816
		OT	6 222		6 452	5 765		6 479		6 696
		US	9 344		9 479	9 628		9 476		10 154
		Total	62 211		64 196	62 688		65 251		67 470
All	Euro-PCT-IP	EP	53 874		55 923	55 254		54 501		55 512
		JA	27 743		29 051	28 915		30 372		30 832
		OT	24 100		24 608	28 706		24 766		25 463
		US	54 118		52 778	51 436		54 367		57 481
		Total	159 835		162 360	164 312		164 006		169 289
Grand total	Total	EP	89 618		93 172	91 607		92 255		94 316
		JA	38 644		40 067	39 857		41 913		42 649
		OT	30 322		31 060	34 471		31 246		32 159
		US	63 462		62 257	61 064		63 843		67 635
		Total	222 046		226 555	227 000		229 257		236 759
Growth from 2007					2.0%			3.2%		6.6%
Implied Euro-PCT-IP					71.7%	72.4%		71.5%		71.5%

Table 9: Forecasts for EPO filings – Biggest group, broken down by residence bloc

4.3 Random group

The Random group is based on a sample of 2,021 selected applicants for Euro-direct filings and Euro-PCT-RP filings, of which 708 responded to the survey (35.0%).

For responses from the Random group, the Q Index method was used following logarithmic transformation of the data.¹⁶ The resulting forecasts for numbers of patent filings calculated for the Random group without a breakdown by residence bloc are illustrated in **Figure 6** and **Table 10**. **Table 11** shows details on the forecasts by filing type and route where the four residence blocs Europe (EPC), Japan (JA), Other (OT) and the US are differentiated. All result tables for the Random group analyses show Q indices with their standard errors¹⁷, the resulting filing forecasts and the 95% confidence intervals based thereon.

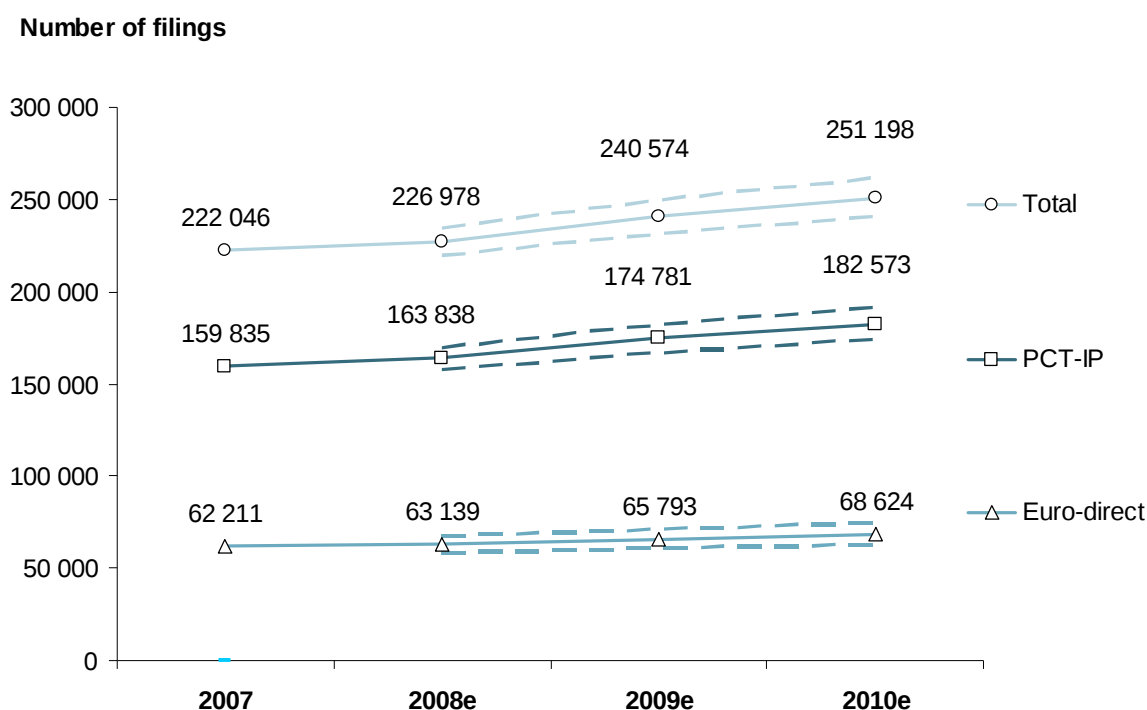


Figure 6: Forecasts for EPO filings – Random group without breakdown by residence bloc (dotted lines illustrate 95% confidence limits)

Various forecasts for EPO filings based on the Random group sample are presented, resulting from different residence bloc breakdowns, combinations of Euro-direct and PCT-IP filings and the inclusion/exclusion of respondents with qualifying comments¹⁸ (cf. **Tables 10 to 17**). The corresponding analysis to **Table 10**, with no subsidiary breakdown, was used for the recommended filing forecasts in the 2005 and 2007 reports. This recommendation was based mostly on the narrower confidence interval of the forecasts and better adherence to known filing figures of the survey year compared to the analysis itemised by residence bloc. Comparing the width of the confidence intervals shown in

¹⁶ Cf. Applicant Panel Survey 2002 report: Section IV.1, Annex IV.

¹⁷ In Table 10 and following tables based on analysis of the Random group, the reported quantities S.E. 08, S.E. 09, S.E. 10 are standard errors of 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.

¹⁸ For details on qualifying comments see section 7.4

Table 10 (analysis with no subsidiary breakdown) and **Table 11** (analysis with breakdown by residence bloc), this holds true for this year's predictions once again.

To address the shifting of filings between different filing routes, alternative breakdown scenarios have been analysed and are presented in **Table 12** to **Table 17**. **Table 12** and **Table 13** show the growth forecasts when Euro-direct and PCT-IP filing routes are combined with and without breakdown by residence bloc, respectively. As in the previous year, the two analyses combining Euro-direct and PCT-IP filings do not result in narrower confidence limits compared to the previous two analyses. There is a possibility of US applicants confusing first and subsequent filings due to the fact that the USPTO process does not distinguish them in the same way. To address this possibility, **Table 14** shows predictions obtained by combining first and subsequent filing numbers for the US bloc only.

As in previous applicant panel survey reports, a further analysis was carried out with no subsidiary breakdown, but after excluding cases in which researchers made qualifying comments (**Table 15**). The analysis combining the residence blocs "EP" and "Other" is shown in **Table 16** for all eligible cases, and in **Table 17** excluding cases with qualifying comments. Interestingly, in both analyses excluding cases with qualifying comments, one-year growth estimates are considerably more conservative than the respective estimate using all available applicants. In fact, overall one-year growth estimates using only companies without qualifying comments project negative one-year growth.

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										
			2007	2008				2009			2010		
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	Euro-direct	Total	19 714	1.0363	0.0302	20 430	20 787	1.1193	0.0327	22 066	1.1725	0.0362	23 114
		LCL				19 219				20 649			21 471
		UCL				21 640				23 484			24 756
First	Euro-PCT-IP	Total	14 015	1.1957	0.0580	16 758	14 873	1.1470	0.0404	16 075	1.2063	0.0449	16 907
		LCL				14 847				14 801			15 417
		UCL				18 668				17 349			18 397
Subsequent	Euro-direct	Total	42 497	1.0050	0.0511	42 710	41 901	1.0289	0.0567	43 727	1.0709	0.0618	45 511
		LCL				38 420				38 854			39 986
		UCL				46 999				48 600			51 035
Subsequent	Euro-PCT-IP	Total	145 820	1.0086	0.0200	147 081	149 439	1.0884	0.0236	158 706	1.1361	0.0264	165 667
		LCL				141 318				151 351			157 076
		UCL				152 843				166 061			174 257
All	Euro-direct	Total	62 211			63 139	62 688			65 793			68 624
		LCL				58 682				60 718			62 861
		UCL				67 596				70 868			74 387
All	Euro-PCT-IP	Total	159 835			163 838	164 312			174 781			182 573
		LCL				157 767				167 316			173 855
		UCL				169 910				182 246			191 292
Grand total		Total	222 046			226 978	227 000			240 574			251 198
		LCL				219 446				231 547			240 746
		UCL				234 509				249 601			261 649
Growth from 2007						2.2%				8.3%			13.1%
Implied % Euro-PCT-IP			72.0%			72.2%	72.4%			72.7%			72.7%
Deviation in % of forecast						3.3%				3.8%			4.2%

Table 10: Forecasts for EPO filings – Random group with no subsidiary breakdown

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											
			2007		2008			2009			2010			
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings	
First	Euro-direct	EP	16 877	1.0326	0.0366	17 427	17 784	1.1280	0.0409	19 037	1.1860	0.0451	20 016	
		JA	335	1.0280	0.0443	344	366	1.0483	0.0463	351	1.0813	0.0559	362	
		OT	1 229	0.9944	0.1541	1 222	1 314	1.1541	0.0849	1 418	1.1559	0.0846	1 421	
		US	1 273	1.0915	0.0785	1 389	1 323	1.1323	0.0674	1 441	1.1917	0.0813	1 517	
		Total	19 714			20 383	20 787			22 248			23 316	
	LCL					19 059						21 512		
	UCL					21 708						25 121		
First	Euro-PCT-IP	EP	3 708	1.3115	0.0871	4 863	4 088	1.1588	0.0603	4 297	1.2397	0.0682	4 597	
		JA	2 639	1.1255	0.0568	2 970	3 191	1.1910	0.0687	3 143	1.2229	0.0739	3 227	
		OT	5 759	1.3761	0.1279	7 925	5 818	1.4846	0.1308	8 550	1.4504	0.1509	8 353	
		US	1 909	0.9655	0.0758	1 843	1 775	1.0103	0.0719	1 929	1.0679	0.0833	2 039	
		Total	14 015			17 602	14 873			17 918			18 215	
	LCL					15 382						15 564		
	UCL					19 821						20 867		
Subsequent	Euro-direct	EP	18 867	0.9748	0.0829	18 391	18 569	0.9647	0.0935	18 201	1.0016	0.1024	18 897	
		JA	10 566	1.0324	0.0345	10 908	10 576	1.1052	0.0365	11 677	1.1634	0.0420	12 292	
		OT	4 993	1.2221	0.2993	6 102	4 451	1.2784	0.1251	6 383	1.3243	0.2213	6 612	
		US	8 071	1.0595	0.0703	8 552	8 305	1.1229	0.0609	9 063	1.1415	0.0716	9 213	
		Total	42 497			43 953	41 901			45 324			47 015	
	LCL					38 890						41 899		
	UCL					49 015						52 130		
Subsequent	Euro-PCT-IP	EP	50 166	1.0047	0.0268	50 403	51 166	1.0785	0.0358	54 103	1.1396	0.0408	57 168	
		JA	25 104	1.0671	0.0335	26 788	25 724	1.1118	0.0362	27 909	1.1496	0.0397	28 859	
		OT	18 341	1.2557	0.1139	23 030	22 888	1.6841	0.1212	30 889	2.0098	0.1968	36 862	
		US	52 209	0.9222	0.0523	48 148	49 661	1.0296	0.0464	53 756	1.0425	0.0506	54 428	
		Total	145 820			148 369	149 439			166 657			177 317	
	LCL					140 526						160 895		
	UCL					156 213						193 740		
All	Euro-direct	EP	35 744			35 818	36 353			37 238			38 914	
		JA	10 901			11 253	10 942			12 028			12 654	
		OT	6 222			7 324	5 765			7 801			8 033	
		US	9 344			9 941	9 628			10 504			10 730	
		Total	62 211			64 336	62 688			67 572			70 331	
	LCL					59 103						64 906		
	UCL					69 569						75 756		
All	Euro-PCT-IP	EP	53 874			55 266				58 400			61 765	
		JA	27 743			29 759				31 053			32 086	
		OT	24 100			30 955				39 438			45 215	
		US	54 118			49 991				55 684			56 466	
		Total	159 835			165 971	164 312			184 575			195 533	
	LCL					157 820						178 897		
	UCL					174 122						212 168		
Grand total	Total	EP	89 618			91 084				95 638			100 679	
		JA	38 644			41 012				43 081			44 741	
		OT	30 322			38 279				47 240			53 248	
		US	63 462			59 932				66 189			67 196	
		Total	222 046			230 307	227 000			252 147			265 864	
	LCL					220 620						248 366		
	UCL					239 993						283 361		
Growth from 2007						3.7%				13.6%			19.7%	
Implied Euro-PCT-IP						72.1%	72.4%			73.2%			73.5%	
Deviation in % of forecast						4.2%				4.4%			6.6%	

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

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										
			2007		2008			2009			2010		
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	All	Total	33 729	1.0640	0.0318	35 886	35 660	1.1318	0.0348	38 174	1.1966	0.0407	40 359
		LCL				33 651				35 566			37 133
		UCL				38 121				40 783			43 584
Subsequent	All	Total	188 317	1.0009	0.0191	188 492	191 340	1.0516	0.0205	198 037	1.0931	0.0244	205 847
		LCL				181 419				190 087			195 986
		UCL				195 564				205 988			215 708
Grand total		Total	222 046			224 378	227 000			236 212			246 206
		LCL				216 961				227 844			235 830
		UCL				231 795				244 579			256 581
Growth from 2007						1.1%				6.4%			10.9%
Deviation in % of forecast						3.3%				3.5%			4.2%

Table 12: Forecasts for EPO filings – Random group with no subsidiary breakdown (Euro-direct and PCT-IP filings combined)

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										
			2007	2008			2009			2010			
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	All	EP	20 585	1.0657	0.0393	21 938	21 872	1.1306	0.0410	23 273	1.1967	0.0521	24 633
		JA	2 974	1.0776	0.0572	3 205	3 557	1.1631	0.0681	3 459	1.1991	0.0736	3 566
		OT	6 988	1.1509	0.0905	8 042	7 132	1.1746	0.0844	8 208	1.1765	0.0835	8 221
		US	3 182	1.0216	0.1070	3 251	3 098	1.0757	0.1118	3 423	1.1955	0.1269	3 804
		Total	33 729			36 436	35 660			38 363			40 225
		LCL				34 084				35 882			37 166
	UCL				38 787				40 845			43 284	
Subsequent	All	EP	69 033	1.0163	0.0318	70 160	69 735	1.0397	0.0333	71 774	1.0912	0.0401	75 326
		JA	35 670	1.0449	0.0249	37 273	36 300	1.1198	0.0281	39 944	1.1640	0.0325	41 520
		OT	23 334	1.1288	0.1593	26 339	27 339	1.4260	0.1581	33 274	1.7964	0.2636	41 918
		US	60 280	0.8837	0.0404	53 270	57 966	0.9478	0.0361	57 132	0.9380	0.0472	56 542
		Total	188 317			187 043	191 340			202 123			215 306
		LCL				176 526				189 732			191 014
	UCL				197 560				214 514			239 599	
Grand total	Total	EP	89 618			92 098	91 607			95 047			99 960
		JA	38 644			40 478	39 857			43 403			45 086
		OT	30 322			34 381	34 471			41 482			50 139
		US	63 462			56 521	61 064			60 555			60 346
		Total	222 046			223 479	227 000			240 487			255 531
		LCL				212 702				227 849			231 047
	UCL				234 256				253 124			280 016	
Growth from 2007						0.6%				8.3%			15.1%
Deviation in % of forecast						4.8%				5.3%			9.6%

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
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										
			2007		2008			2009			2010		
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	Euro-direct	EP	16 877	1.0326	0.0366	17 427	17 784	1.1280	0.0409	19 037	1.1860	0.0451	20 016
		JA	335	1.0280	0.0443	344	366	1.0483	0.0463	351	1.0813	0.0559	362
		OT	1 229	0.9944	0.1541	1 222	1 314	1.1541	0.0849	1 418	1.1559	0.0846	1 421
		Total - US	18 441			18 994	19 464			20 807			21 799
		LCL				17 687			19 258			20 011	
First	Euro-PCT-IP	UCL				20 301			22 355			23 587	
		EP	3 708	1.3115	0.0871	4 863	4 088	1.1588	0.0603	4 297	1.2397	0.0682	4 597
		JA	2 639	1.1255	0.0568	2 970	3 191	1.1910	0.0687	3 143	1.2229	0.0739	3 227
		OT	5 759	1.3761	0.1279	7 925	5 818	1.4846	0.1308	8 550	1.4504	0.1509	8 353
		Total - US	12 106			15 758	13 098			15 990			16 177
Subsequent	Euro-direct	LCL				13 556			13 673			13 546	
		UCL				17 961			18 307			18 807	
		EP	18 867	0.9748	0.0829	18 391	18 569	0.9647	0.0935	18 201	1.0016	0.1024	18 897
		JA	10 566	1.0324	0.0345	10 908	10 576	1.1052	0.0365	11 677	1.1634	0.0420	12 292
		OT	4 993	1.2221	0.2993	6 102	4 451	1.2784	0.1251	6 383	1.3243	0.2213	6 612
Subsequent	Euro-PCT-IP	Total - US	34 426			35 401	33 596			37 802			39 036
		LCL				30 478			32 454			32 854	
		UCL				40 324			40 068			42 750	
		EP	50 166	1.0047	0.0268	50 403	51 166	1.0785	0.0358	54 103	1.1396	0.0408	57 168
		JA	25 104	1.0671	0.0335	26 788	25 724	1.1118	0.0362	27 909	1.1496	0.0397	28 859
First+Subsequent	Euro-direct	OT	18 341	1.2557	0.1139	23 030	22 888	1.6841	0.1212	30 889	2.0098	0.1968	36 862
		Total - US	93 611			100 222	99 778			112 901			122 890
		LCL				94 134			104 332			107 383	
		UCL				106 309			121 469			138 396	
		US	9 344	1.0683	0.0681	9 982	9 628	1.1040	0.0627	10 316	1.0935	0.0855	10 218
First+Subsequent	Euro-PCT-IP	LCL				8 645			9 044			8 496	
		UCL				11 318			11 587			11 939	
		US	54 118	0.8355	0.0622	45 213	51 436	0.9126	0.0598	49 390	0.9355	0.0663	50 626
		LCL				39 684			43 586			44 028	
		UCL				50 742			55 195			57 224	
Grand total	Total	EP	89 618			91 084	91 607			95 638			100 679
		JA	38 644			41 012	39 857			43 081			44 741
		OT	30 322			38 279	34 471			47 240			53 248
		US	63 462			55 195	61 064			59 706			60 844
		Total	222 046			225 570	227 000			245 665			259 511
Growth from 2007	Deviation in % of forecast	LCL				204 185				222 348			226 318
		UCL				246 955				268 982			292 704
						1.6%				10.6%			16.9%
						9.5%				9.5%			12.8%

Table 14: Forecasts for EPO filings – Random group, broken down by residence bloc (first and subsequent filings combined for US residence bloc only)

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											
			2007	2008				2009				2010		
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings	
First	Euro-direct	Total	19 714	1.0440	0.0520	20 581	20 787	1.1440	0.0589	22 553	1.1699	0.0634	23 063	
		LCL				18 478				19 943			20 188	
		UCL				22 685				25 163			25 938	
First	Euro-PCT-IP	Total	14 015	1.0906	0.0703	15 285	14 873	1.1311	0.0727	15 853	1.1507	0.0750	16 127	
		LCL				13 172				13 586			13 747	
		UCL				17 397				18 119			18 507	
Subsequent	Euro-direct	Total	42 497	0.9704	0.0808	41 238	41 901	1.0067	0.0855	42 784	1.0357	0.0909	44 013	
		LCL				34 672				35 575			36 125	
		UCL				47 805				49 993			51 900	
Subsequent	Euro-PCT-IP	Total	145 820	0.9811	0.0270	143 062	149 439	1.0326	0.0308	150 576	1.0803	0.0338	157 530	
		LCL				135 487				141 489			147 079	
		UCL				150 637				159 664			167 982	
All	Euro-direct	Total	62 211			61 820	62 688			65 336			67 075	
		LCL				54 924				57 669			58 680	
		UCL				68 715				73 004			75 471	
All	Euro-PCT-IP	Total	159 835			158 347	164 312			166 429			173 657	
		LCL				150 483				157 063			162 938	
		UCL				166 211				175 795			184 376	
Grand total		Total	222 046			220 167	227 000			231 765			240 733	
		LCL				209 707				219 662			227 118	
		UCL				230 626				243 869			254 348	
Growth from 2007						-0.8%				4.4%			8.4%	
Implied % Euro-PCT-IP			72.0%			71.9%	72.4%			71.8%			72.1%	
Deviation in % of forecast						4.8%				5.2%			5.7%	

Table 15: Forecasts for EPO filings – Random group with no subsidiary breakdown (excluding companies with qualifying comments)

Forecast for EPO filings - Random group, breakdown by residence bloc ("Other" incorp. in EP)

Random group

Breakdown by residence bloc ("other" incorporated in EP)

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										
			2007	2008			2009			2010			
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	Euro-direct	EP/OT	18 106	1.0316	0.0363	18 678	19 098	1.1287	0.0404	20 436	1.1851	0.0444	21 458
		JA	335	1.0280	0.0443	344	366	1.0483	0.0463	351	1.0813	0.0559	362
		US	1 273	1.0915	0.0785	1 389	1 323	1.1323	0.0674	1 441	1.1917	0.0813	1 517
		Total	19 714			20 412	20 787			22 228			23 337
		LCL				19 065			20 597			21 451	
First	Euro-PCT-IP	EP/OT	9 467	1.3147	0.0837	12 446	9 906	1.1783	0.0581	11 155	1.2520	0.0659	11 852
		JA	2 639	1.1255	0.0568	2 970	3 191	1.1910	0.0687	3 143	1.2229	0.0739	3 227
		US	1 909	0.9655	0.0758	1 843	1 775	1.0103	0.0719	1 929	1.0679	0.0833	2 039
		Total	14 015			17 260	14 873			16 227			17 118
		LCL				15 161			14 856			15 478	
Subsequent	Euro-direct	EP/OT	23 860	0.9810	0.0823	23 406	23 020	0.9725	0.0926	23 203	1.0113	0.1010	24 129
		JA	10 566	1.0324	0.0345	10 908	10 576	1.1052	0.0365	11 677	1.1634	0.0420	12 292
		US	8 071	1.0595	0.0703	8 552	8 305	1.1229	0.0609	9 063	1.1415	0.0716	9 213
		Total	42 497			42 866	41 901			43 943			45 634
		LCL				38 824			39 488			40 547	
Subsequent	Euro-PCT-IP	EP/OT	68 507	1.0135	0.0268	69 435	74 054	1.0983	0.0360	75 244	1.1659	0.0419	79 872
		JA	25 104	1.0671	0.0335	26 788	25 724	1.1118	0.0362	27 909	1.1496	0.0397	28 859
		US	52 209	0.9222	0.0523	48 148	49 661	1.0296	0.0464	53 756	1.0425	0.0506	54 428
		Total	145 820			144 371	149 439			156 910			163 159
		LCL				137 976			149 411			154 359	
All	Euro-direct	EP/OT	41 966			42 084	42 118			43 639			45 587
		JA	10 901			11 253	10 942			12 028			12 654
		US	9 344			9 941	9 628			10 504			10 730
		Total	62 211			63 277	62 688			66 171			68 972
		LCL				59 017			61 427			63 546	
All	Euro-PCT-IP	EP/OT	77 974			81 881	83 960			86 399			91 725
		JA	27 743			29 759	28 915			31 053			32 086
		US	54 118			49 991	51 436			55 684			56 466
		Total	159 835			161 631	164 312			173 136			180 278
		LCL				154 900			165 514			171 326	
Grand total	Total	EP/OT	119 940			123 965	126 078			130 038			137 312
		JA	38 644			41 012	39 857			43 081			44 741
		US	63 462			59 932	61 064			66 189			67 196
		Total	222 046			224 908	227 000			239 307			249 249
		LCL				216 943			230 329			238 782	
Growth from 2007						1.3%				7.8%		12.3%	
Implied Euro-PCT-IP						71.9%	72.4%			72.3%		72.3%	
Deviation in % of forecast						3.5%				3.8%		4.2%	

Table 16: Forecasts for EPO - Random group, broken down by residence bloc ("Other" incorporated in EPC)

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										
			2007	2008			2009			2010			
Filing type	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	Euro-direct	EP/OT	18 106	1.0137	0.0618	18 355	19 098	1.1259	0.0699	20 386	1.1466	0.0738	20 761
		JA	335	1.1420	0.0789	383	366	1.1842	0.0797	397	1.3077	0.1081	438
		US	1 273	1.2167	0.0932	1 549	1 323	1.2621	0.0844	1 607	1.2516	0.1399	1 593
		Total	19 714			20 286	20 787			22 389			22 792
		LCL				18 038				19 573			19 743
		UCL				22 534			25 205			25 841	
First	Euro-PCT-IP	EP/OT	9 467	1.2168	0.1093	11 519	9 906	1.1995	0.1120	11 356	1.2230	0.1160	11 578
		JA	2 639	0.9709	0.0718	2 562	3 191	1.1093	0.1072	2 927	1.1254	0.1098	2 970
		US	1 909	0.9556	0.1304	1 824	1 775	1.0162	0.1120	1 940	1.0309	0.1172	1 968
		Total	14 015			15 906	14 873			16 223			16 516
		LCL				13 345				13 596			13 742
		UCL				18 466			18 850			19 290	
Subsequent	Euro-direct	EP/OT	23 860	0.9343	0.1298	22 291	23 020	0.9311	0.1335	22 215	0.9570	0.1425	22 835
		JA	10 566	1.0251	0.0488	10 832	10 576	1.1244	0.0522	11 881	1.1879	0.0576	12 551
		US	8 071	1.0272	0.1027	8 291	8 305	1.1385	0.0669	9 189	1.1093	0.0842	9 953
		Total	42 497			41 414	41 901			43 285			44 340
		LCL				35 340				37 149			37 544
		UCL				47 488			49 422			51 136	
Subsequent	Euro-PCT-IP	EP/OT	68 507	0.9886	0.0338	67 729	74 054	1.0264	0.0431	70 314	1.0944	0.0490	74 976
		JA	25 104	1.0222	0.0479	25 661	25 724	1.0482	0.0525	26 313	1.0801	0.0569	27 115
		US	52 209	0.9063	0.0782	47 319	49 661	1.0310	0.0677	53 827	1.0391	0.0732	54 251
		Total	145 820			140 709	149 439			150 454			156 342
		LCL				131 821				140 756			145 282
		UCL				149 597			160 152			167 402	
All	Euro-direct	EP/OT	41 966			40 646	42 118			42 601			43 596
		JA	10 901			11 214	10 942			12 278			12 989
		US	9 344			9 840	9 628			10 796			10 547
		Total	62 211			61 700	62 688			65 674			67 132
		LCL				55 224				58 923			59 684
		UCL				68 177			72 426			74 581	
All	Euro-PCT-IP	EP/OT	77 974			79 249	83 960			81 670			86 554
		JA	27 743			28 223	28 915			29 241			30 085
		US	54 118			49 143	51 436			55 767			56 219
		Total	159 835			156 615	164 312			166 677			172 858
		LCL				147 365				156 629			161 456
		UCL				165 864			176 725			184 261	
Grand total	Total	EP/OT	119 940			119 895	126 078			124 271			130 150
		JA	38 644			39 437	39 857			41 518			43 075
		US	63 462			58 983	61 064			66 562			66 766
		Total	222 046			218 315	227 000			232 351			239 990
		LCL				207 023				220 246			226 371
		UCL				229 606			244 457			253 610	
Growth from 2007						-1.7%					4.6%		8.1%
Implied Euro-PCT-IP						71.7%	72.4%			71.7%			72.0%
Deviation in % of forecast						5.2%				5.2%			5.7%

Table 17: 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 joint cluster

The forecasts for EPO filings were analysed with primary breakdowns by joint clusters based on the information provided in questionnaire **Sections B** (filings) and **C** (joint cluster activities). For the Biggest group sample, the composite indices were calculated and for the Random group sample Q indices were calculated. The forecasts of filings by filing type, filing route and joint cluster for the Biggest group are shown in **Table 18** and **Table 18 (part II)**. Detailed results for the Random group are presented in **Table 19** and **Table 19 (part II)** and illustrated in **Figure 7**, which corresponds to **Table 19 (part II)**.

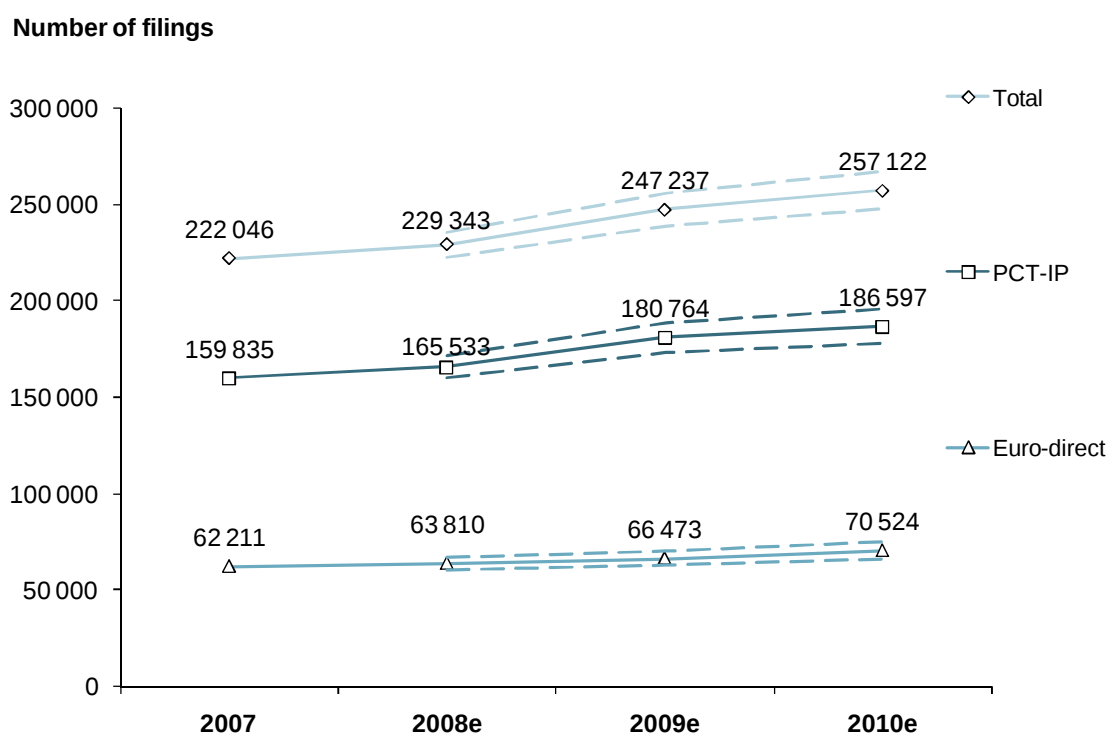


Figure 7: Forecasts for EPO filings based on breakdown by joint cluster for the Random group (dotted lines illustrating 95% confidence limits)

As before, in tables covering Random group forecasts, the standard errors of the (log) Q indices are given and confidence intervals are calculated. However, when deriving the standard error, a correction factor is included to avoid distortions caused by multiple joint cluster classifications. For the Random group, this correction factor takes into account the average repetition factor of 2.01, and widens the confidence limits by multiplying standard errors by 1.42, the square root of 2.01. As previously for the calculation of standard errors, a finite population correction is also applied that narrows the confidence limits.

Since the breakdown of the sample into 14 sub-groups results in rather few observations per sub-group, some of the individual Q indices per joint cluster have relatively large standard errors. Overall, the aggregated forecasts for total filings and standard errors are not too dissimilar to those without any further breakdown (e.g. compare **Table 10** and

Table 19 (part II). This gives confidence in the forecasts for individual joint clusters.

However, it is not suggested that the total filing forecasts based on the joint cluster breakdown should be used for the overall forecast of EPO filings. As the respondents were allowed to choose more than one cluster to indicate their main business, it has to be taken into account that all of the answers provided in Section B of the questionnaire are used to calculate the Q Index for each joint cluster reported for that applicant. Differing respondent behaviour as a function of cluster is not considered. For this reason, it appears to be better to use a forecast for total filings without itemisation by joint cluster. The approach based on joint clusters is, however, useful for business planning as it provides forecasts for individual EPO examining departments of the various primary combinations of first, subsequent, Euro-direct and PCT-IP filings. The number of survey observations per joint cluster is not high. In the next section, a new approach is taken to amalgamate the joint clusters into a smaller number of entities with larger numbers of observations in each class.

Biggest group
Breakdown by EPO joint cluster
Composite indices

Filing type	Filing route	Cluster	Year							
			2007		2008		2009		2010	
			Actual filings	Index 08	Predicted filings	Actual filings	Index 09	Predicted filings	Index 10	Predicted filings
First	Euro-direct	Audio, Video & Media	1 063	1.0046 *	1 068	1 025	1.0678 *	1 135	1.1018 *	1 171
		Biotechnology	1 464	0.9095	1 332	1 575	0.9667	1 415	0.9881	1 447
		Civil Engineering & Thermodynamics	1 389	1.0163	1 412	1 548	1.0483	1 456	1.0804	1 501
		Computer	1 032	1.0046 *	1 037	995	1.0678 *	1 102	1.1018 *	1 137
		Electricity & Electrical Machines	1 245	0.9595	1 194	1 637	1.0077	1 254	1.0329	1 285
		Electronics	938	1.0308	967	1 002	1.0607	995	1.0822	1 015
		Handling and Processing	1 737	1.0154	1 763	1 858	1.0359	1 799	1.0462	1 817
		Human Necessities	1 364	0.9517	1 298	1 453	0.9839	1 342	1.0141	1 383
		Industrial Chemistry	2 020	0.9816	1 983	2 139	1.0420	2 105	1.0840	2 190
		Measuring, Optics	1 098	1.0046 *	1 103	1 227	1.0678 *	1 172	1.1018 *	1 209
		Polymers	1 101	1.0250	1 128	1 169	1.0254	1 129	1.0277	1 131
		Pure & Applied Organic Chemistry	2 405	0.9100	2 188	2 339	0.9682	2 329	1.0067	2 421
		Telecommunications	1 774	1.0409	1 847	1 569	1.0537	1 869	1.0678	1 894
		Vehicles & General Technology	1 085	0.9974	1 082	1 251	1.0467	1 135	1.0533	1 142
		Total	19 714		19 402	20 787		20 238		20 745
First	Euro-PCT-IP	Audio, Video & Media	1 067	1.0118 *	1 080	1 164	0.9860 *	1 052	1.0082 *	1 076
		Biotechnology	595	1.0816	643	402	0.9860 *	587	1.0082 *	600
		Civil Engineering & Thermodynamics	1 033	0.7885	814	1 412	0.8522	880	0.8844	913
		Computer	843	1.0118 *	853	1 023	0.9860 *	831	1.0082 *	850
		Electricity & Electrical Machines	1 187	0.9544	1 133	1 462	0.9842	1 169	1.0190	1 210
		Electronics	648	1.0605	687	692	0.9955	645	1.0205	661
		Handling and Processing	1 221	1.0118 *	1 235	1 459	0.9860 *	1 204	1.0082 *	1 231
		Human Necessities	1 301	1.0290	1 338	1 302	1.0066	1 309	1.1003	1 431
		Industrial Chemistry	1 277	0.9620	1 229	1 215	1.0213	1 305	1.0681	1 364
		Measuring, Optics	738	1.0118 *	747	881	0.9860 *	728	1.0082 *	744
		Polymers	507	1.0250	520	369	1.0600	537	1.0900	553
		Pure & Applied Organic Chemistry	1 064	1.0114	1 076	654	1.0349	1 101	1.0465	1 113
		Telecommunications	1 668	1.0136	1 691	1 740	0.9399	1 568	0.9611	1 603
		Vehicles & General Technology	866	0.8114	703	1 097	0.8465	733	0.8469	734
		Total	14 015		13 749	14 873		13 648		14 083
Subsequent	Euro-direct	Audio, Video & Media	3 363	0.9797	3 295	3 037	1.0093	3 394	1.0360	3 484
		Biotechnology	990	1.0423	1 032	1 101	0.9846	975	0.9728	963
		Civil Engineering & Thermodynamics	4 618	0.9981	4 609	4 625	0.9935	4 588	1.0326	4 768
		Computer	1 991	0.9464	1 884	2 074	0.9929	1 976	1.0268	2 044
		Electricity & Electrical Machines	3 904	1.0447	4 079	4 298	1.0376	4 051	1.0976	4 285
		Electronics	2 132	1.1502	2 452	2 052	1.0944	2 333	1.1250	2 398
		Handling and Processing	5 468	0.9898	5 412	5 401	1.0114	5 530	1.0417	5 696
		Human Necessities	3 761	0.9535	3 586	3 598	0.9758	3 670	0.9878	3 715
		Industrial Chemistry	3 000	1.0077	3 023	2 713	0.9918	2 975	1.1268	3 380
		Measuring, Optics	2 763	1.0410	2 876	2 961	1.0282	2 841	1.0999	3 039
		Polymers	1 176	1.0036	1 181	1 065	0.9991	1 175	1.0854	1 277
		Pure & Applied Organic Chemistry	1 295	0.9773	1 266	1 271	0.9795	1 269	0.9665	1 252
		Telecommunications	2 902	1.0958	3 180	2 562	1.0597	3 075	1.0772	3 126
		Vehicles & General Technology	5 134	1.0590	5 437	5 145	1.0910	5 601	1.1162	5 730
		Total	42 497		43 311	41 901		43 454		45 159
Subsequent	Euro-PCT-IP	Audio, Video & Media	9 397	0.9861	9 267	9 177	0.9913	9 315	0.9997	9 394
		Biotechnology	7 934	0.9507	7 543	9 173	0.8842	7 016	0.9005	7 145
		Civil Engineering & Thermodynamics	10 052	1.2135	12 197	10 812	1.3359	13 428	1.4321	14 395
		Computer	8 233	0.9986	8 221	7 930	1.0359	8 529	1.0684	8 796
		Electricity & Electrical Machines	11 927	1.0363	12 360	12 419	1.0783	12 861	1.1241	13 408
		Electronics	5 832	0.8725	5 089	5 539	0.9341	5 448	0.9744	5 683
		Handling and Processing	12 447	1.1066	13 774	12 274	1.1716	14 583	1.2749	15 868
		Human Necessities	14 447	0.9730	14 057	14 804	0.9679	13 982	1.0095	14 584
		Industrial Chemistry	14 690	1.0583	15 546	15 201	1.1453	16 824	1.2151	17 849
		Measuring, Optics	8 582	1.1635	9 985	8 947	1.2314	10 568	1.3206	11 334
		Polymers	7 111	0.9367	6 661	7 039	0.9926	7 058	1.0645	7 569
		Pure & Applied Organic Chemistry	13 617	0.8718	11 872	14 006	0.9040	12 310	0.9654	13 146
		Telecommunications	11 584	0.8712	10 092	11 629	0.9183	10 638	0.9396	10 885
		Vehicles & General Technology	9 967	1.1502	11 464	10 490	1.2534	12 492	1.3353	13 308
		Total	145 820		148 129	149 439		155 052		163 363

Table 18 (part I): Forecasts for EPO filings at the EPO – Biggest group (first and subsequent filings, broken down by joint cluster)

Biggest group
Breakdown by EPO joint cluster
Composite indices

			Year							
			2007	2008		2009		2010		
Filing type	Filing route	Cluster	Actual filings	Index 08	Predicted filings	Actual filings	Index 09	Predicted filings	Index 10	Predicted filings
All	Euro-direct	Audio, Video & Media	4 426		4 363	4 062		4 530		4 656
		Biotechnology	2 455		2 364	2 675		2 391		2 410
		Civil Engineering & Thermodynamics	6 007		6 021	6 173		6 044		6 269
		Computer	3 023		2 921	3 069		3 078		3 181
		Electricity & Electrical Machines	5 149		5 273	5 935		5 305		5 571
		Electronics	3 069		3 418	3 054		3 328		3 413
		Handling and Processing	7 204		7 175	7 259		7 329		7 513
		Human Necessities	5 125		4 884	5 051		5 012		5 099
		Industrial Chemistry	5 020		5 006	4 851		5 081		5 570
		Measuring, Optics	3 861		3 979	4 188		4 013		4 248
		Polymers	2 277		2 309	2 234		2 304		2 408
		Pure & Applied Organic Chemistry	3 700		3 454	3 610		3 597		3 673
		Telecommunications	4 676		5 027	4 131		4 945		5 020
		Vehicles & General Technology	6 218		6 518	6 396		6 736		6 872
		Total	62 211		62 713	62 688		63 692		65 904
All	Euro-PCT-IP	Audio, Video & Media	10 465		10 347	10 340		10 368		10 470
		Biotechnology	8 529		8 186	9 576		7 602		7 745
		Civil Engineering & Thermodynamics	11 084		13 012	12 223		14 308		15 308
		Computer	9 076		9 075	8 953		9 360		9 646
		Electricity & Electrical Machines	13 114		13 493	13 881		14 030		14 618
		Electronics	6 480		5 776	6 231		6 093		6 344
		Handling and Processing	13 668		15 010	13 733		15 787		17 099
		Human Necessities	15 747		15 396	16 105		15 291		16 015
		Industrial Chemistry	15 967		16 775	16 416		18 129		19 213
		Measuring, Optics	9 320		10 732	9 829		11 296		12 078
		Polymers	7 618		7 181	7 408		7 596		8 122
		Pure & Applied Organic Chemistry	14 681		12 948	14 660		13 411		14 259
		Telecommunications	13 252		11 782	13 369		12 205		12 487
		Vehicles & General Technology	10 833		12 167	11 587		13 225		14 042
		Total	159 835		161 878	164 312		168 700		177 446
Grand total	Total	Audio, Video & Media	14 891		14 710	14 403		14 897		15 126
		Biotechnology	10 983		10 550	12 251		9 993		10 155
		Civil Engineering & Thermodynamics	17 091		19 033	18 397		20 352		21 577
		Computer	12 099		11 995	12 022		12 438		12 827
		Electricity & Electrical Machines	18 263		18 766	19 816		19 335		20 189
		Electronics	9 550		9 195	9 285		9 421		9 757
		Handling and Processing	20 872		22 185	20 992		23 116		24 612
		Human Necessities	20 872		20 280	21 156		20 304		21 113
		Industrial Chemistry	20 987		21 781	21 267		23 209		24 784
		Measuring, Optics	13 181		14 711	14 017		15 309		16 326
		Polymers	9 895		9 490	9 642		9 900		10 530
		Pure & Applied Organic Chemistry	18 382		16 403	18 270		17 008		17 932
		Telecommunications	17 928		16 809	17 500		17 150		17 508
		Vehicles & General Technology	17 051		18 685	17 983		19 961		20 914
		Total	222 046		224 591	227 000		232 392		243 350
Growth from 2007					1.1%		4.7%		9.6%	
Implied Euro-PCT-IP					72.1%	72.4%	72.6%		72.9%	

Table 18 (part II): Forecasts for EPO filings – Biggest group (total filings, broken down by joint cluster)

Random group
Breakdown by EPO joint 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

			2007		2008		Year						
Filing type	Filing route	Cluster	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual Filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	Euro-direct	Audio, Video & Media	1 063	1.0620	0.0682	1 129	1 025	1.1037	0.0646	1 174	1.1510	0.0852	1 224
		Biotechnology	1 464	0.9110	0.1038	1 334	1 575	0.9975	0.1554	1 461	1.0500	0.1683	1 538
		Civil Engineering & Thermodynamics	1 389	1.0653	0.1247	1 480	1 548	1.2512	0.1415	1 738	1.3299	0.1526	1 948
		Computer	1 032	1.1154	0.0925	1 151	995	1.0930	0.0883	1 128	1.1056	0.0967	1 141
		Electricity & Electrical Machines	1 245	1.0370	0.0861	1 291	1 637	1.0411	0.0901	1 296	1.0699	0.1023	1 332
		Electronics	938	1.1200	0.0771	1 050	1 002	1.0835	0.0882	1 016	1.1682	0.1038	1 095
		Handling and Processing	1 737	1.0384	0.1048	1 803	1 858	1.1449	0.0862	1 988	1.1945	0.1109	2 074
		Human Necessities	1 364	1.0640	0.2016	1 451	1 453	1.0448	0.2150	1 425	1.0593	0.2206	1 445
		Industrial Chemistry	2 020	1.0139	0.0789	2 048	2 139	1.1282	0.0815	2 279	1.1905	0.0875	2 405
		Measuring, Optics	1 098	1.0665	0.1004	1 171	1 227	1.1301	0.1424	1 241	1.2031	0.1877	1 321
		Polymers	1 101	1.0367	0.1016	1 141	1 169	1.0961	0.0730	1 207	1.1683	0.0831	1 286
		Pure & Applied Organic Chemistry	2 405	0.9407	0.1163	2 262	2 339	0.9732	0.1898	2 341	1.0241	0.2009	2 463
		Telecommunications	1 774	1.0785	0.0589	1 913	1 569	1.0938	0.0654	1 941	1.1113	0.0715	1 972
		Vehicles & General Technology	1 085	1.0776	0.1710	1 469	1 251	1.1679	0.1671	1 267	1.3469	0.1541	1 461
First	Euro-PCT-IP	Total	19 714			20 394	20 787			21 499			22 603
		LCL				19 159			19 944			20 824	
		UCL				21 630			22 656			24 383	
		Audio, Video & Media	1 067	1.0672	0.1255	1 139	1 164	1.1635	0.1860	1 242	1.1823	0.2197	1 262
		Biotechnology	595	1.3920	0.2405	828	402	1.0796	0.1134	642	1.1305	0.1280	672
		Civil Engineering & Thermodynamics	1 033	1.4382	0.2801	1 485	1 412	1.1162	0.2035	1 153	1.1481	0.2275	1 186
		Computer	843	1.0784	0.1628	909	1 023	1.2399	0.2220	1 045	1.2839	0.2551	1 083
		Electricity & Electrical Machines	1 187	1.2463	0.1416	1 480	1 462	1.3480	0.1459	1 601	1.3694	0.1602	1 626
		Electronics	648	1.2575	0.1396	815	692	1.2940	0.1381	838	1.3330	0.1551	864
		Handling and Processing	1 221	1.6833	0.2844	2 055	1 459	1.7163	0.2692	2 095	1.7862	0.3153	2 181
		Human Necessities	1 301	1.2072	0.1261	1 570	1 302	1.2378	0.1704	1 610	1.2092	0.1759	1 573
		Industrial Chemistry	1 277	1.4768	0.2108	1 887	1 215	1.2788	0.1481	1 634	1.3715	0.1650	1 752
		Measuring, Optics	738	1.0979	0.1696	810	881	1.2787	0.2485	944	1.3646	0.3328	1 007
		Polymers	507	1.4253	0.2289	723	369	1.2488	0.1153	633	1.3141	0.1430	666
Pure & Applied Organic Chemistry	1 064	1.4184	0.2209	1 509	654	1.2136	0.1602	1 291	1.2535	0.1921	1 333		
Telecommunications	1 668	1.1941	0.1466	1 992	1 740	1.2429	0.1626	2 073	1.2410	0.1677	2 070		
Vehicles & General Technology	866	1.1234	0.1948	973	1 097	1.2172	0.2003	1 054	1.3314	0.2186	1 153		
Subsequent	Euro-direct	Total	14 015			18 174	14 873			17 855			18 421
		LCL				16 000			15 878			16 050	
		UCL				20 348			19 833			20 805	
		Audio, Video & Media	3 363	0.7010	0.3483	2 357	3 037	0.7397	0.3858	2 488	0.7702	0.4017	2 590
		Biotechnology	990	1.1071	0.1710	1 096	1 101	0.9157	0.1915	907	0.9126	0.2006	904
		Civil Engineering & Thermodynamics	4 618	1.0575	0.0465	4 883	4 625	1.1287	0.1037	5 212	1.3282	0.1325	6 133
		Computer	1 991	0.9763	0.0502	1 943	2 074	1.0158	0.0701	2 022	1.0306	0.0787	2 052
		Electricity & Electrical Machines	3 904	0.9964	0.0425	3 890	4 298	1.0078	0.0567	3 935	1.0732	0.0793	4 190
		Electronics	2 132	1.0191	0.0636	2 172	2 052	1.0162	0.0588	2 166	1.0569	0.0717	2 253
		Handling and Processing	5 468	1.2075	0.0831	6 602	5 401	1.2359	0.0822	6 758	1.3237	0.0942	7 237
		Human Necessities	3 761	1.0161	0.0918	3 822	3 598	1.0190	0.0867	3 833	1.0667	0.0921	4 012
		Industrial Chemistry	3 000	1.1193	0.0571	3 358	2 713	1.2294	0.0860	3 688	1.2638	0.1082	3 791
		Measuring, Optics	2 763	1.0820	0.0859	2 989	2 961	1.0900	0.0970	3 012	1.1616	0.1301	3 205
		Polymers	1 176	1.0420	0.0787	1 226	1 065	1.1722	0.0947	1 379	1.2481	0.0960	1 468
Pure & Applied Organic Chemistry	1 295	0.9893	0.0959	1 282	1 271	1.0003	0.1781	1 296	0.9979	0.1829	1 293		
Telecommunications	2 902	0.8294	0.2393	2 407	2 562	0.8168	0.2573	2 370	0.8348	0.2690	2 423		
Vehicles & General Technology	5 134	1.0493	0.0693	5 397	5 145	1.1509	0.0753	5 305	1.2400	0.0949	6 360		
Subsequent	Euro-PCT-IP	Total	42 497			43 415	41 901			44 973			47 421
		LCL				40 635			41 657			43 933	
		UCL				46 196			48 290			51 905	
		Audio, Video & Media	9 397	1.0196	0.0728	9 582	9 177	1.0435	0.0771	9 806	1.0465	0.0772	9 834
		Biotechnology	7 934	0.9864	0.0624	7 826	9 173	1.0567	0.0809	8 384	1.0965	0.0870	8 695
		Civil Engineering & Thermodynamics	10 062	0.9718	0.0678	9 768	10 812	1.2160	0.1153	12 223	1.2941	0.1453	13 008
		Computer	8 233	0.9341	0.0806	7 690	7 930	1.0165	0.0661	8 369	1.0061	0.0691	8 284
		Electricity & Electrical Machines	11 927	1.0532	0.0564	12 562	12 419	1.1972	0.0886	14 279	1.2421	0.1050	14 814
		Electronics	5 832	0.9789	0.0594	5 709	5 539	1.1069	0.0681	6 456	1.1330	0.0794	6 608
		Handling and Processing	12 447	1.0271	0.0747	12 785	12 274	1.0866	0.0737	13 525	1.1316	0.0902	14 085
		Human Necessities	14 447	0.9874	0.0537	14 265	14 804	1.0525	0.0564	15 205	1.0613	0.0587	15 332
		Industrial Chemistry	14 680	1.0450	0.0801	15 351	15 201	1.2405	0.0924	18 223	1.2770	0.0923	18 759
		Measuring, Optics	8 582	1.0128	0.0715	8 692	8 947	1.1167	0.0913	9 583	1.1498	0.1268	9 868
		Polymers	7 111	1.0140	0.0594	7 210	7 039	1.1251	0.0827	8 000	1.2149	0.0768	8 638
Pure & Applied Organic Chemistry	13 617	0.9939	0.0480	13 534	14 006	1.1160	0.0610	15 197	1.1403	0.0600	15 527		
Telecommunications	11 584	0.9825	0.0485	11 381	11 629	1.0281	0.0621	11 909	1.0422	0.0687	12 073		
Vehicles & General Technology	9 967	1.1040	0.0790	11 003	10 490	1.1788	0.0936	11 749	1.2682	0.1055	12 638		
		Total	145 820			147 359	149 439			162 908			168 170
		LCL				142 070			155 664			159 669	
		UCL				152 647			170 154			176 671	

Table 19 (part I): Forecasts for EPO filings at the EPO – Random group (first and subsequent filings, broken down by joint cluster)

Random group
Breakdown by EPO joint 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											
			2007	2008			2009			2010				
Filing type	Filing route	Cluster	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual Filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings	
All	Euro-direct	Audio, Video & Media	4 426			3 487	4 062			3 661			3 814	
		Biotechnology	2 455			2 430	2 675			2 367			2 441	
		Civil Engineering & Thermodynamics	6 007			6 363	6 173			6 950			7 981	
		Computer	3 023			3 094	3 069			3 150			3 192	
		Electricity & Electrical Machines	5 149			5 181	5 935			5 230			5 522	
		Electronics	3 069			3 223	3 054			3 182			3 348	
		Handling and Processing	7 204			8 406	7 259			8 746			9 312	
		Human Necessities	5 125			5 273	5 051			5 258			5 457	
		Industrial Chemistry	5 020			5 406	4 851			5 968			6 196	
		Measuring, Optics	3 861			4 169	4 188			4 252			4 530	
		Polymers	2 277			2 367	2 234			2 586			2 754	
		Pure & Applied Organic Chemistry	3 700			3 544	3 610			3 636			3 756	
		Telecommunications	4 676			4 320	4 131			4 311			4 394	
		Vehicles & General Technology	6 218			6 556	6 396			7 175			7 826	
		Total	62 211			63 810	62 688			66 473			70 524	
		LCL				60 767				62 810			66 157	
		UCL				66 852				70 136			74 891	
All	Euro-PCT-IP	Audio, Video & Media	10 465			10 721	10 340			11 048			11 096	
		Biotechnology	8 529			8 654	9 576			9 026			9 372	
		Civil Engineering & Thermodynamics	11 084			11 253	12 223			13 375			14 194	
		Computer	9 076			9 599	8 953			9 414			9 366	
		Electricity & Electrical Machines	13 114			14 042	13 881			15 880			16 440	
		Electronics	6 480			6 524	6 231			7 294			7 472	
		Handling and Processing	13 668			14 840	13 733			15 621			16 266	
		Human Necessities	15 747			15 835	16 105			16 815			16 904	
		Industrial Chemistry	15 967			17 238	16 416			19 857			20 511	
		Measuring, Optics	9 320			9 502	9 829			10 527			10 875	
		Polymers	7 618			7 933	7 408			8 633			9 305	
		Pure & Applied Organic Chemistry	14 681			15 043	14 660			16 488			16 861	
		Telecommunications	13 252			13 372	13 369			13 982			14 143	
		Vehicles & General Technology	10 833			11 977	11 587			12 803			13 793	
		Total	158 835			165 533	164 312			180 764			186 597	
		LCL				159 815				173 254			177 770	
		UCL				171 250				188 274			195 424	
Grand total	Total	Audio, Video & Media	14 891			14 208	14 403			14 709			14 910	
		Biotechnology	10 983			11 084	12 251			11 394			11 813	
		Civil Engineering & Thermodynamics	17 091			17 616	18 397			20 326			22 174	
		Computer	12 099			11 694	12 022			12 564			12 559	
		Electricity & Electrical Machines	18 263			19 222	19 816			21 110			21 962	
		Electronics	9 550			9 747	9 285			10 477			10 820	
		Handling and Processing	20 872			23 246	20 992			24 367			25 578	
		Human Necessities	20 872			21 108	21 156			22 073			22 361	
		Industrial Chemistry	20 987			22 644	21 267			25 824			26 707	
		Measuring, Optics	13 181			13 662	14 017			14 779			15 405	
		Polymers	9 895			10 300	9 642			11 219			12 060	
		Pure & Applied Organic Chemistry	18 382			18 587	18 270			20 125			20 616	
		Telecommunications	17 928			17 692	17 500			18 293			18 537	
		Vehicles & General Technology	17 051			18 532	17 983			19 978			21 619	
		Total	222 046			229 343	227 000			247 237			257 122	
		LCL				222 866				238 881			247 273	
		UCL				235 819				255 592			266 970	
		Growth from 2007						3.3%						15.8%
		Implied Euro-PCT-IP						72.2%						72.6%
		Deviation in % of forecast						2.8%						3.8%

Table 19 (part II): Forecasts for EPO filings – Random group (total filings, broken down by joint cluster)

4.5 Results broken down by mega cluster

The forecasts for EPO filings were also analysed with primary breakdowns by mega clusters based on amalgamated joint clusters (see **Annex III, Section 9**). For the Biggest group sample the composite indices were calculated and for the Random group sample Q indices were calculated.

As before when deriving the standard error for joint 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 1.51, and widens the confidence limits by multiplying standard errors by 1.23, the square root of 1.51. As previously for the calculation of standard errors, a finite population correction is also applied that narrows the confidence limits.

The forecasts of filings by filing type, filing route and joint cluster for the Biggest group are shown in **Table 20**. The analogous forecasts for the Random group broken down by mega clusters are illustrated in **Figure 8** (and **Table 21**).

Number of filings

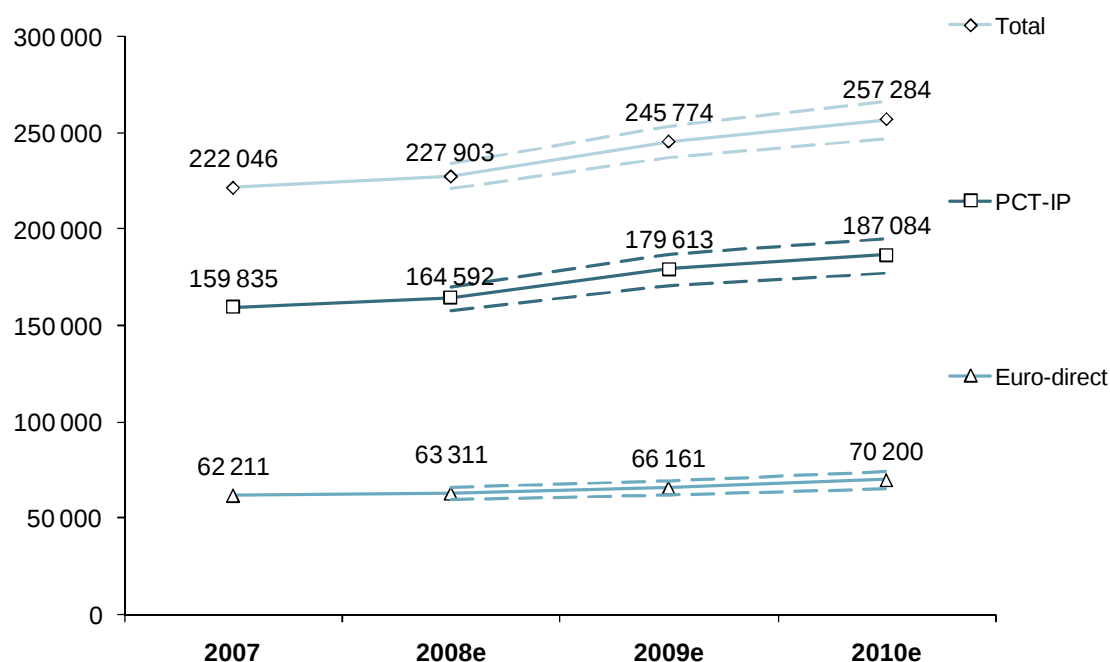


Figure 8: Forecasts for EPO filings based on breakdown by mega cluster for the Random group (dotted lines illustrating 95% confidence limits).

Overall, the aggregated forecasts for total filings and standard errors are not too dissimilar to those without any further breakdown (e.g. compare **Table 10** and **Table 21**). 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, since – as with the breakdown by joint cluster – these numbers are not based on specific data for a single mega cluster. Rather, 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. Differing respondent behaviour as a function of mega cluster is not considered. For this reason, it appears to be better to use a forecast for total filings without a breakdown by mega cluster.

The approach based on mega clusters may in the future, however, prove useful for business planning as it provides forecasts for major industry groupings of the various primary combinations of first, subsequent, Euro-direct and PCT-IP filings.

Biggest group
Breakdown by EPO joint mega cluster
Composite indices

			Year							
Filing type	Filing route	Cluster	2007	2008		2009		2010		
			Actual filings	Index 08	Predicted filings	Actual filings	Index 09	Predicted filings	Index 10	Predicted filings
First	Euro-direct	Electricity	3 280	1.0124	3 321	3 866	1.0639	3 490	1.0838	3 555
		Organic Chemistry	3 869	0.9526	3 686	3 913	1.0156	3 930	1.0583	4 095
		Inorganic Chemistry	3 121	1.0039	3 133	3 308	1.0527	3 285	1.0870	3 392
		ICT	3 869	1.0257	3 969	3 589	1.0390	4 020	1.0513	4 068
		Traditional	5 575	0.9663	5 386	6 110	1.0208	5 691	1.0503	5 855
		Total	19 714		19 495	20 787		20 415		20 965
First	Euro-PCT-IP	Electricity	2 573	1.0108	2 601	3 035	0.9584	2 466	0.9792	2 520
		Organic Chemistry	1 659	1.0450	1 733	1 057	1.0430	1 730	1.0538	1 748
		Inorganic Chemistry	1 785	0.9881	1 763	1 584	1.0360	1 849	1.0743	1 917
		ICT	3 578	1.0112	3 618	3 927	0.9460	3 385	0.9647	3 452
		Traditional	4 420	0.8599	3 801	5 269	0.8886	3 928	0.9049	4 000
		Total	14 015		13 517	14 873		13 358		13 636
Subsequent	Euro-direct	Electricity	8 799	1.0984	9 665	9 311	1.0589	9 318	1.0883	9 576
		Organic Chemistry	2 286	1.0307	2 356	2 372	0.9876	2 257	0.9792	2 238
		Inorganic Chemistry	4 176	0.9985	4 170	3 777	0.9976	4 166	1.0871	4 540
		ICT	8 256	1.0720	8 850	7 673	1.0424	8 606	1.0575	8 731
		Traditional	18 980	1.0066	19 106	18 768	1.0326	19 598	1.0717	20 342
		Total	42 497		44 147	41 901		43 945		45 427
Subsequent	Euro-PCT-IP	Electricity	26 342	0.9359	24 653	26 906	0.9888	26 046	1.0348	27 258
		Organic Chemistry	21 551	0.9818	21 159	23 179	0.9539	20 557	0.9912	21 362
		Inorganic Chemistry	21 801	0.9471	20 647	22 240	1.0091	21 999	1.0671	23 262
		ICT	29 214	0.8851	25 859	28 735	0.9277	27 103	0.9472	27 673
		Traditional	46 912	1.0312	48 377	48 379	1.0618	49 809	1.1133	52 225
		Total	145 820		140 695	149 439		145 515		151 781
All	Euro-direct	Electricity	12 079		12 985	13 177		12 807		13 131
		Organic Chemistry	6 155		6 042	6 285		6 187		6 333
		Inorganic Chemistry	7 297		7 303	7 085		7 452		7 933
		ICT	12 125		12 819	11 262		12 626		12 799
		Traditional	24 555		24 492	24 879		25 289		26 197
		Total	62 211		63 642	62 688		64 361		66 392
All	Euro-PCT-IP	Electricity	28 915		27 254	29 941		28 512		29 778
		Organic Chemistry	23 210		22 892	24 236		22 287		23 110
		Inorganic Chemistry	23 585		22 411	23 824		23 848		25 180
		ICT	32 793		29 477	32 662		30 488		31 125
		Traditional	51 332		52 178	53 648		53 737		56 225
		Total	159 835		154 211	164 312		158 873		165 417
Grand total	Total	Electricity	40 994		40 239	43 118		41 319		42 909
		Organic Chemistry	29 365		28 934	30 521		28 475		29 443
		Inorganic Chemistry	30 882		29 714	30 909		31 300		33 112
		ICT	44 918		42 296	43 924		43 115		43 923
		Traditional	75 887		76 670	78 527		79 025		82 422
		Total	222 046		217 853	227 000		223 233		231 809
Growth from 2007				-1.9%		0.5%		4.4%		
Implied Euro-PCT-IP				70.8%	72.4%	71.2%		71.4%		

Table 20: Forecasts for EPO filings at the EPO – Biggest group broken down by mega cluster

Random group
Breakdown by EPO joint 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										
Filing type	Filing route	Cluster	2007	2008			2009			2010			
			Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual Filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
First	Euro-direct	Electricity	3 280	1.0973	0.0690	3 599	3 866	1.1274	0.0811	3 698	1.2174	0.0993	3 993
		Organic Chemistry	3 869	0.9668	0.0933	3 741	3 913	1.0612	0.1304	4 106	1.1209	0.1426	4 337
		Inorganic Chemistry	3 121	1.0330	0.0743	3 224	3 308	1.0972	0.0653	3 424	1.1658	0.0718	3 638
		ICT	3 869	1.0529	0.0540	4 074	3 589	1.0853	0.0549	4 199	1.1130	0.0624	4 307
		Traditional	5 575	1.0042	0.0852	5 598	6 110	1.0789	0.0987	6 015	1.1495	0.1067	6 408
		Total	19 714			20 236	20 787			21 442			22 683
		LCL				18 819				19 640			20 563
First	Euro-PCT-IP	UCL				21 565				23 146			24 653
		Electricity	2 573	1.2245	0.1075	3 151	3 035	1.2750	0.1101	3 281	1.3460	0.1335	3 464
		Organic Chemistry	1 659	1.2945	0.2256	2 147	1 057	1.1154	0.1253	1 850	1.1740	0.1430	1 947
		Inorganic Chemistry	1 785	1.3806	0.2077	2 464	1 584	1.2039	0.1076	2 148	1.2763	0.1230	2 278
		ICT	3 578	1.1657	0.1218	4 171	3 927	1.2198	0.1327	4 365	1.2462	0.1450	4 459
		Traditional	4 420	1.3976	0.1585	6 178	5 269	1.2690	0.1292	5 609	1.3600	0.1401	6 012
		Total	14 015			18 111	14 873			17 254			18 159
Subsequent	Euro-direct	LCL				15 403				15 174			15 720
		UCL				20 735				19 206			20 413
		Electricity	8 799	1.0452	0.0513	9 197	9 311	1.0618	0.0602	9 343	1.1278	0.0778	9 923
		Organic Chemistry	2 286	1.0930	0.1316	2 498	2 372	1.0037	0.1372	2 294	1.0115	0.1425	2 312
		Inorganic Chemistry	4 176	1.0586	0.0558	4 421	3 777	1.1843	0.0681	4 946	1.2346	0.0853	5 156
		ICT	8 256	0.8456	0.2041	6 981	7 673	0.8515	0.2236	7 029	0.8693	0.2305	7 177
		Traditional	18 980	1.0526	0.0429	19 978	18 768	1.1120	0.0510	21 106	1.2091	0.0617	22 548
Subsequent	Euro-PCT-IP	Total	42 497			43 076	41 901			44 718			47 518
		LCL				39 519				40 625			42 761
		UCL				46 510				48 660			52 025
		Electricity	26 342	1.0195	0.0538	26 855	26 906	1.1842	0.0712	31 195	1.2358	0.0865	32 554
		Organic Chemistry	21 551	1.0118	0.0530	21 806	23 179	1.1131	0.0651	23 989	1.1456	0.0676	24 689
		Inorganic Chemistry	21 801	1.0377	0.0657	22 622	22 240	1.1706	0.0801	25 519	1.2402	0.0766	27 036
		ICT	29 214	0.9453	0.0507	27 618	28 735	1.0057	0.0529	29 380	1.0191	0.0584	29 773
All	Euro-direct	Traditional	46 912	1.0143	0.0419	47 581	48 379	1.1144	0.0523	52 277	1.1697	0.0586	54 872
		Total	145 820			146 481	149 439			162 360			168 924
		LCL				139 801				153 257			158 445
		UCL				152 527				170 344			177 811
		Electricity	12 079			12 796	13 177			13 040			13 916
		Organic Chemistry	6 155			6 239	6 285			6 400			6 649
		Inorganic Chemistry	7 297			7 645	7 085			8 371			8 795
All	Euro-PCT-IP	ICT	12 125			11 055	11 262			11 229			11 483
		Traditional	24 555			25 576	24 879			27 120			29 357
		Total	62 211			63 311	62 688			66 161			70 200
		LCL				59 483				61 688			64 992
		UCL				66 994				70 455			75 120
		Electricity	28 915			30 006	29 941			34 476			36 018
		Organic Chemistry	23 216			23 953	24 236			25 839			26 636
Grand total	Total	Inorganic Chemistry	23 585			25 085	23 824			27 667			29 314
		ICT	32 793			31 789	32 662			33 745			34 232
		Traditional	51 332			53 759	53 648			57 886			60 884
		Total	159 835			164 592	164 312			179 613			187 084
		LCL				157 384				170 276			176 326
		UCL				171 183				187 833			196 252
		Electricity	40 994			42 802	43 118			47 516			49 934
Growth from 2007	Implied Euro-PCT-IP	Organic Chemistry	29 365			30 192	30 521			32 239			33 285
		Inorganic Chemistry	30 882			32 730	30 909			36 030			36 109
		ICT	44 918			42 844	43 924			44 974			45 716
		Traditional	75 887			79 335	78 527			85 007			90 241
		Total	222 046			227 903	227 000			245 774			257 284
		LCL				219 742				235 421			245 332
		UCL				235 453				255 048			267 689
Growth from 2007						2.6%				10.7%		15.9%	
Implied Euro-PCT-IP						72.2%				73.1%		72.7%	
Deviation in % of forecast						3.6%				4.2%		4.6%	

Table 21: Forecasts for EPO filings at the EPO – Random group broken down by mega cluster

5 Forecasts for PCT regional phase applications

The results for PCT regional phase applications at the EPO were obtained from question (j) in **Section B** of the questionnaire (**Annex I, Section 7**). 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. Separate questions on first filings and subsequent filings are not 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 22**) and in terms of absolute numbers of filings (**Table 23**). Firstly, Euro-PCT-RP filings are estimated for the Biggest group sample with no subsidiary breakdown (**Table 24**) and broken down by residence bloc (**Table 25**). 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 (**Table 26**). The same analysis is repeated with the Euro-PCT-RP filings itemised by residence bloc (**Table 27**). Finally, the regional phase filing predictions are shown in **Table 28**, based on the breakdown by joint cluster of the Random group sample.

The results do not fully confirm the prediction made in the 2007 report, which indicated significant increases in the numbers of filings entering the regional phase in the year 2008. The 2008 growth rate (from 2007) for the Biggest group is estimated at 4.7% and for the Random group it is estimated to be in a range between 0.9% to 5.3%, depending on the method used. In contrast to last year's prediction, not all forecasting approaches continue to predict significant growth in the number of Euro-PCT-RP filings from 2008 to 2009 but most approaches predict a pickup of growth from 2009 onwards.

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. Interestingly and as in the previous year, the one-year-ahead growth forecast of 8.7% based on joint cluster breakdown is considerably more optimistic than all other estimates. Still, by 2010 all estimates appear to converge except that for "None (excluding companies with comments)".

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 X, Section 16** for the appropriate correction factors.

Comparison of forecasts: Growth from 2007
Euro-PCT-RP

Group	Breakdown	2008		2009		2010	
		Growth rate	Deviation*	Growth rate	Deviation*	Growth rate	Deviation*
Biggest	None	4.7%		8.4%		10.8%	
Biggest	Residence bloc	4.8%		12.9%		10.0%	
Random	None	5.3%	5.2%	11.7%	5.9%	15.0%	7.0%
Random	None (excluding companies with comments)	1.0%	7.6%	7.4%	9.0%	9.6%	9.7%
Random	Residence bloc	6.0%	5.5%	13.5%	6.7%	17.6%	7.6%
Random	Residence bloc (excluding companies with comments)	0.9%	10.9%	15.3%	15.2%	14.5%	15.5%
Random	EPO joint cluster	8.7%	7.4%	12.5%	8.6%	16.5%	10.4%

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

Table 22: 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

Group	Breakdown	2008			2009			2010		
		Predicted filings	LCL	UCL	Predicted filings	LCL	UCL	Predicted filings	LCL	UCL
Biggest	None	82 408			85 312			87 213		
Biggest	Residence bloc	82 467			86 587			88 802		
Random	None	82 835	78 542	87 128	87 883	82 659	93 106	90 488	84 133	96 842
Random	None (excluding companies with comments)	79 511	73 455	85 567	84 529	76 924	92 135	86 269	77 911	85 567
Random	Residence bloc	83 383	78 760	88 006	89 320	83 298	95 342	92 508	85 513	99 502
Random	Residence bloc (excluding companies with comments)	79 370	70 680	88 061	90 742	76 939	104 546	90 075	76 090	104 060
Random	EPO joint cluster	85 530	79 183	91 878	88 547	80 927	96 167	91 684	82 104	101 263
Actual filings		83 442								

Table 23: Overview of predicted filing numbers for Euro-PCT-RP applications by forecasting methods

Biggest Group
No subsidiary breakdown
Composite indices

			Year							
			2007	2008			2009		2010	
Patent Office	Filing route	Res. bloc	Actual filings	Index 08	Predicted filings	Actual filings	Index 09	Predicted filings	Index 10	Predicted filings
EPO	Euro-PCT-RP	Total	78 686	1.0473	82 408	83 442	1.0842	85 312	1.1084	87 213
Growth from 2007					4.7%			8.4%		10.8%

Table 24: Forecasts for Euro-PCT-RP applications (no subsidiary breakdown; composite index based on Biggest group)

Biggest group
Breakdown by residence bloc
Composite indices

			Year							
			2007	2008			2009		2010	
Patent office	Filing route	Res. bloc	Actual filings	Index 08	Predicted filings	Actual filings	Index 09	Predicted filings	Index 10	Predicted filings
EPO	Euro-PCT-RP	EP	33 195	1.0118	33 585	35 599	1.0132	33 635	1.0016	33 249
		JA	12 028	1.1353	13 655	12 075	1.1729	14 108	1.2585	15 138
		OT	7 285	1.0473 *	7 630	8 122	1.0842 *	7 898	1.1084 *	8 074
		US	26 178	1.0542	27 597	27 646	1.1822	30 946	1.2354	32 341
Total		Total	78 686		82 467	83 442		86 587		88 802
Growth from 2007					4.8%			10.0%		12.9%

Table 25: Forecasts for Euro-PCT-RP applications (breakdown by residence bloc; composite index based on Biggest group)

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										
			2007	2008			2009			2010			
Patent office	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings
EPO	Euro-PCT-RP	Total	78 686	1.0527	0.0264	82 835	83 442	1.1169	0.0303	87 883	1.1500	0.0358	90 488
		LCL				78 542				82 659			84 133
		UCL				87 128				93 106			96 842
Growth from 2007						5.3%				11.7%			15.0%
Deviation in % of forecast						5.2%				5.9%			7.0%

Table 26: Forecasts for Euro-PCT-RP applications (no subsidiary breakdown; Q Index based on Random group)

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												
			2007	2008				2009				2010			
Patent Office	Filing route	Res. bloc	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings		
EPO	Euro-PCT-RP	EP	33 195	1.0443	0.0384	34 666	35 599	1.1015	0.0407	36 564	1.1080	0.0514	36 781		
		JA	12 028	1.0514	0.0452	12 647	12 075	1.1426	0.0556	13 743	1.2014	0.0543	14 451		
		OT	7 285	1.0834	0.1112	7 892	8 122	1.4150	0.1457	10 309	1.4509	0.1516	10 570		
		US	26 178	1.0764	0.0579	28 178	27 646	1.0965	0.0720	28 704	1.1729	0.0786	30 705		
Total		Total	78 686			83 383	83 442			89 320			92 508		
		LCL				78 760				83 298			85 513		
		UCL				88 006				95 342			99 502		
Growth from 2007						6.0%					13.5%		17.6%		
Deviation in % of forecast						5.5%					6.7%		7.6%		

Table 27: Forecasts for Euro-PCT-RP applications (broken down by residence bloc; Q Index based on Random group)

Random group
Breakdown by EPO Joint 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															
			2007				2008				2009				2010			
Patent office	Filing route	Cluster	Actual filings	Q-index 08	S.E. 08	Predicted filings	Actual filings	Q-index 09	S.E. 09	Predicted filings	Q-index 10	S.E. 10	Predicted filings	Q-index 11	S.E. 11	Predicted filings		
EPO	Euro-PCT-RP	Audio, Video & Media	4 471	0.9539	0.1445	4 265	4 723	1.0438	0.2081	4 667	1.1045	0.2514	4 938	1.1652	0.2988	5 209		
		Biotechnology	4 916	1.1155	0.1254	5 484	4 978	1.0982	0.1309	5 399	1.1350	0.1819	5 580	1.1957	0.2292	5 761		
		Civil Engineering & Thermodynamics	4 967	1.0746	0.1367	5 337	5 291	1.0696	0.1393	5 313	1.0711	0.2298	5 320	1.0711	0.2298	5 320		
		Computer	3 844	1.0412	0.1894	4 002	4 213	1.1568	0.2229	4 447	1.1708	0.2639	4 500	1.1708	0.2639	4 500		
		Electricity & Electrical Machines	5 442	1.0925	0.0821	5 945	6 192	1.1274	0.1204	6 135	1.2719	0.1402	6 922	1.3241	0.1413	7 633		
		Electronics	3 309	1.0101	0.0776	3 342	3 189	1.0436	0.1158	3 453	1.1554	0.1132	3 823	1.2719	0.1402	4 500		
		Handling and Processing	6 897	1.0834	0.1536	7 472	6 964	1.1645	0.1653	8 031	1.2212	0.1733	8 422	1.2719	0.1402	8 922		
		Human Necessities	7 564	1.0700	0.1281	8 094	7 966	1.0975	0.1338	8 302	1.1077	0.1387	8 379	1.1077	0.1387	8 379		
		Industrial Chemistry	8 157	1.1426	0.1393	9 320	8 792	1.1745	0.1606	9 581	1.1394	0.2103	9 294	1.1394	0.2103	9 294		
		Measuring, Optics	4 567	1.1545	0.2190	5 273	4 869	1.3400	0.2373	6 120	1.3785	0.2462	6 296	1.3785	0.2462	6 296		
		Polymers	4 649	1.1865	0.1200	5 516	4 777	1.1111	0.1582	5 166	1.1258	0.2369	5 234	1.1258	0.2369	5 234		
		Pure & Applied Organic Chemistry	9 108	1.0723	0.0996	9 766	9 283	1.0315	0.0990	9 395	1.0416	0.1514	9 487	1.0416	0.1514	9 487		
		Telecommunications	5 885	1.0887	0.1366	6 407	6 632	1.1063	0.1669	6 511	1.1873	0.1849	6 987	1.1873	0.1849	6 987		
		Vehicles & General Technology	4 910	1.0807	0.1055	5 306	5 573	1.2279	0.1258	6 029	1.3241	0.1413	6 501	1.3241	0.1413	6 501		
		Total		78 686			85 530	83 442			88 547			91 684			94 825	
		LCL					79 183				80 927			82 104			83 281	
		UCL					91 878				96 167			101 263			105 546	
Growth from 2007						8.7%				12.5%			16.5%			20.5%		
Deviation in % of forecast						7.4%				8.6%			10.4%			12.6%		

Table 28: Forecasts for Euro-PCT-RP applications (broken down by joint cluster; Q Index based on Random group)

6 Conclusions and Outlook

The applicants responding to the survey in 2008 represented an appreciable percentage of applications from the total population (see **Annex XI, Section 17**). There is a reasonable level of agreement between the results obtained through different forecasting methods, as well as between those based on the Biggest group and the Random group. Despite the fact that the groups do, to some extent, overlap, this may be taken as an indication that the results should be fairly representative of future filing intentions. However, there is always the possibility that applicants who did not respond have different intentions or that surveyed applicants may have changed their views since the time that the survey took place.

This year, as in the previous year, purely survey-based forecasts of filing intentions were augmented by birth/death corrected forecasts of filing intentions. The process which directly addresses an unavoidable shortfall of the survey methodology has slightly been adapted this year.

When comparing one-year growth rates of this survey with those of the previous year, it becomes clear that filings expectations for 2008 have considerably moderated since last year. Lowered growth expectations in this year's survey are less evident for two-year and three-year growth rates.

However, it is important to keep in mind that this survey was conducted in mid-2008. Given the markedly increased turmoil in the global financial markets after September 2008 and the ensuing deepening of the global recession, the assumption that applicants did not change their views since then may be hard to swallow for the current survey. It will be important to update and validate the growth expectations that this survey suggests regularly and in a timely fashion to make sure that any potential impact of the global economic downturn can promptly be identified.

Please read the following Annexes for information on the mechanism and execution of the survey (Annexes I to V), for results on respondent profiles (Annex VI) and answers to additional questions (Annexes VII to X). Special questions were asked about the effects of EPO procedural fees on filing behaviour (Annex VIII). Here an overall elasticity of filings changes to fee changes of between 30% and 40% is indicated. On effects of recent changes to patenting rules (Annex IX), implementation of EPC 2000 appears to have had little or no effect regarding filings levels and validation rates of granted EPO patents at EPC national offices. On the other hand, the implementation of the London Agreement, which relaxes certain considerations regarding translations of patent documents after granting, seems to be having a slight positive effect on filings and a more marked positive effect on validation rates. Annexes X and XI give further supporting information to the main part of the survey.

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

7.1 Parent population and target persons

The **parent population** of the Applicant Panel comprises applicants who filed a patent application at the EPO in 2007. 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 2007, broken down by residence bloc (applicants for Euro-direct and PCT-IP, see also **Annex XI, Section 17**).

Residence bloc	Applicants	
	(popula- tion)	%
EPC countries	26 601	42.0
Japan	5 058	8.0
USA	19 456	30.7
Other countries	12 262	19.3
Total	63 377	100.0

Table 29: Population size (applicants for Euro-direct and PCT-IP for the Random group)

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 2007.

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 was broadly similar to the one used in 2007.

The main part B of the questionnaire remained unchanged to allow comparisons. Part C remained unchanged except for the order of two questions on sales and operating and capital expenditures. Within part D, the 2007 questions on withdrawing and reasons for withdrawals were replaced by questions on effects of fees, EPC2000, and the London Agreement. Part E was slightly shortened.

The questionnaire (see next page) covers the following key topics:

- **Current and future filings (part B)**, split by
 - First and subsequent filings
 - Different procedures: Euro-direct, PCT international as well as national/regional phase, and national procedures
 - Different countries: Germany, UK, France, Japan, US, 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
- **Other issues relating to effects on filing numbers (part D)**: fee types and levels, effects of EPC2000 and the London Agreement on filing numbers
- **Company details**, such as organisation type and number of employees, founding year (**part E**), and size of operating and capital expenditure as well as total sales (**part C**)
- General **comments** regarding the questionnaire (**part F**). A summary of the comments received is included in **Annex II, Section 8**.

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. A confirmation notice was also added to the EPO surveys website to legitimise the survey.

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).

As the questionnaire was largely identical to the one used in 2007, no pre-test interviews were conducted. Nevertheless, comments of respondents were gathered during the first interviews and checked in order to identify possible problems in understanding. From that, no major problems were detected but questions of respondents could be clarified by interviewers.

The English version of the questionnaire is displayed below:



APPR / GROUP
FA
LEITER PATENTABTL
ABTEILUNG
STRASSE

ORT
LAND

Questionnaire

for Applicant Panel Survey on Patent Filings

Please return to:
+49-89-99 600 569

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.

Will you answer the questionnaire based on a smaller company/company part or based on a bigger company/company part?

- ☐ 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 2009 under <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. 2008 compared with 2007; 2009 compared with 2008; 2010 compared with 2009).

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	
		2007		2008		2009		2010	
		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)								
	Other countries (h)								
Worldwide Total First Filings (i)									

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 under the columns for first filings.

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 2007	Expected 2008	Expected 2009	Expected 2010
European Patent Office (EPO) (j)				
United States Patent and Trademark Office (USPTO) (k)				
Japan Patent Office (JPO) (l)				
German Patent and Trade Mark Office (DPMA) (m)				

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 in 2007**.
Please indicate...

- (a) the total number of inventions in 2007 that led you to consider making patent applications:.....
- (b) – generally speaking – the percentage of all your inventions that are actually patented: %
- (c) the approximate size of the total operating and capital expenditure for your company throughout the world in 2007 (specify currency):.....
- (d) the approximate size of your total sales throughout the world in 2007 (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 2007 (specify currency)	(g) ...the number of first patent filings that you actually made in 2007 throughout the world
☐ 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		

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

D. Other issues

(a) The European Patent Office (EPO) has recently decided a general adjustment of fees to inflation of about 4%. To what extent does the amount of the following fees **influence your decisions to pursue a patent application**? For an average patent application EPO fees are about 14% of total patenting costs. Please answer using a scale from 1 to 5 (1 meaning "no influence at all", 5 meaning "very much influence").

	No influence at all				Very much influence
	1	2	3	4	5
Filing fee	☐	☐	☐	☐	☐
Search fee	☐	☐	☐	☐	☐
Substantive examination fee	☐	☐	☐	☐	☐
Claim fee	☐	☐	☐	☐	☐
Renewal fees at EPO during examination	☐	☐	☐	☐	☐
Appeal fees	☐	☐	☐	☐	☐
Opposition fees	☐	☐	☐	☐	☐

(b) What do you think would be the **effect on your patenting filings at the EPO** (in terms of percentage increase or decrease compared to your current patent filing levels at EPO) if the EPO fees listed above were to fall generally by 25% in total, or rise generally by 25% in total?

	Decrease patenting at EPO by	No effect	Increase patenting at EPO by
General EPO fee fall by 25%:	 %	☐	 %
General EPO fee rise by 25%:	 %	☐	 %

The rules for patent applications at EPO were changed from December 2007 via a revision of the European Patent Convention, to the so-called "**EPC2000**". In addition, the rules for translation requirements into national languages before validating granted EPO patents at EPC national offices have changed in May 2008, due to the so called "**London Agreement**".

(c) To what extent do these changes of rules alter your intentions regarding **overall patent filing levels at EPO**?

	Lower filing levels	No change	Higher filing levels	Not yet decided	Do not know this change at all
EPC2000	☐	☐	☐	☐	☐
London Agreement	☐	☐	☐	☐	☐

(d) And to what extent do these changes of rules alter your intentions regarding the **number of EPC national offices** at which you will validate your patents after they have been granted by EPO?

	Lower number of national offices	No change	Higher number of national offices	Not yet decided	Do not know this change at all
EPC2000	☐	☐	☐	☐	☐
London Agreement	☐	☐	☐	☐	☐

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

E. Details of company/company part

(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 ...	☐	Persons employed: individual inventor.....	☐
Public sector:		1 – 9.....	☐
- Government-performed R&D	☐	10 – 49.....	☐
- Higher educational sector.....	☐	50 – 249.....	☐
- Other public sector	☐	250 – 999.....	☐
		1 000 – 4 999.....	☐
Other,	☐	5 000 – 9 999.....	☐
please specify:		10 000 – 49 999.....	☐
_____		50 000 or more.....	☐

(b) In what year was your company created? _____

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, which are described in the following:

- (1) International research of up-to-date telephone numbers
- (2) Telephone contact interviews
- (3) Main interviews (by fax/e-mail/postal mail or by telephone)

7.3.1 International research of up-to-date telephone numbers

Updated telephone numbers were obtained where necessary for the 2,164 EPO applicant addresses (Biggest and Random sample 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, up-to-date telephone numbers could not be found 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.

7.3.2 Telephone contact interviews

Following the research step, telephone contact interviews were conducted with applicants whose current telephone number 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 872 cases, the questionnaire and the accompanying letters were sent by fax. However, many applicants preferred to receive the documents via e-mail (704). A few participants requested to receive the questionnaire per postal mail (12 cases).

As in previous years, the contact phase was particularly complicated in the US. The response rate in the US was lower for both Biggest and Random groups than in 2007. This was due to a higher reluctance towards participating than last year and a difficult procedure to identify target persons. In particular, some bigger patent applicants who were also approached during past years' surveys refused to take part in this years' survey.

The main contacting phase, i.e. sending the personalised questionnaires and accompanying letters to the participants, started on May 29th 2008.

7.3.3 Main interviews

Most questionnaires were completed by the target persons themselves and sent back to Synovate by fax. In some cases (41), the responses were collected directly through a follow-up telephone call. All completed questionnaires received by September 15th 2008 were included in the analysis. In 2008, 14 late returns were received after that date which could not be integrated in the data.

In total, **772 interviews** were realised in 2008. The number of responses is slightly higher than the responses of the previous year (747 interviews for the analogous groups) and identical with the high number of responses in 2006 (772). Of these 772 participants in 2008, 103 had also previously taken part in the 2007 survey.

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 ¹⁹		Biggest		Random	
	n	%	n	%	n	%
Total gross sample	2 164	100.0	419	100.0	2 021	100.0
Addresses not found	87	4.0	3	0.7	85	4.2
Addresses found	2 077	100.0	416	100.0	1 936	100.0
Dropouts (1)	381	18.3	62	14.9	368	19.0
Adjusted sample	1 696	81.7	354	85.1	1 571	81.1
Dropouts (2)	924	44.5	164	39.4	863	44.6
Total responses/ response rate*	772	37.2	190	45.7	708	36.6

(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 out the questionnaire; not able to collect requested data; company policy; data too confidential, etc.

*) Calculation: total responses over addresses found

Table 30: Overview of sample and responses received

¹⁹ Including 19 addresses requested by EPO cluster managers

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 complete the questionnaire
- Collect the responses by telephone, where appropriate
- Clarify answers that were not comprehensible or implausible

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 are either native speakers of the required languages, or speak those languages fluently. Some 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.

7.3.4 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 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 attempts had to be made to contact them repeatedly.

For smaller countries or exotic languages, English was typically used as the contact and questionnaire language. Language problems sometimes occurred in Asian countries such as Korea, Taiwan, and Singapore. Especially for Korea it was hard to establish successful first contacts in English. Therefore, the interviewer translated sentences for first contacts into Korean by using a dictionary with phonetic transcription. By reading the initial greeting and first sentences in Korean as a start and switching to English afterwards, it was easier to get the necessary information concerning contact persons in companies.

7.4 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. The number of these rules was increased since 2007. In detail, the rules covered the following topics:

- The worldwide total of first filings (line i 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, and h) 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 (h) 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 l) 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 2009 and 2010 (lines j, k, l, or m) 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 2007 and 2008, respectively.
- Technical areas noted verbally in the "Others" line of Section C were allocated to one of the 14 joint clusters ex post, where possible.

These plausibility checks and figure interpretations or estimations may have resulted in a number of codes in the electronic database that identify an answer scenario as being dubious. They were therefore marked and some analyses were carried out to test the effect of excluding such cases (**Table 15** and **Table 17**).

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.

7.5 Non-response analysis and response rates

7.5.1 Address qualification

The EPO provided lists containing a total²⁰ of 2,164 selected applicants in 2008. The researchers strove to identify contact names, addresses and telephone numbers, and 2,077 addresses were confirmed. For the Biggest group, it was possible to obtain 416 telephone numbers for 419 addresses through the international research procedure. In the Random group (including target group overlap), this level was comparable (96%) to that of the Biggest group and slightly higher than that of last year's Biggest group (93%).

7.5.2 Losses

In 2008, 12% of the addresses found for the Biggest group were identical with, or included in, another company. In the Random group, 15% of the addresses found were identical to, or included in, another applicant in the sample. This left 366 addresses in the Biggest group and 1,644 addresses in the Random group. This number is defined as Adjusted sample A.

A further 3% had to be classified as non-systematic losses for the Biggest and 4% for the Random group. 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 Biggest group, a direct contact person could be identified for 84% of the 419 gross addresses which refers to Adjusted sample B (2007: 84%). This figure was slightly lower in the Random group (78% of 2,021 gross addresses), which is comparable to that of last year (81%).

7.5.3 Response rates

In terms of addresses found, Table 30 shows that the overall response rate is 37.2% overall, 45.6% in the Biggest group, and 36.6% in the Random group.

In the following detailed response tables, response rates are recalculated in terms of percentages against Adjusted sample A (addresses found after removal of duplicate identical duplicate companies in the samples) and Adjusted sample B (equivalent to "Adjusted sample" in Table 30).

Referring to Adjusted sample B, the overall response rate was 54% in the Biggest group and 45% in the Random group. Compared to the previous year, the level is somewhat lower in both groups (2007: 60% response rate in the Biggest group, and 47% in the Random group) due to higher numbers of refusals. As in previous years, the response rate was higher in the Biggest group than in the Random group in 2008.

The response rates in the different regions of the survey vary compared to 2007 – which indicates a change in the number of refusals:

²⁰ Including 19 addresses requested by EPO cluster managers

The response rates for EPC countries are comparable to 2007 in the Biggest group 54% (56% in 2007), and the Random group 51% (2007: 49%).

Among EPC applicants, high response rates were achieved in Sweden (63% Biggest, 65% Random), the Netherlands (63% Biggest), Italy (80% Biggest, 63% Random), Denmark (73% Random), and Finland (69% Random).

In the US, the response rate decreased to 33% in the Biggest group (2007: 47%), and to 29% in the Random group (2007: 33%).

In Japan, response rates of 84% in the Biggest group (2007: 83%), and 67% in the Random group (2007: 76%) were achieved in 2008.

It is also possible to calculate the response rate on the basis of all addresses found without double cases ("adjusted sample A"). This response rate ("response rate 2") includes non-systematic losses and is, therefore, lower than that described above. For the Biggest group, the response rate 2 was 52%, for the Random group it was 43%.

The detailed response statistics with blocs and countries of origin are shown in **Table 31** (Biggest Group) and **Table 32** (Random group). **Table 33** shows blocs and countries of origin of the respondents themselves. Reasons for non-response are explained in **Table 34** (Biggest group) and **Table 35** (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	3	0	3	1	2	0	2	1	1	50%	50%
EPC	BE	12	0	12	0	12	0	12	9	3	25%	25%
EPC	CH	31	0	31	1	30	2	28	15	13	46%	43%
EPC	DE	96	0	96	13	83	2	81	34	47	58%	57%
EPC	DK	2	0	2	0	2	0	2	1	1	50%	50%
EPC	ES	3	0	3	0	3	0	3	1	2	67%	67%
EPC	FI	4	0	4	0	4	0	4	1	3	75%	75%
EPC	FR	28	0	28	5	23	1	22	12	10	45%	43%
EPC	GB	16	0	16	2	14	1	13	6	7	54%	50%
EPC	HU	1	0	1	1	0	0	0	0	0	0%	0%
EPC	IE	1	0	1	0	1	0	1	1	0	0%	0%
EPC	IT	5	0	5	0	5	0	5	1	4	80%	80%
EPC	LI	2	0	2	0	2	0	2	0	2	100%	100%
EPC	LU	2	0	2	0	2	0	2	1	1	50%	50%
EPC	NL	11	0	11	3	8	0	8	3	5	63%	63%
EPC	SE	9	0	9	1	8	0	8	3	5	63%	63%
EPC	TR	1	0	1	0	1	0	1	0	1	100%	100%
EPC	Subtotal	227	0	227	27	200	6	194	89	105	54%	53%
JA	JP	83	1	82	12	70	2	68	11	57	84%	81%
US	US	92	0	92	8	84	4	80	54	26	33%	31%
OT	OT	17	2	15	3	12	0	12	10	2	17%	17%
OT	CA	5	0	5	1	4	0	4	3	1	25%	25%
OT	KR	4	1	3	0	3	0	3	3	0	0%	0%
OT	SG	1	0	1	0	1	0	1	0	1	100%	100%
Total		419	3	416	50	366	12	354	164	190	54%	52%

1) Without addresses requested by EPO cluster managers

D1) Both columns sum up to Dropouts (1) in **Table 30**

D2) This column refers to Dropouts (2) in **Table 30**

*) Calculation: number of interviews over adjusted sample B

**) Calculation: number of interviews over adjusted sample A

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

Bloc, Random	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	34	3	31	1	30	2	28	15	13	46%	43%
EPC	BE	25	1	24	2	22	0	22	15	7	32%	32%
EPC	CH	105	3	102	11	91	3	88	44	44	50%	48%
EPC	CZ	5	2	3	0	3	0	3	1	2	67%	67%
EPC	DE	357	5	352	44	308	12	296	151	145	49%	47%
EPC	DK	18	0	18	2	16	1	15	4	11	73%	69%
EPC	ES	28	4	24	1	23	1	22	8	14	64%	61%
EPC	FI	19	1	18	2	16	0	16	5	11	69%	69%
EPC	FR	125	0	125	31	94	2	92	53	39	42%	41%
EPC	GB	77	7	70	4	66	2	64	34	30	47%	45%
EPC	HR	1	0	1	0	1	0	1	0	1	100%	100%
EPC	HU	2	0	2	0	2	0	2	1	1	50%	50%
EPC	IE	7	1	6	0	6	0	6	4	2	33%	33%
EPC	IT	67	0	67	2	65	6	59	22	37	63%	57%
EPC	LI	4	0	4	0	4	0	4	1	3	75%	75%
EPC	LT	1	1	0	0	0	0	0	0	0	0%	0%
EPC	LU	6	2	4	0	4	0	4	2	2	50%	50%
EPC	LV	2	2	0	0	0	0	0	0	0	0%	0%
EPC	NL	59	2	57	10	47	1	46	25	21	46%	45%
EPC	NO	10	0	10	1	9	0	9	4	5	56%	56%
EPC	PL	5	1	4	0	4	0	4	2	2	50%	50%
EPC	SE	40	1	39	6	33	2	31	11	20	65%	61%
EPC	SI	2	0	2	0	2	0	2	1	1	50%	50%
EPC	TR	3	1	2	0	2	0	2	0	2	100%	100%
EPC	Subtotal	1 002	37	965	117	848	32	816	403	413	51%	49%
JA	JP	299	5	294	62	232	12	220	73	147	67%	63%
US	US	540	15	525	81	444	19	425	302	123	29%	28%
OT	OT	180	28	152	32	120	10	110	85	25	23%	21%
OT	CA	28	3	25	1	24	2	22	17	5	23%	21%
OT	CN	16	3	13	3	10	1	9	7	2	22%	20%
OT	IL	19	1	18	1	17	2	15	7	8	53%	47%
OT	KR	59	4	55	25	30	2	28	24	4	14%	13%
Total		2 021	85	1 936	292	1 644	73	1 571	863	708	45%	43%

1) Without addresses requested by EPO cluster managers

D1) Both columns sum up to Dropouts (1) in **Table 30**

D2) This column refers to Dropouts (2) in **Table 30**

*) Calculation: number of interviews over adjusted sample B

**) Calculation: number of interviews over adjusted sample A

Table 32: 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	13	14
EPC	BE	3	7	8
EPC	CH	13	44	46
EPC	CZ	0	2	2
EPC	DE	47	145	166
EPC	DK	1	11	11
EPC	ES	2	14	15
EPC	FI	3	11	12
EPC	FR	10	39	40
EPC	GB	7	30	35
EPC	HR	0	1	1
EPC	HU	0	1	1
EPC	IE	0	2	2
EPC	IT	4	37	39
EPC	LI	2	3	4
EPC	LU	1	2	2
EPC	NL	5	21	21
EPC	NO	0	5	5
EPC	PL	0	2	2
EPC	SE	5	20	21
EPC	SI	0	1	1
EPC	TR	1	2	2
EPC	Subtotal	105	413	450
JA	JP	57	147	166
US	US	26	123	130
OT	OT	2	25	26
OT	AU	0	1	1
OT	BB	0	1	1
OT	BR	0	1	1
OT	CA	1	5	5
OT	CN	0	2	2
OT	IL	0	8	8
OT	IN	0	1	1
OT	KR	0	4	4
OT	NZ	0	1	1
OT	SG	1	0	1
OT	VG	0	1	1
Total		190	708	772

1) Without addresses requested by EPO cluster managers

2) Including addresses requested by EPO cluster managers

Table 33: Respondent structure

Losses ¹			Systematic losses/refusals ¹		
- Contact is sick/on vacation	5	42%	- Did not return questionnaire	80	49%
- Technical problems (fax, e-mail address not working)	3	25%	- No time	33	20%
- Company is being restructured	3	25%	- Not interested	11	7%
- Company has been sold	1	8%	- Company policy	11	7%
			- Not able to identify/collect data	10	6%
			- Data too confidential	5	3%
			- No reason given	4	2%
			- Questionnaire too complicated	2	1%
			- Participated in other EPO survey	2	1%
			- Returned questionnaire too late	5	3%
			- Other reasons*	1	1%
Total	12	100%	Total	164	100%

1) Without addresses requested by EPO cluster managers

* Too expensive due to external attorney

Table 34: Reasons for non-response – Biggest (incl. overlapping members of the Random group)

Losses ¹			Systematic losses/refusals ¹		
- Appropriate contact not found / mailbox system	20	27%	- Did not return questionnaire	393	46%
- Contact never available	12	16%	- No time	150	17%
- Company no longer exists	11	15%	- Not interested	110	13%
- Contact is sick/on vacation	10	14%	- Not able to identify/collect data	57	7%
- Company is being restructured	8	11%	- Company policy	44	5%
- Technical problems (fax, e-mail address not working)	6	8%	- Data too confidential	34	4%
- Company is never available	5	7%	- No reason given	33	4%
- Company will be liquidated	1	1%	- Returned questionnaire too late	12	1%
			- Participated in other EPO survey	9	1%
			- Questionnaire too complicated	7	1%
			- Other reasons*	14	2%
Total	73	100%	Total	863	100%

1) Without addresses requested by EPO cluster managers

* Costs/too expensive due to external attorney

Table 35: Reasons for non-response – Random (incl. overlapping members of the Biggest group)

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 forecast (possible)/data not available/not known/not gathered (for this entity/in requested structure)/too difficult to find out	23	36	1	1		61
Data confidential (future filing numbers, R&D budgets)	4	10			3	17
Difficult to provide figures for forecast/hard to estimate/data are estimates	7	2	1	1	2	13
More information at www/in annual report					8	8
Electronic questionnaire would be more convenient					5	5
The questionnaire is very time-consuming/high effort to fill in requested data	2				2	4
More information on purpose requested/purpose of single questions not clear					4	4

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 stable/no change expected	7
Future filing numbers will be increasing	6
Future filing numbers will be decreasing	1

8.2 Individual Comments (selection)

8.2.1 Individual comments on the questionnaire/the survey

- Three weeks ago, in Europe we received calls from companies claiming they are working or doing research on behalf of the EPO. This has been an increasing trend.
- Apart from the fact that the table was a bit confusing we got through that.
- Is there any reason why you do not have this document set-up on a secure website where we can go to and fill it in online? This paper approach seems outdated.
- We appreciate that you take the time to do this work.

8.2.2 Individual comments on patenting strategy and development

- Our company has been facing changes concerning inventions for some time. At the moment, we have only few inventions – but this is to be increasing again.
- Our current policy is: first filing before the OEPM (Spain), two months later application before USPTO (most of the inventions), and 12 months later application of PCT (most of them but less than in USPTO). In past years, 2005, 2006, 2007, it was different. This can explain some "anomalies" you could find in the ratio and trends.
- Our company was acquired by xxx, therefore we changed patent filing strategy for foreign countries drastically. At first, we used to be in pro-EP but changed to pro-Asia. Before 2007, we had applied 30% of domestic patent applications at EP. Since this questionnaire asks from the year 2007, our latest change of strategy was not reflected here. Nowadays, each company's strategy changes often by mergers & acquisition. I thought it would be clearer if this questionnaire requires the data since 2002.
- We file approx. 50-60 first filings on a yearly basis. The number has been fairly stable over the years; we do not foresee any large increase or decrease. In the end, we will have somewhere between 5 to 10 national patents in the patent family for each invention. We have previously begun all filing at the EPO, but will now (starting 2008) commence with a PCT filing due to a wider desired coverage
- In the past, we used to be a larger company with 15 patent attorneys. Now we have two patent attorneys. The attorneys handle 15 applications each on average – a total of about 30 US filings. The 30 US cases will be filed PCT next year. We expect no increase of any kind. Our company has been sold. So next year, things could change if the sale goes through.
- The current exchange rate between \$ and Euro is having greatest impact on decisions to file in Europe.
- The number of investments has been exceptionally small in 2007 because of the reorganisation of R&D. In general, we get 20-30 investments per year.
- We are a small company in the UK. This means zero funding for engineering, so any kind of patent is a huge expense. We also cannot afford to defend them. The only point of a patent for us is to prove we are clever and to use this to raise investment funding.

8.2.3 Individual comments on London Agreement

- Lower translation costs – happy when it goes ahead.
- London agreement is a very welcome change.
- London agreement is a good idea. Cost of translations – now cost barrier removed.
- The London Agreement is bad for SMEs but only fits for big concerns.
- The London Agreement only reduces costs superficially. Because of the commitment to renounce translation for FR+DE, applicants with activities in competition monitoring have higher monitoring costs in these countries (because of translating at the cost of the company). Why isn't English, as the language of technology, used in general?
- At the moment, it is hard to recognise the impact of the London Protocol. But we will quantify the cost reduction for validations in Germany and GB.
- Will make it more desirable to file with the EPO.

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

- The purpose of the EPO is to provide protection for intellectual property, for which the annual increase of the number of issued patents is a quantitative measure. The purpose of this research is to find the applicant's most effective considerations that may lead to such increase, which is a simple question to ask. Obviously, the priority goes to cost and lower fees will obviously increase the number of filings. The actual correlation is everybody's guess. Thus, the increase of the excess claims fee was the [worst] decision made, resulting in lesser protection at a higher price. An incredible incentive.
- A European patent application should be valid for all European countries without extra costs.
- The fee increase/decrease causes us to reconsider our patenting strategy.
- A change in fees that affect us the most are the fees/costs of European attorneys and IP firms.
- The EU claims to be a single large trading bloc, but patent validation fees are still collected by each of the 30 odd member countries. This makes the COST of maintaining a patent the single most important consideration for a European patent. We need to see patent selling and maintenance fees reduced and not increased.
- 1. Increasing costs and barriers of making patent applications result in considering alternative methods 2. The EU should think about having a standard patent for the whole community and eliminating all national phases, e.g. USA covering all states, etc. 3. May forego making patent applications in Europe and just making applications in the USA, Japan, China, and Russia 4. Europe is far too expensive.
- Apart from the indicated fees, none of the others has individual influence. It is the overall cost which influences the decision to file or not.
- Please establish lower rates for non-profit institutions.
- Patents and technology protection are critical in our industry both to distinguish our products and secure competitive advantage. Since patent costs are a small part of R&D budgets, we are currently fairly price-insensitive on patenting. The value obtained by patents far outweighs the cost.
- We have quit filings in the EU. Too many fees. Too long process applications.
- If I want to apply for a patent fees are not important. The ability to monitor and exploit the patent is important.
- Promising patents will always be filed.
- A unified European patent enabling a uniform enforcement process is a must. The European patent system is not competitive to us (maintenance access at each state is too much). The European patent system favours large corporations over innovative SMEs.

8.2.5 Individual comments on EPO quality

- We went through a very thorough review recently and the EPO did a very good job. They listened and explained their opposition very well - it worked just as it is supposed to.
- To be honest, I like to deal with the EPO. The standards and quality of work is higher than it is in the USPTO. The EPO carries more respect around the world too - examiners are better qualified.

- Patenting and maintaining patents in Europe is expensive and inconvenient. Once the EPO application is granted, it is a lot of money and admin to translating files in nationals and renew for each country. We have been abandoning many patents for this reason. We need a unified more authoritative EPO to be accepted by Euro nations.
- I have filed for two patents, one in the US and it was rejected, the second in Europe, still in process. My comments: the majority of inventors go through patent lawyers and it is very expensive - the time to get an answer from the patent office is too long.
- The USPTO is much faster and much less expensive to file for a patent.
- Introduction of "Extended Search Report" enabled appropriate revision and patenting but, on the other hand, there is a tendency that the judgment for a similarity between prior literature is a bit assertive. There are many matters on examination that are not proceeded with.
- The time between filing for a patent and the results from the search report at the EPO is too long.
- Examination works slow.
- I wish the EPO could reduce its "backlog" - too much time to process patent applications.
- There are some applications which we are still waiting for, the issue of international search report takes more than one year (they were PCT applications and EPO is intended as review body). Generally, EPO works slow and has tendency to delay, but we did not expect such a long time.
- Rapidly escalating annuities due on applications 5+ years old seems quite unjust, particularly since it is the EPO's delay, not the applicant's (in our experience) which causes cases to remain this long. The escalation of annuities in this manner seems to reward the EPO for being slow. Since many applicants have fixed patent budgets, this policy probably results in fewer filings in the EPO, which probably decreases the stature of the EPO in international patenting. We would like to see a more just annuity structure which does not penalise an applicant for the EPO's delays.

9 Annex III: 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. 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 experimentally been amalgamated into five larger groups for the first time 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 36**.

In this year's report, growth and filing estimates as well as the additional analyses of **Annex VII** to **Annex IX** are also 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 36: Amalgamation of joint clusters to mega clusters

10 Annex IV: Detailed forecasting results

The detailed results of the predictive analysis are shown below. For each forecast, the growth index is given as the composite index (CI) for the Biggest group or as the Q index for the Random group. The number of cases that the forecast is based on and the estimated standard error of the forecast (Q index only) are also shown.

Biggest group
No subsidiary breakdown
Composite indices

			Year					
			2008		2009		2010	
Filing type	Filing route	Res. bloc	Cases 08	Index 08	Cases 09	Index 09	Cases 10	Index 10
First	Euro-direct	Total	65	1.0046	59	1.0678	57	1.1018
	Euro-PCT-IP	Total	50	1.0118	47	0.9860	47	1.0082
Subsequent	Euro-direct	Total	111	1.0449	97	1.0349	90	1.0699
	Euro-PCT-IP	Total	137	1.0240	124	1.0407	118	1.0718

Table 37: Detailed forecasting results (no further breakdown) – Biggest group [used in Table 8]

Biggest group
Breakdown by residence bloc
Composite indices

			Year					
			2008		2009		2010	
Filing type	Filing route	Res. bloc	Cases 08	Index 08	Cases 09	Index 09	Cases 10	Index 10
First	Euro-direct	EP	51	1.0111	45	1.0854	43	1.1174
		JA	9	0.9479	9	0.9658	9	0.9853
		OT	0	1.0046 *	0	1.0678 *	0	1.1018 *
		US	5	1.0046 *	5	1.0678 *	5	1.1018 *
First	Euro-PCT-IP	EP	26	1.0621	24	0.9644	24	0.9813
		JA	14	1.0131	14	1.0399	14	1.0689
		OT	1	1.0118 *	1	0.9860 *	1	1.0082 *
		US	9	0.7826	8	0.8133	8	0.8160
Subsequent	Euro-direct	EP	64	1.0698	52	1.0302	47	1.0572
		JA	31	1.0125	31	1.0617	29	1.0871
		OT	1	1.0449 *	1	1.0349 *	1	1.0699 *
		US	15	1.0160	13	1.0056	13	1.0843
Subsequent	Euro-PCT-IP	EP	77	1.0363	67	1.0151	61	1.0340
		JA	37	1.0507	36	1.1005	36	1.1158
		OT	1	1.0240 *	1	1.0407 *	1	1.0718 *
		US	22	0.9823	20	1.0116	20	1.0711

Table 38: Detailed forecasting results broken down by residence bloc – Biggest group [used in Table 9]

Random group
No subsidiary breakdown
Q-Indices

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct	Total	225	1.0363	0.0302	207	1.1193	0.0327	193	1.1725	0.0362
First	Euro-PCT-IP	Total	146	1.1957	0.0580	141	1.1470	0.0404	133	1.2063	0.0449
Subsequent	Euro-direct	Total	266	1.0050	0.0511	246	1.0289	0.0567	236	1.0709	0.0618
Subsequent	Euro-PCT-IP	Total	389	1.0086	0.0200	359	1.0884	0.0236	341	1.1361	0.0264

Table 39: Detailed forecasting results (no further breakdown) – Random group [used in Table 10]

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct	EP	183	1.0326	0.0366	167	1.1280	0.0409	155	1.1860	0.0451
		JA	17	1.0280	0.0443	16	1.0483	0.0463	16	1.0813	0.0559
		OT	7	0.9944	0.1541	6	1.1541	0.0849	6	1.1559	0.0846
		US	18	1.0915	0.0785	18	1.1323	0.0674	16	1.1917	0.0813
First	Euro-PCT-IP	EP	73	1.3115	0.0871	74	1.1588	0.0603	68	1.2397	0.0682
		JA	35	1.1255	0.0568	31	1.1910	0.0687	31	1.2229	0.0739
		OT	7	1.3761	0.1279	8	1.4846	0.1308	7	1.4504	0.1509
		US	31	0.9655	0.0758	28	1.0103	0.0719	27	1.0679	0.0833
Subsequent	Euro-direct	EP	147	0.9748	0.0829	135	0.9647	0.0935	127	1.0016	0.1024
		JA	70	1.0324	0.0345	69	1.1052	0.0365	67	1.1634	0.0420
		OT	7	1.2221	0.2993	6	1.2784	0.1251	7	1.3243	0.2213
		US	42	1.0595	0.0703	36	1.1229	0.0609	35	1.1415	0.0716
Subsequent	Euro-PCT-IP	EP	198	1.0047	0.0268	183	1.0785	0.0358	167	1.1396	0.0408
		JA	98	1.0671	0.0335	93	1.1118	0.0362	93	1.1496	0.0397
		OT	12	1.2557	0.1139	11	1.6841	0.1212	10	2.0098	0.1968
		US	81	0.9222	0.0523	72	1.0296	0.0464	71	1.0425	0.0506

Table 40: Detailed forecasting results broken down by residence bloc – Random group [used in Table 11 and Table 14]

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

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct+Euro-PCT-IP	Total	140	1.0640	0.0318	126	1.1318	0.0348	123	1.1966	0.0407
Subsequent	Euro-direct+Euro-PCT-IP	Total	299	1.0009	0.0191	270	1.0516	0.0205	261	1.0931	0.0244

Table 41: Detailed forecasting results – Random group, no breakdown, Euro-direct and PCT-IP filings combined [used in Table 12]

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

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct+Euro-PCT-IP	EP	77	1.0657	0.0393	69	1.1306	0.0410	68	1.1967	0.0521
		JA	33	1.0776	0.0572	31	1.1631	0.0681	31	1.1991	0.0736
		OT	6	1.1509	0.0905	6	1.1746	0.0844	6	1.1765	0.0835
		US	24	1.0216	0.1070	20	1.0757	0.1118	18	1.1955	0.1269
Subsequent	Euro-direct+Euro-PCT-IP	EP	136	1.0163	0.0318	123	1.0397	0.0333	115	1.0912	0.0401
		JA	95	1.0449	0.0249	91	1.1198	0.0281	91	1.1640	0.0325
		OT	6	1.1288	0.1593	4	1.4260	0.1581	5	1.7964	0.2636
		US	62	0.8837	0.0404	52	0.9478	0.0361	50	0.9380	0.0472

Table 42: Detailed forecasting results – Random group broken down by residence bloc, Euro-direct and PCT-IP filings combined [used in Table 13]

Random group
Breakdown by residence bloc
Q-indices
First and Subsequent filings combined

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First+Subsequent	Euro-direct	EP	105	0.9822	0.0508	88	1.0248	0.0640	86	1.0723	0.0721
		JA	55	0.9767	0.0316	52	1.0652	0.0347	52	1.1158	0.0395
		OT	5	0.7915	0.2147	4	1.0347	0.0211	4	1.0370	0.0214
		US	32	1.0683	0.0681	27	1.1040	0.0627	27	1.0935	0.0855
First+Subsequent	Euro-PCT-IP	EP	75	1.0489	0.0434	68	1.0742	0.0527	66	1.1178	0.0634
		JA	75	1.0552	0.0288	68	1.0985	0.0333	68	1.1271	0.0377
		OT	4	1.4085	0.1656	4	1.5220	0.1818	3	1.5543	0.2373
		US	61	0.8355	0.0622	51	0.9126	0.0598	49	0.9355	0.0663

Table 43: Detailed forecasting results – Random group broken down by residence bloc, Euro-direct and PCT-IP filings combined [used together with Table 40 in Table 14]

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

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct	Total	86	1.0440	0.0520	72	1.1440	0.0589	68	1.1699	0.0634
First	Euro-PCT-IP	Total	44	1.0906	0.0703	42	1.1311	0.0727	42	1.1507	0.0750
Subsequent	Euro-direct	Total	151	0.9704	0.0808	137	1.0067	0.0855	132	1.0357	0.0909
Subsequent	Euro-PCT-IP	Total	226	0.9811	0.0270	209	1.0326	0.0308	199	1.0803	0.0338

Table 44: Detailed forecasting results (no further breakdown), excluding companies with qualifying comments²¹ – Random group [used in Table 15]

²¹ For details on qualifying comments see section 7.4

Random group
Breakdown by residence bloc ("other" incorporated in EP)
Q-indices

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct	EP/OT	190	1.0316	0.0363	173	1.1287	0.0404	161	1.1851	0.0444
		JA	17	1.0280	0.0443	16	1.0483	0.0463	16	1.0813	0.0559
		US	18	1.0915	0.0785	18	1.1323	0.0674	16	1.1917	0.0813
First	Euro-PCT-IP	EP/OT	80	1.3147	0.0837	82	1.1783	0.0581	75	1.2520	0.0659
		JA	35	1.1255	0.0568	31	1.1910	0.0687	31	1.2229	0.0739
		US	31	0.9655	0.0758	28	1.0103	0.0719	27	1.0679	0.0833
Subsequent	Euro-direct	EP/OT	154	0.9810	0.0823	141	0.9725	0.0926	134	1.0113	0.1010
		JA	70	1.0324	0.0345	69	1.1052	0.0365	67	1.1634	0.0420
		US	42	1.0595	0.0703	36	1.1229	0.0609	35	1.1415	0.0716
Subsequent	Euro-PCT-IP	EP/OT	210	1.0135	0.0268	194	1.0983	0.0360	177	1.1659	0.0419
		JA	98	1.0671	0.0335	93	1.1118	0.0362	93	1.1496	0.0397
		US	81	0.9222	0.0523	72	1.0296	0.0464	71	1.0425	0.0506

Table 45: Detailed forecasting results broken down by residence bloc, "Other" incorporated in EPC – Random group [used in Table 16]

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

			Year								
			2008			2009			2010		
Filing type	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct	EP/OT	73	1.0137	0.0618	61	1.1259	0.0699	57	1.1466	0.0738
		JA	6	1.1420	0.0789	5	1.1842	0.0797	5	1.3077	0.1081
		US	7	1.2167	0.0932	6	1.2621	0.0844	6	1.2516	0.1399
First	Euro-PCT-IP	EP/OT	21	1.2168	0.1093	20	1.1995	0.1120	20	1.2230	0.1160
		JA	11	0.9709	0.0718	10	1.1093	0.1072	10	1.1254	0.1098
		US	12	0.9556	0.1304	12	1.0162	0.1120	12	1.0309	0.1172
Subsequent	Euro-direct	EP/OT	89	0.9343	0.1298	79	0.9311	0.1335	75	0.9570	0.1425
		JA	41	1.0251	0.0488	40	1.1244	0.0522	39	1.1879	0.0576
		US	21	1.0272	0.1027	18	1.1385	0.0669	18	1.1093	0.0842
Subsequent	Euro-PCT-IP	EP/OT	124	0.9886	0.0338	115	1.0264	0.0431	106	1.0944	0.0490
		JA	55	1.0222	0.0479	52	1.0482	0.0525	52	1.0801	0.0569
		US	47	0.9063	0.0782	42	1.0310	0.0677	41	1.0391	0.0732

Table 46: Detailed forecasting results broken down by residence bloc, excluding companies with qualifying comments²², "Other" incorporated in EPC – Random group [used in Table 17]

²² For details on qualifying comments see section 7.4

Biggest group
Breakdown by EPO joint cluster
Composite indices

			Year					
			2008		2009		2010	
Filing type	Filing route	Cluster	Cases 08	Index 08	Cases 09	Index 09	Cases 10	Index 10
First	Euro-direct	Audio, Video & Media	4	1.0046 *	4	1.0678 *	4	1.1018 *
		Biotechnology	15	0.9095	15	0.9667	14	0.9881
		Civil Engineering & Thermodynamics	7	1.0163	7	1.0483	7	1.0804
		Computer	4	1.0046 *	4	1.0678 *	4	1.1018 *
		Electricity & Electrical Machines	15	0.9595	13	1.0077	13	1.0329
		Electronics	12	1.0308	12	1.0607	12	1.0822
		Handling and Processing	6	1.0154	6	1.0359	6	1.0462
		Human Necessities	11	0.9517	10	0.9839	10	1.0141
		Industrial Chemistry	14	0.9816	13	1.0420	13	1.0840
		Measuring, Optics	4	1.0046 *	4	1.0678 *	4	1.1018 *
		Polymers	12	1.0250	10	1.0254	10	1.0277
		Pure & Applied Organic Chemistry	11	0.9100	10	0.9682	10	1.0067
		Telecommunications	7	1.0409	7	1.0537	7	1.0678
		Vehicles & General Technology	11	0.9974	11	1.0467	11	1.0533
First	Euro-PCT-IP	Audio, Video & Media	2	1.0118 *	2	0.9860 *	2	1.0082 *
		Biotechnology	6	1.0816	5	0.9860 *	5	1.0082 *
		Civil Engineering & Thermodynamics	8	0.7885	8	0.8522	8	0.8844
		Computer	3	1.0118 *	3	0.9860 *	3	1.0082 *
		Electricity & Electrical Machines	11	0.9544	11	0.9842	11	1.0190
		Electronics	12	1.0605	12	0.9955	12	1.0205
		Handling and Processing	4	1.0118 *	4	0.9860 *	4	1.0082 *
		Human Necessities	8	1.0290	7	1.0066	7	1.1003
		Industrial Chemistry	8	0.9620	7	1.0213	7	1.0681
		Measuring, Optics	3	1.0118 *	3	0.9860 *	3	1.0082 *
		Polymers	8	1.0250	8	1.0600	8	1.0900
		Pure & Applied Organic Chemistry	7	1.0114	6	1.0349	6	1.0465
		Telecommunications	6	1.0136	6	0.9399	6	0.9611
		Vehicles & General Technology	12	0.8114	12	0.8465	12	0.8469
Subsequent	Euro-direct	Audio, Video & Media	10	0.9797	10	1.0093	10	1.0360
		Biotechnology	15	1.0423	13	0.9846	13	0.9728
		Civil Engineering & Thermodynamics	13	0.9981	12	0.9935	10	1.0326
		Computer	8	0.9464	8	0.9929	7	1.0268
		Electricity & Electrical Machines	23	1.0447	22	1.0376	21	1.0976
		Electronics	16	1.1502	16	1.0944	15	1.1250
		Handling and Processing	17	0.9898	17	1.0114	15	1.0417
		Human Necessities	20	0.9535	18	0.9758	17	0.9878
		Industrial Chemistry	19	1.0077	18	0.9918	17	1.1268
		Measuring, Optics	12	1.0410	12	1.0282	11	1.0999
		Polymers	12	1.0036	10	0.9991	10	1.0854
		Pure & Applied Organic Chemistry	14	0.9773	14	0.9795	14	0.9665
		Telecommunications	14	1.0958	13	1.0597	12	1.0772
		Vehicles & General Technology	27	1.0590	24	1.0910	24	1.1162
Subsequent	Euro-PCT-IP	Audio, Video & Media	11	0.9861	11	0.9913	11	0.9997
		Biotechnology	25	0.9507	24	0.8842	23	0.9005
		Civil Engineering & Thermodynamics	16	1.2135	15	1.3359	13	1.4321
		Computer	7	0.9986	7	1.0359	7	1.0684
		Electricity & Electrical Machines	23	1.0363	22	1.0783	21	1.1241
		Electronics	18	0.8725	18	0.9341	18	0.9744
		Handling and Processing	14	1.1066	14	1.1716	13	1.2749
		Human Necessities	24	0.9730	22	0.9679	21	1.0095
		Industrial Chemistry	21	1.0583	20	1.1453	19	1.2151
		Measuring, Optics	9	1.1635	9	1.2314	9	1.3206
		Polymers	17	0.9367	15	0.9926	15	1.0645
		Pure & Applied Organic Chemistry	27	0.8718	26	0.9040	26	0.9654
		Telecommunications	17	0.8712	17	0.9183	17	0.9396
		Vehicles & General Technology	28	1.1502	26	1.2534	26	1.3353

Table 47: Detailed forecasting results broken down by joint cluster – Biggest group [used in Table 18 and Table 18 (part II)]

Random group
Breakdown by EPO joint cluster
Q-indices

Filing type	Filing route	Cluster	Year								
			2008			2009			2010		
			Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct	Audio, Video & Media	19	1.0620	0.0682	16	1.1037	0.0646	15	1.1510	0.0852
		Biotechnology	38	0.9110	0.1038	37	0.9975	0.1554	35	1.0500	0.1683
		Civil Engineering & Thermodynamics	30	1.0653	0.1247	27	1.2512	0.1415	24	1.3299	0.1526
		Computer	14	1.1154	0.0925	13	1.0930	0.0883	13	1.1056	0.0967
		Electricity & Electrical Machines	30	1.0370	0.0861	23	1.0411	0.0901	22	1.0699	0.1023
		Electronics	31	1.1200	0.0771	31	1.0835	0.0882	28	1.1682	0.1038
		Handling and Processing	17	1.0384	0.1048	18	1.1449	0.0862	17	1.1945	0.1109
		Human Necessities	33	1.0640	0.2016	31	1.0448	0.2150	30	1.0593	0.2206
		Industrial Chemistry	31	1.0139	0.0789	23	1.1282	0.0815	23	1.1905	0.0875
		Measuring, Optics	17	1.0665	0.1004	16	1.1301	0.1424	16	1.2031	0.1877
		Polymers	29	1.0367	0.1016	25	1.0961	0.0730	22	1.1683	0.0831
		Pure & Applied Organic Chemistry	28	0.9407	0.1163	26	0.9732	0.1898	25	1.0241	0.2009
		Telecommunications	26	1.0785	0.0589	24	1.0938	0.0654	24	1.1113	0.0715
		Vehicles & General Technology	23	1.0776	0.1710	25	1.1679	0.1671	22	1.3469	0.1541
		Audio, Video & Media	11	1.0672	0.1255	11	1.1635	0.1860	8	1.1823	0.2197
		Biotechnology	19	1.3920	0.2405	16	1.0796	0.1134	15	1.1305	0.1280
		Civil Engineering & Thermodynamics	13	1.4382	0.2801	13	1.1162	0.2035	11	1.1481	0.2275
First	Euro-PCT-IP	Computer	12	1.0784	0.1628	12	1.2399	0.2220	11	1.2839	0.2651
		Electricity & Electrical Machines	25	1.2463	0.1416	25	1.3480	0.1459	23	1.3694	0.1602
		Electronics	23	1.2575	0.1396	23	1.2940	0.1381	21	1.3330	0.1551
		Handling and Processing	12	1.6833	0.2844	13	1.7163	0.2692	11	1.7862	0.3153
		Human Necessities	19	1.2072	0.1261	18	1.2378	0.1704	17	1.2092	0.1759
		Industrial Chemistry	20	1.4768	0.2108	18	1.2788	0.1481	16	1.3715	0.1650
		Measuring, Optics	10	1.0979	0.1696	9	1.2787	0.2485	8	1.3646	0.3328
		Polymers	18	1.4253	0.2289	16	1.2488	0.1153	14	1.3141	0.1430
		Pure & Applied Organic Chemistry	19	1.4184	0.2209	15	1.2136	0.1602	14	1.2535	0.1921
		Telecommunications	18	1.1941	0.1466	17	1.2429	0.1626	16	1.2410	0.1677
		Vehicles & General Technology	23	1.1234	0.1948	23	1.2172	0.2003	21	1.3314	0.2186
Subsequent	Euro-direct	Audio, Video & Media	23	0.7010	0.3483	24	0.7397	0.3858	24	0.7702	0.4017
		Biotechnology	31	1.1071	0.1710	26	0.9157	0.1915	25	0.9126	0.2006
		Civil Engineering & Thermodynamics	31	1.0575	0.0465	27	1.1287	0.1037	24	1.3282	0.1325
		Computer	24	0.9763	0.0502	20	1.0158	0.0701	20	1.0306	0.0787
		Electricity & Electrical Machines	55	0.9964	0.0425	49	1.0078	0.0567	46	1.0732	0.0793
		Electronics	37	1.0191	0.0636	34	1.0162	0.0588	32	1.0569	0.0717
		Handling and Processing	37	1.2075	0.0831	37	1.2359	0.0822	37	1.3237	0.0942
		Human Necessities	40	1.0161	0.0918	37	1.0190	0.0867	36	1.0667	0.0921
		Industrial Chemistry	35	1.1193	0.0571	31	1.2294	0.0860	30	1.2638	0.1082
		Measuring, Optics	30	1.0820	0.0859	27	1.0900	0.0970	27	1.1616	0.1301
		Polymers	26	1.0420	0.0787	22	1.1722	0.0947	20	1.2481	0.0960
		Pure & Applied Organic Chemistry	27	0.9893	0.0959	23	1.0003	0.1781	23	0.9979	0.1829
		Telecommunications	38	0.8294	0.2393	34	0.8168	0.2573	33	0.8348	0.2690
		Vehicles & General Technology	62	1.0493	0.0693	58	1.1509	0.0753	56	1.2400	0.0949
Subsequent	Euro-PCT-IP	Audio, Video & Media	31	1.0196	0.0728	31	1.0435	0.0771	30	1.0465	0.0772
		Biotechnology	79	0.9864	0.0624	74	1.0567	0.0809	69	1.0965	0.0870
		Civil Engineering & Thermodynamics	37	0.9718	0.0678	32	1.2160	0.1153	28	1.2941	0.1453
		Computer	30	0.9341	0.0806	27	1.0165	0.0661	26	1.0061	0.0691
		Electricity & Electrical Machines	67	1.0532	0.0564	62	1.1972	0.0886	57	1.2421	0.1050
		Electronics	45	0.9789	0.0594	42	1.1069	0.0681	40	1.1330	0.0794
		Handling and Processing	43	1.0271	0.0747	45	1.0866	0.0737	44	1.1316	0.0902
		Human Necessities	74	0.9874	0.0537	69	1.0525	0.0564	66	1.0613	0.0587
		Industrial Chemistry	65	1.0450	0.0801	55	1.2405	0.0924	51	1.2770	0.0923
		Measuring, Optics	34	1.0128	0.0715	31	1.1167	0.0913	30	1.1498	0.1268
		Polymers	52	1.0140	0.0594	44	1.1251	0.0827	41	1.2149	0.0768
		Pure & Applied Organic Chemistry	72	0.9939	0.0480	66	1.1160	0.0610	63	1.1403	0.0600
		Telecommunications	48	0.9825	0.0485	45	1.0281	0.0621	44	1.0422	0.0687
		Vehicles & General Technology	68	1.1040	0.0790	66	1.1788	0.0936	63	1.2682	0.1055

Table 48: Detailed forecasting results broken down by joint cluster – Random group [used in Table 19 parts I and II]

Biggest group
Breakdown by EPO joint mega cluster
Composite indices

			Year					
			2008		2009		2010	
Filing type	Filing route	Mega Cluster	Cases 08	Index 08	Cases 09	Index 09	Cases 10	Index 10
First	Euro-direct	Electricity	20	1.0124	18	1.0639	18	1.0838
		Organic Chemistry	19	0.9526	18	1.0156	17	1.0583
		Inorganic Chemistry	20	1.0039	18	1.0527	18	1.0870
		ICT	11	1.0257	11	1.0390	11	1.0513
		Traditional	23	0.9663	22	1.0208	22	1.0503
First	Euro-PCT-IP	Electricity	18	1.0108	18	0.9584	18	0.9792
		Organic Chemistry	9	1.0450	7	1.0430	7	1.0538
		Inorganic Chemistry	12	0.9881	11	1.0360	11	1.0743
		ICT	8	1.0112	8	0.9460	8	0.9647
		Traditional	21	0.8599	20	0.8886	20	0.9049
Subsequent	Euro-direct	Electricity	32	1.0984	31	1.0589	30	1.0883
		Organic Chemistry	20	1.0307	18	0.9876	18	0.9792
		Inorganic Chemistry	24	0.9985	21	0.9976	20	1.0871
		ICT	19	1.0720	18	1.0424	17	1.0575
		Traditional	59	1.0066	53	1.0326	48	1.0717
Subsequent	Euro-PCT-IP	Electricity	34	0.9359	33	0.9888	32	1.0348
		Organic Chemistry	37	0.9818	35	0.9539	34	0.9912
		Inorganic Chemistry	29	0.9471	26	1.0091	25	1.0671
		ICT	22	0.8851	22	0.9277	22	0.9472
		Traditional	62	1.0312	57	1.0618	53	1.1133

Table 49: Detailed forecasting results broken down by mega cluster – Biggest group [used in Table 20]

Random group
Breakdown by EPO joint mega cluster
Q-indices

			Year								
			2008			2009			2010		
Filing type	Filing route	Cluster	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	Euro-direct	Electricity	52	1.0973	0.0690	48	1.1274	0.0811	45	1.2174	0.0993
		Organic Chemistry	50	0.9668	0.0933	47	1.0612	0.1304	45	1.1209	0.1426
		Inorganic Chemistry	48	1.0330	0.0743	39	1.0972	0.0653	36	1.1658	0.0718
		ICT	44	1.0529	0.0540	40	1.0853	0.0549	39	1.1130	0.0624
		Traditional	82	1.0042	0.0852	82	1.0789	0.0987	74	1.1495	0.1067
First	Euro-PCT-IP	Electricity	38	1.2245	0.1075	38	1.2750	0.1101	35	1.3460	0.1335
		Organic Chemistry	28	1.2945	0.2256	23	1.1154	0.1253	22	1.1740	0.1430
		Inorganic Chemistry	27	1.3806	0.2077	25	1.2039	0.1076	22	1.2763	0.1230
		ICT	27	1.1657	0.1218	28	1.2198	0.1327	25	1.2462	0.1450
		Traditional	51	1.3976	0.1585	50	1.2690	0.1292	46	1.3600	0.1401
Subsequent	Euro-direct	Electricity	79	1.0452	0.0513	72	1.0618	0.0602	70	1.1278	0.0778
		Organic Chemistry	42	1.0930	0.1316	36	1.0037	0.1372	35	1.0115	0.1425
		Inorganic Chemistry	46	1.0586	0.0558	41	1.1843	0.0681	38	1.2346	0.0853
		ICT	51	0.8456	0.2041	46	0.8515	0.2236	46	0.8693	0.2305
		Traditional	134	1.0526	0.0429	122	1.1120	0.0510	116	1.2091	0.0617
Subsequent	Euro-PCT-IP	Electricity	93	1.0195	0.0538	87	1.1842	0.0712	82	1.2358	0.0865
		Organic Chemistry	110	1.0118	0.0530	102	1.1131	0.0651	97	1.1456	0.0676
		Inorganic Chemistry	85	1.0377	0.0657	73	1.1706	0.0801	67	1.2402	0.0766
		ICT	69	0.9453	0.0507	66	1.0057	0.0529	65	1.0191	0.0584
		Traditional	166	1.0143	0.0419	156	1.1144	0.0523	148	1.1697	0.0586

Table 50: Detailed forecasting results broken down by mega cluster – Random group [used in Table 21]

Biggest group
Breakdown by residence bloc
Composite indices

			Year					
			2008		2009		2010	
			Cases 08	Index 08	Cases 09	Index 09	Cases 10	Index 10
EPO	Euro-PCT-RP	EP	80	1.0118	74	1.0132	69	1.0016
		JA	43	1.1353	39	1.1729	39	1.2585
		OT	1	1.0473 *	1	1.0842 *	1	1.1084 *
		US	22	1.0542	20	1.1822	20	1.2354
EPO	Euro-PCT-RP	Total	146	1.0473	134	1.0842	129	1.1084

Table 51: Detailed forecasting results for PCT applications entering the regional phase at the EPO – Biggest group [used in Table 24 and Table 25]

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2008			2009			2010		
			Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
EPO	Euro-PCT-RP	EP	240	1.0443	0.0384	225	1.1015	0.0407	213	1.1080	0.0514
		JA	100	1.0514	0.0452	90	1.1426	0.0556	91	1.2014	0.0543
		OT	17	1.0834	0.1112	13	1.4150	0.1457	14	1.4509	0.1516
		US	79	1.0764	0.0579	74	1.0965	0.0720	72	1.1729	0.0786
EPO	Euro-PCT-RP	Total	436	1.0527	0.0264	402	1.1169	0.0303	390	1.1500	0.0358

Table 52: Detailed forecasting results for PCT applications entering the regional phase at the EPO – Random group [used in Table 26 and Table 27]

Random group
Breakdown by EPO Joint Cluster
Q-indices

			Year								
			2008			2009			2010		
			Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
EPO	Euro-PCT-RP	Audio, Video & Media	28	0.9539	0.1445	25	1.0438	0.2081	23	1.1045	0.2514
		Biotechnology	80	1.1155	0.1254	77	1.0982	0.1309	76	1.1350	0.1819
		Civil Engineering & Thermodynamics	50	1.0746	0.1367	44	1.0696	0.1393	40	1.0711	0.2298
		Computer	24	1.0412	0.1894	22	1.1568	0.2229	22	1.1708	0.2639
		Electricity & Electrical Machines	62	1.0925	0.0821	55	1.1274	0.1204	53	1.2719	0.1402
		Electronics	47	1.0101	0.0776	42	1.0436	0.1158	41	1.1554	0.1132
		Handling and Processing	46	1.0834	0.1536	46	1.1645	0.1653	45	1.2212	0.1733
		Human Necessities	72	1.0700	0.1281	67	1.0975	0.1338	66	1.1077	0.1387
		Industrial Chemistry	66	1.1426	0.1393	59	1.1745	0.1606	57	1.1394	0.2103
		Measuring, Optics	34	1.1545	0.2190	32	1.3400	0.2373	32	1.3785	0.2462
		Polymers	55	1.1865	0.1200	48	1.1111	0.1582	47	1.1258	0.2369
		Pure & Applied Organic Chemistry	75	1.0723	0.0996	70	1.0315	0.0990	67	1.0416	0.1514
		Telecommunications	47	1.0887	0.1366	44	1.1063	0.1669	44	1.1873	0.1849
		Vehicles & General Technology	79	1.0807	0.1055	71	1.2279	0.1258	70	1.3241	0.1413

Table 53: Detailed forecasting results for PCT applications entering the regional phase at the EPO broken down by joint cluster – Random group [used in Table 28]

11 Annex V: 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 (k) to (m) in **Section B** of the questionnaire (**Annex I, Section 7**).

National applications by country based on the Random group are presented in **Table 54** and **Table 55**. Forecasts based on the Random group for PCT national phase applications at USPTO, JPO, and DPMA (German Patent Office) are displayed in **Table 56** to **Table 58**. The tables are limited to calculating growth indices as up-to-date filings numbers are not generally available for the base year from all the offices concerned.

As in previous surveys, the intentions expressed towards national applications to various offices are fairly flat with slight increases by 2010. An exception is subsequent filings to the United Kingdom from applicants residing in Japan, where **Table 55** shows an estimated growth rate from 2007 of 2.4 for 2008, then moderating slightly in 2009 and 2010. These particular growth estimates may not be particularly dependable because they are based on very small numbers of respondents and have high standard errors.

Random Group
No breakdown
Q Indices

				Year								
				2008			2009			2010		
Filings type	Filing route	Nation	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	National	Germany (c)	Total	126	0.9398	0.0866	115	1.0448	0.0461	107	1.0601	0.0473
		United Kingdom (d)	Total	42	0.8958	0.0879	36	0.8799	0.1132	32	0.8691	0.1389
		France (e)	Total	48	1.0853	0.0635	43	1.1316	0.0649	38	1.1386	0.0686
		Japan (f)	Total	151	1.0204	0.0521	140	1.0950	0.0369	134	1.1065	0.0381
		United States (g)	Total	247	0.9830	0.0419	228	1.0820	0.0288	218	1.1397	0.0317
		Other Countries (h)	Total	116	1.0147	0.0863	102	1.0513	0.0969	95	1.0960	0.1089
		Worldwide total (i)	Total	594	1.0021	0.0169	545	1.0640	0.0185	519	1.1127	0.0236
Subsequent	National	Germany (c)	Total	71	0.9717	0.1147	61	1.0973	0.0745	58	1.1315	0.0869
		United Kingdom (d)	Total	41	1.3095	0.1946	40	1.2626	0.1379	37	1.3544	0.1480
		France (e)	Total	39	1.0532	0.1364	38	1.0438	0.1704	36	1.1428	0.1834
		Japan (f)	Total	141	0.9791	0.0416	127	1.0709	0.0475	125	1.1101	0.0523
		United States (g)	Total	248	0.9633	0.0388	225	1.0062	0.0299	218	1.0405	0.0340
		Other Countries (h)	Total	201	0.9808	0.0433	180	1.1019	0.0402	174	1.1412	0.0423

Table 54: Detailed forecasting results for national applications (excluding PCT), no breakdown – Random group

Random Group
Breakdown by residence bloc
Q Indices

Filings type	Filing route	Nation	Res. bloc	Year								
				2008			2009			2010		
				Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
First	National	Germany (c)	EP	105	0.9664	0.0830	95	1.0663	0.0363	89	1.1078	0.0366
			JA	7	1.1263	0.0925	7	1.2058	0.0940	6	1.1600	0.1061
			OT	2	0.9398 *	0.0866 *	1	1.0448 *	0.0461 *	0	1.0601 *	0.0473 *
			US	12	0.6781	0.4730	12	0.8310	0.2471	12	0.7665	0.2163
		United Kindom (d)	EP	31	0.8549	0.1078	26	0.8051	0.1305	24	0.7915	0.1625
			JA	4	0.8958 *	0.0879 *	3	0.8799 *	0.1132 *	3	0.8691 *	0.1389 *
			OT	1	0.8958 *	0.0879 *	1	0.8799 *	0.1132 *	0	0.8691 *	0.1389 *
			US	6	1.1333	0.2642	6	1.3503	0.2317	5	0.8691 *	0.1389 *
		France (e)	EP	40	1.0978	0.0747	37	1.1405	0.0741	33	1.1471	0.0781
			JA	2	1.0853 *	0.0635 *	1	1.1316 *	0.0649 *	1	1.1386 *	0.0686 *
			OT	1	1.0853 *	0.0635 *	1	1.1316 *	0.0649 *	0	1.1386 *	0.0686 *
			US	5	1.0853 *	0.0635 *	4	1.1316 *	0.0649 *	4	1.1386 *	0.0686 *
		Japan (f)	EP	17	0.9632	0.1459	15	1.2357	0.0885	13	1.2368	0.0956
			JA	120	1.0232	0.0230	112	1.0429	0.0268	109	1.0646	0.0302
			OT	3	1.0204 *	0.0521 *	3	1.0950 *	0.0369 *	2	1.1065 *	0.0381 *
			US	11	1.2428	0.3854	10	1.2762	0.3303	10	1.2240	0.3175
		United States (g)	EP	96	0.9677	0.0810	87	1.1000	0.0517	79	1.1875	0.0588
			JA	42	1.0264	0.0561	39	1.1153	0.0655	39	1.1809	0.0706
			OT	12	1.2307	0.0975	11	1.3261	0.1175	10	1.3871	0.1356
			US	97	0.9604	0.0332	91	1.0217	0.0325	90	1.0443	0.0359
		Other Countries (h)	EP	70	0.9837	0.1343	62	0.9946	0.1443	57	1.0328	0.1632
			JA	20	1.1747	0.0693	18	1.3302	0.0884	18	1.4189	0.1085
			OT	9	0.9010	0.1888	7	0.9944	0.2829	6	0.9953	0.3384
			US	17	1.0006	0.0752	15	1.0244	0.0653	14	1.0537	0.0652
		Worldwide total (i)	EP	341	0.9957	0.0251	309	1.0602	0.0227	290	1.1100	0.0257
			JA	127	1.0246	0.0288	120	1.0787	0.0490	118	1.1300	0.0709
			OT	21	1.0784	0.0717	19	1.2102	0.0920	17	1.3095	0.1037
			US	105	0.9805	0.0322	97	1.0346	0.0326	94	1.0712	0.0359
Subsequent	National	Germany (c)	EP	30	0.8731	0.1780	25	1.0753	0.1599	24	1.1113	0.1882
			JA	25	1.0022	0.0859	22	1.0599	0.0618	21	1.0708	0.0668
			OT	2	0.9717 *	0.1147 *	1	1.0973 *	0.0745 *	0	1.1315 *	0.0869 *
			US	14	1.2948	0.1619	13	1.2386	0.1303	13	1.2929	0.1338
		United Kindom (d)	EP	18	1.2768	0.1340	18	1.3294	0.1336	18	1.4423	0.1294
			JA	8	2.4265	0.4543	7	1.7181	0.3310	7	1.7181	0.3310
			OT	1	1.3095 *	0.1946 *	1	1.2626 *	0.1379 *	0	1.3544 *	0.1480 *
			US	14	0.8717	0.2784	14	0.9894	0.2523	12	1.0477	0.3024
		France (e)	EP	20	0.8242	0.1632	19	0.7712	0.2453	19	0.8545	0.2567
			JA	8	1.8453	0.2843	8	1.8744	0.2804	8	2.0041	0.2821
			OT	1	1.0532 *	0.1364 *	1	1.0438 *	0.1704 *	0	1.1428 *	0.1834 *
			US	10	1.0306	0.1835	10	1.0789	0.2108	9	1.1939	0.2746
		Japan (f)	EP	59	1.0355	0.0520	55	1.1398	0.0697	53	1.1860	0.0767
			JA	55	1.0472	0.0579	50	1.1085	0.0652	50	1.1677	0.0728
			OT	5	0.9791 *	0.0416 *	4	1.0709 *	0.0475 *	4	1.1101 *	0.0523 *
			US	22	0.7242	0.1457	18	0.8283	0.1422	18	0.8393	0.1537
		United States (g)	EP	120	0.9962	0.0628	109	1.0208	0.0366	103	1.0614	0.0439
			JA	68	1.0594	0.0446	64	1.1211	0.0504	63	1.1509	0.0579
			OT	10	0.8137	0.1237	7	1.0789	0.0291	7	1.0409	0.0796
			US	50	0.7887	0.0698	45	0.8258	0.0877	45	0.8627	0.0945
		Other Countries (h)	EP	89	0.9841	0.0707	79	1.1937	0.0675	75	1.2512	0.0704
			JA	69	1.0540	0.0697	66	1.1251	0.0553	64	1.1661	0.0633
			OT	6	0.6625	0.1223	5	1.1019 *	0.0402 *	5	1.1412 *	0.0423 *
			US	37	0.8892	0.0833	30	0.9036	0.1000	30	0.9278	0.1005

Table 55: Detailed forecasting results for national applications (excluding PCT), broken down by residence bloc – Random group

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2008			2009			2010		
Patent Office	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
USPTO	PCT National	EP	187	1.0036	0.0407	175	1.0678	0.0507	166	1.0518	0.0633
		JA	102	1.0845	0.0569	91	1.1889	0.0691	92	1.2326	0.0661
		OT	12	0.9490	0.1608	10	1.3706	0.1875	11	1.3357	0.2104
		US	49	1.2684	0.1007	45	1.2521	0.0930	44	1.2976	0.1126
USPTO	PCT National	Total	350	1.0597	0.0327	321	1.1312	0.0392	313	1.1405	0.0466

Table 56: Detailed forecasting results for PCT applications entering the national phase at USPTO – Random group

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2008			2009			2010		
Patent Office	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
JPO	PCT National	EP	144	1.0162	0.0388	132	1.0643	0.0534	125	1.0453	0.0674
		JA	88	1.0624	0.0602	79	1.2010	0.0644	80	1.2376	0.0602
		OT	13	1.1327	0.1144	10	1.5457	0.1678	11	1.5444	0.2014
		US	61	1.0064	0.0496	53	1.0891	0.0628	53	1.1432	0.0702
JPO	PCT National	Total	306	1.0310	0.0278	274	1.1164	0.0366	269	1.1287	0.0435

Table 57: Detailed forecasting results for PCT applications entering the national phase at JPO – Random group

Random group
Breakdown by residence bloc
Q-indices

			Year								
			2008			2009			2010		
Patent Office	Filing route	Res. bloc	Cases 08	Q-index 08	S.E. 08	Cases 09	Q-index 09	S.E. 09	Cases 10	Q-index 10	S.E. 10
DPMA	PCT National	EP	45	0.6756	0.4981	40	0.9750	0.0834	40	0.9988	0.0976
		JA	28	1.0695	0.1063	24	1.2554	0.1439	24	1.1862	0.1219
		OT	3	1.3413	0.1739	3	2.0035	0.4003	3	2.2937	0.3728
		US	11	0.8082	0.2097	9	1.0418	0.2344	9	1.1336	0.1856
DPMA	PCT National	Total	87	0.7973	0.2994	76	1.0767	0.0739	76	1.0871	0.0791

Table 58: Detailed forecasting results for PCT applications entering the national phase at DPMA – Random group

12 Annex VI: Respondent profile

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 applicants' business, and the year of foundation of the company.

12.1 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.

12.2 Respondents from the Biggest group

The majority of companies in the Biggest group were founded in the first half of the twentieth century. Over 96% of the respondents are private enterprises. More than 90% have more than 1,000 employees, with 46% employing more than 10,000 people.

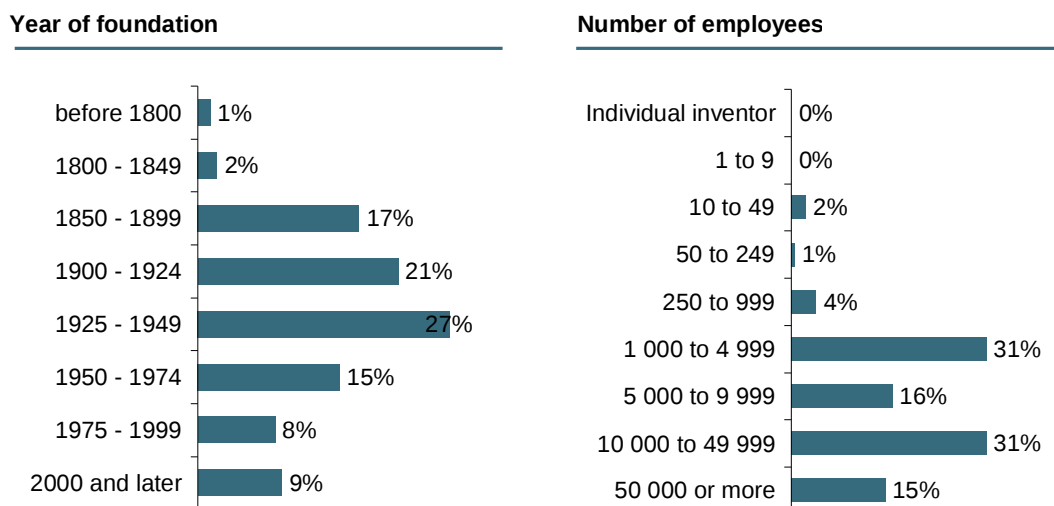


Figure 9: Biggest group by year of foundation and numbers of employees

Broken down by residence bloc, the distributions are as shown in the following two 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%	2%	17%	21%	27%	15%	8%	9%	100%	147
EP	1%	3%	21%	20%	20%	11%	13%	10%	100%	70
JA	0%	0%	5%	22%	42%	25%	2%	4%	100%	55
OT	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0
US	5%	5%	32%	23%	9%	0%	9%	18%	100%	22

Table 59: 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%	2%	1%	4%	31%	16%	31%	15%	100%	174
EP	0%	0%	4%	1%	5%	25%	17%	32%	15%	100%	92
JA	0%	0%	0%	0%	4%	51%	18%	21%	7%	100%	57
OT	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	1
US	0%	0%	0%	0%	0%	8%	4%	54%	33%	100%	24

Table 60: Biggest group by number of employees and residence bloc

12.3 Respondents from the Random group

In the Random group, nearly 92% of the respondents are private enterprises. 40% of the companies were founded in 1975 or later, 35% percent were founded between 1925 and 1974 and the remaining 25% were founded before 1925. Only 44% were founded in the first half of the 20th century, which makes an interesting contrast to the Biggest group.

In terms of the numbers of employees, most companies in the Random group have more than 1,000 employees, accounting for 55% of the group sample. However, the profile regarding the number of employees is more evenly distributed compared to the Biggest group distribution. As in previous years, the Random group contains a larger proportion of small companies than the Biggest group does. There was no individual inventor from Japan in the Random group.

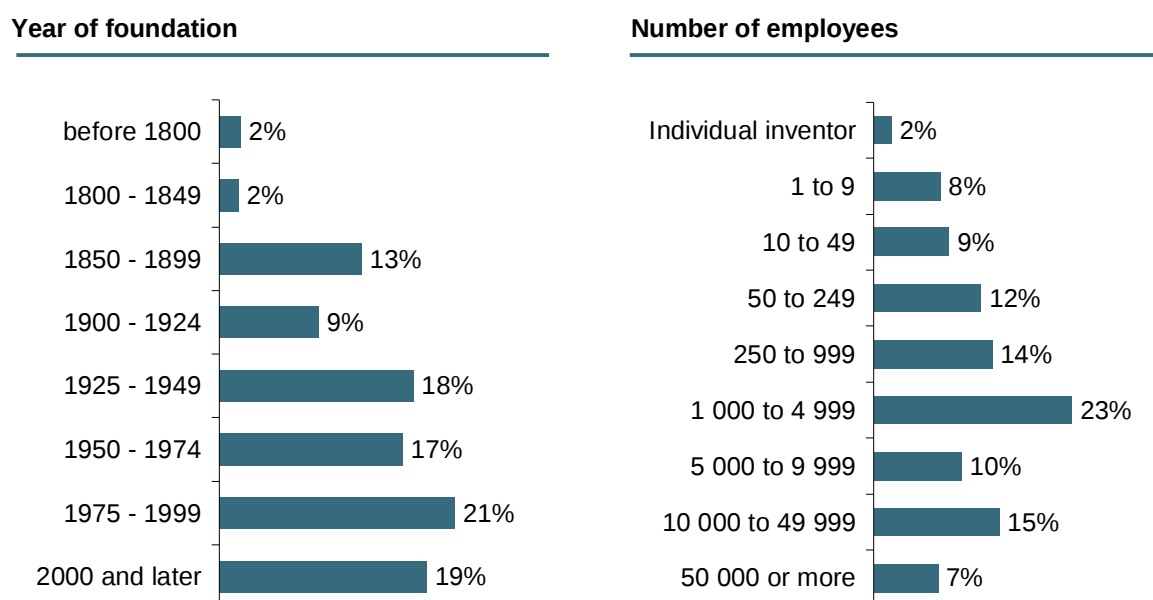


Figure 10: Random group by year of foundation and number of employees

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	2%	2%	13%	9%	18%	17%	21%	19%	100%	511
EP	3%	2%	15%	6%	12%	15%	28%	19%	100%	283
JA	0%	1%	8%	18%	36%	21%	5%	11%	100%	137
OT	0%	0%	0%	0%	0%	21%	36%	43%	100%	14
US	3%	3%	17%	6%	9%	13%	23%	26%	100%	77

Table 61: 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%	8%	9%	12%	14%	23%	10%	15%	7%	100%	618
EP	3%	10%	10%	15%	17%	19%	7%	12%	7%	100%	351
JA	0%	1%	1%	5%	12%	39%	18%	15%	8%	100%	142
OT	4%	9%	35%	17%	0%	13%	13%	4%	4%	100%	23
US	1%	8%	8%	14%	8%	16%	10%	26%	10%	100%	102

Table 62: Random group broken down by persons employed and residence bloc

12.4 Estimated composition of the population of EPO applicants

Useful statistics to describe the populations of applicants and applications can be drawn from the Random group. Estimating the composition of the population of EPO applicants from the Random group fundamentally follows the *extended structural weights* procedure described in the *Applicant Panel Survey 2006 report*²³ to reduce the skewness of the sample towards larger applicants.

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 bloc of residence; and SRSS, which is the sample response rate by size class per bloc of residence.

Table 63 shows an excerpt of bloc-wise PopProb values for filing counts up to 40. The matrix becomes more sparse as filing counts increase further. This year, as in 2007, bloc-specific probabilities are used, whereas in 2006, the values of the "Total" column were used to calculate PopProb. The bloc-wise approach reflects important differences in applicant structure by residence bloc.

Table 64 shows bloc-wise SRSS values based on filing count class. Filing count classes are defined by a range of filing counts from lower bound ("lb") to upper bound ("ub"). This year, as in 2007, bloc-specific SRSS values were used, whereas in 2006, the values of the "Total" column were used to calculate SRSS. Even more so than for the PopProb values, there are pronounced differences between blocs.

²³ Cf. Applicant Panel Survey 2006 report: p. 18.

²⁴ Cf. Applicant Panel Survey 2007 report, Annex VII, p. 110.

count	EP	JP	OT	US	TOTAL
1	0.68229867	0.518877	0.744729	0.640704	0.6671286
2	0.13472996	0.14133	0.126686	0.143624	0.13654
3	0.05405535	0.071834	0.049573	0.06602	0.0580024
4	0.03156833	0.046442	0.019753	0.034846	0.0319996
5	0.02037286	0.030738	0.012156	0.022603	0.0206612
6	0.01316548	0.023054	0.010066	0.014127	0.0137573
7	0.00864886	0.016037	0.004179	0.010171	0.0090204
8	0.00696713	0.014367	0.005508	0.008099	0.0076345
9	0.00566981	0.010692	0.003799	0.007063	0.0061732
10	0.00451663	0.008353	0.001899	0.006028	0.0048629
11	0.00365174	0.007685	0.002279	0.004709	0.0040566
12	0.00240246	0.00735	0.00114	0.003485	0.0028976
13	0.002931	0.008687	0.00095	0.003014	0.0031244
14	0.00249856	0.005012	0.00114	0.003861	0.0028724
15	0.00245051	0.004678	0.00057	0.00292	0.0024945
16	0.00158562	0.004678	0.00076	0.002072	0.0018393
17	0.00120123	0.004009	0.00076	0.001413	0.001411
18	0.00124928	0.003675	0.00095	0.001978	0.0015874
19	0.00139343	0.004678	0.00095	0.001319	0.0015622
20	0.00086489	0.003341	0.00057	0.001413	0.001159
21	0.00091293	0.001336	0.00019	0.001224	0.0009323
22	0.00052854	0.002673	0.00019	0.000659	0.0006803
23	0.00067269	0.001671	0.00038	0.000848	0.0007559
24	0.00062464	0.003675	0.00019	0.000659	0.0008063
25	0.00081684	0.002005	0.00038	0.00113	0.0009323
26	0.00033634	0.002005	0.00038	0.000565	0.0005291
27	0.00033634	0.001336	0.00019	0.000753	0.0005039
28	0.00067269	0.001671	0.00038	0.000283	0.0006047
29	0.00033634	0.001002	0.00076	0.000753	0.0005543
30	0.00048049	0.000334	0.00057	0.000942	0.0006047
31	0.00038439	0.001336	0.00057	0.000659	0.0005543
32	0.00043244	0.001336	0.00019	0.000283	0.0004283
33	0.0002883	0.001002	0.00019	0.000753	0.0004535
34	0.00052854	0.001002	0.00038	0.000377	0.0005039
35	0.00024025	0.001002	0	0.000471	0.0003276
36	0.00033634	0.001336	0.00038	9.42E-05	0.0003528
37	0.00067269	0.001002	0	0.000188	0.0004787
38	0.00014415	0	0.00019	0.000283	0.0001764
39	0.0002883	0.001002	0.00038	0.000188	0.0003276
40	0.00038439	0.002339	0.00019	0.000377	0.0005039

Table 63: Bloc-wise probabilities of existence (PopProb) of specific filing counts for counts up to 40

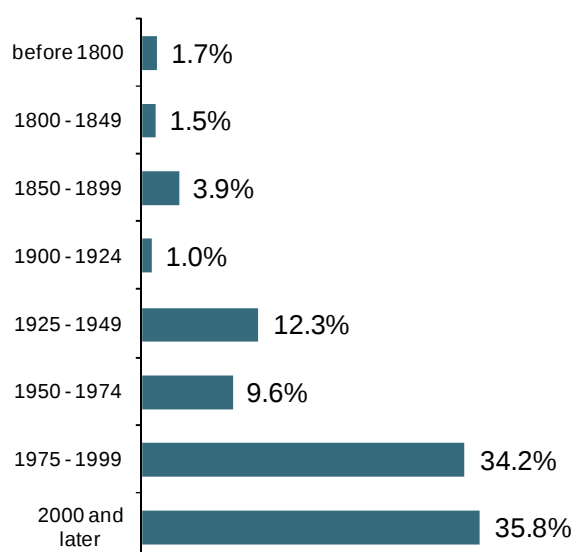
class	lb	ub	EP	JP	OT	US	TOTAL
1	1	1	0.3592	0.2041	0.1148	0.1569	0.27217742
2	2	2	0.4364	0.5385	0.2	0.193	0.34634146
3	3	3	0.3519	0.4286	0.2143	0.1667	0.28225806
4	4	5	0.434	0.5263	0.1053	0.3077	0.37755102
5	6	9	0.5098	0.6087	0.125	0.2632	0.40552995
6	10	19	0.4722	0.4902	0.4286	0.2838	0.41666667
7	20	39	0.4419	0.6098	0.1429	0.1884	0.37142857
8	40	9999999	0.375	0.5618	0.0417	0.2794	0.38138138

Table 64: Bloc-wise SRSS values of the Random sample by filing count class.

As in the previous report, 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:

Year of foundation



Number of employees

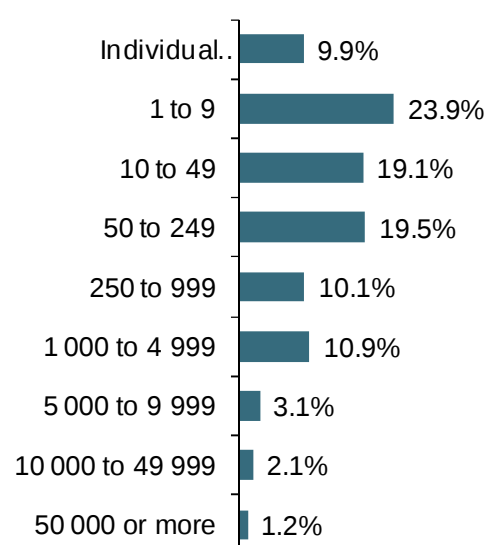


Figure 11: Estimated distribution of the EPO applicant population by year of foundation and number of employees

The overall distribution by number of employees is very similar to the distribution found in the previous survey. The inference for the whole applicant population is that 70% of applicant companies were founded after 1974 and 72% have less than 250 employees. Regarding the year of foundation, the weighted average year is 1972, the weighted median year is 1994. The difference in the values of these statistics reflects the asymmetry of the distribution.

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

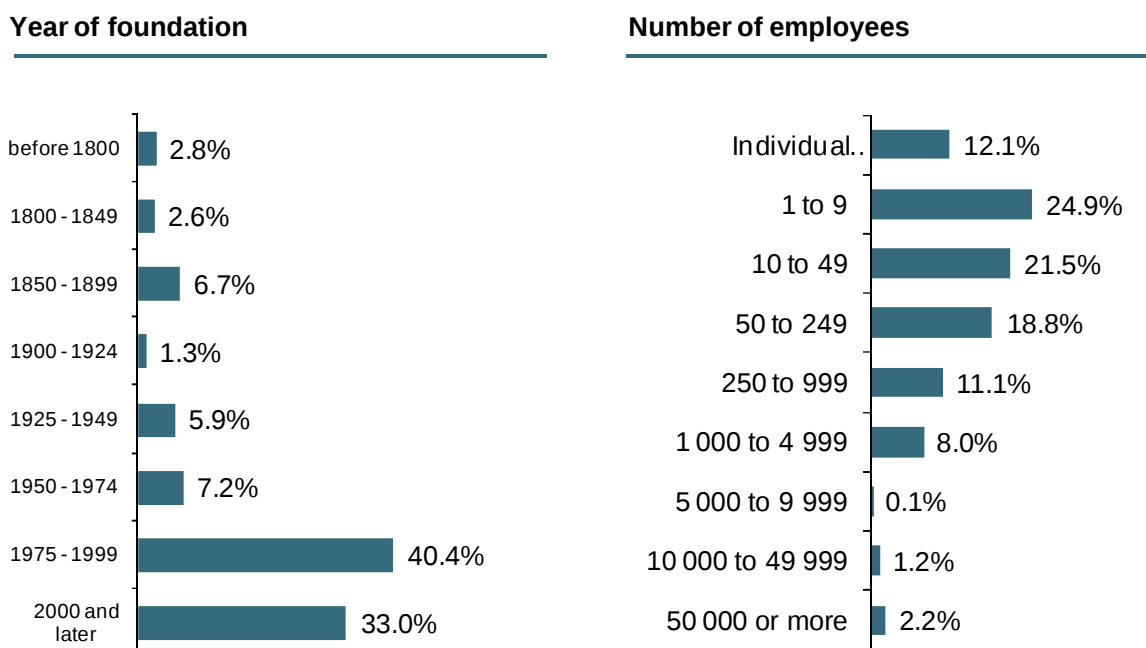


Figure 12: Estimated distribution of the EPO applicant population in the EPC (EP) residence bloc by year of foundation and number of employees

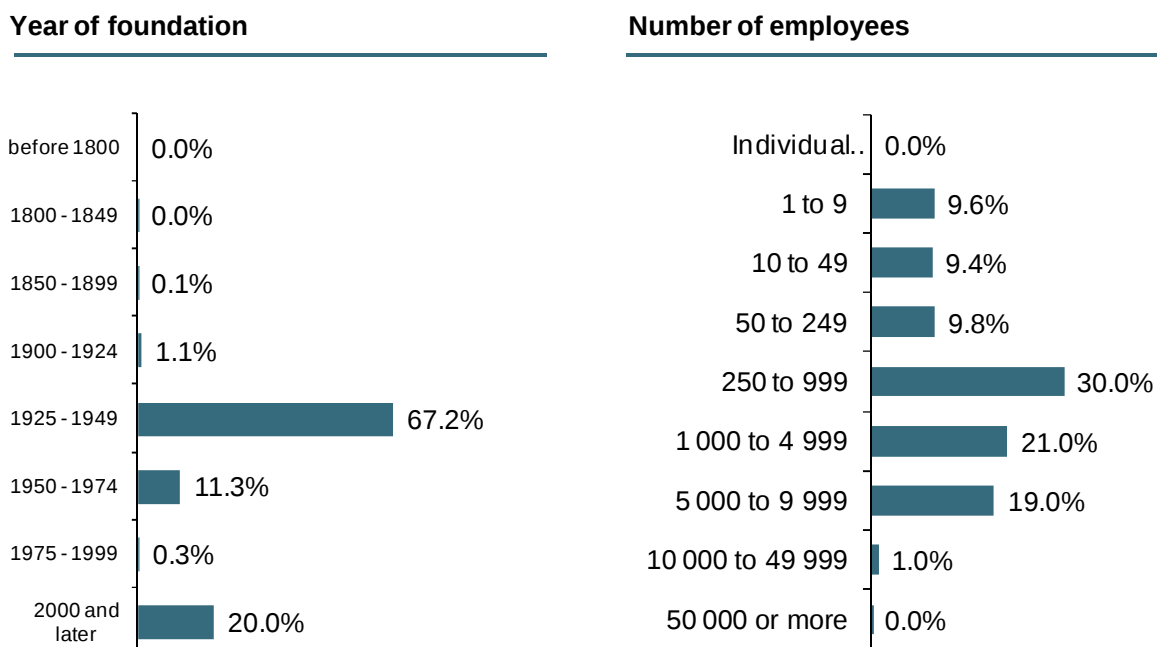
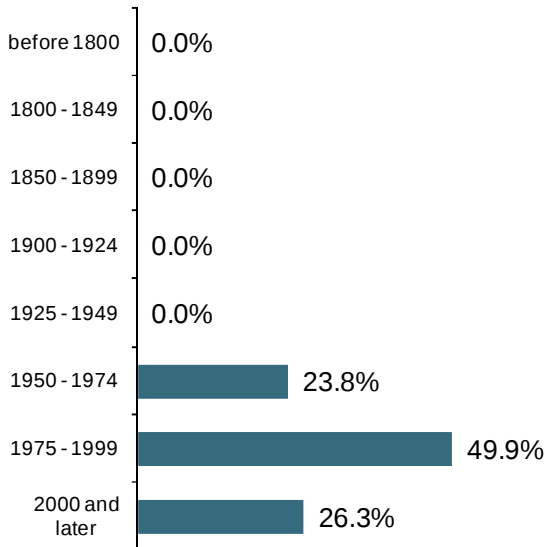


Figure 13: Estimated distribution of the EPO applicant population in the Japan (JA) residence bloc by year of foundation and number of employees

Year of foundation



Number of employees

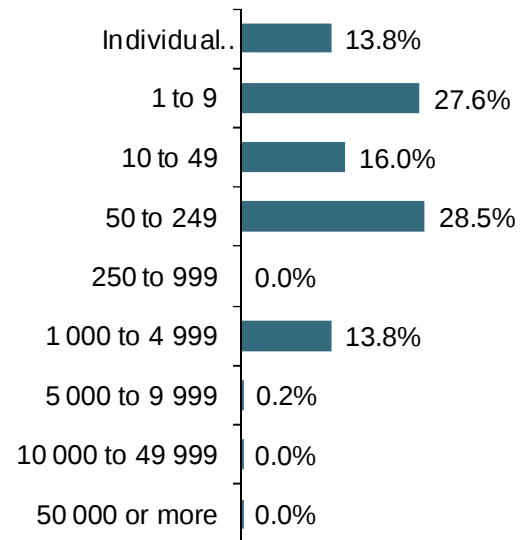
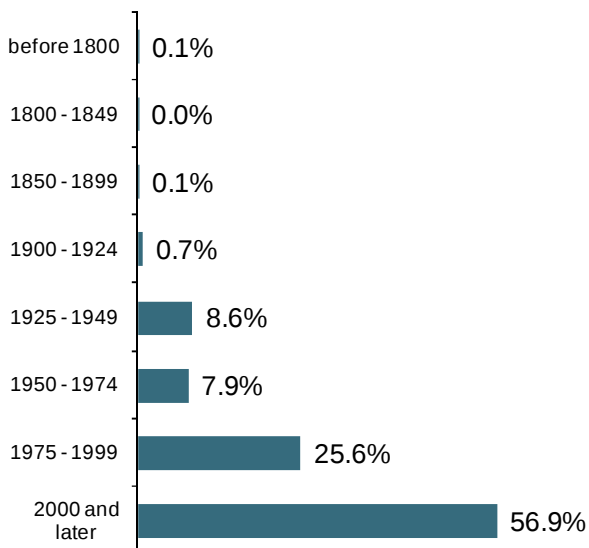


Figure 14: Estimated distribution of the EPO applicant population in the Others (OT) residence bloc by year of foundation and number of employees

Year of foundation



Number of employees

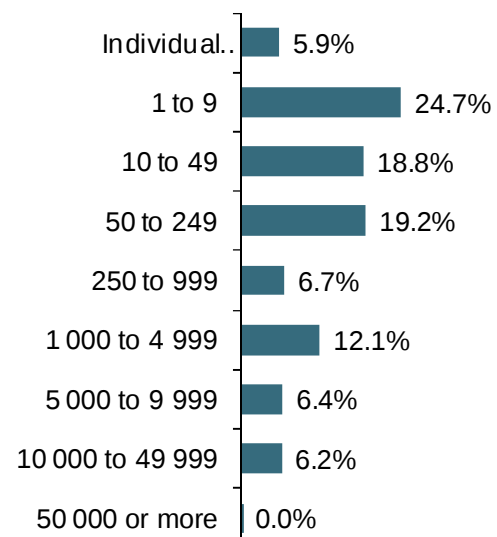


Figure 15: Estimated distribution of the EPO applicant population in the US residence bloc by year of foundation and number of employees

As expected, the percentages are now considerably shifted towards smaller companies. It is also noteworthy that there is also a clear shift to younger companies, except for Japan where it is estimated that more than 67% of companies were set up in the period between 1925 and 1949.

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	1.7%	1.5%	3.9%	1.0%	12.3%	9.6%	34.2%	35.8%	100%
EP	2.8%	2.6%	6.7%	1.3%	5.9%	7.2%	40.4%	33.0%	100%
JA	0.0%	0.0%	0.1%	1.1%	67.2%	11.3%	0.3%	20.0%	100%
OT	0.0%	0.0%	0.0%	0.0%	0.0%	23.8%	49.9%	26.3%	100%
US	0.1%	0.0%	0.1%	0.7%	8.6%	7.9%	25.6%	56.9%	100%

Table 65: 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	9.9%	24.0%	19.4%	20.7%	9.4%	10.6%	2.5%	2.4%	1.2%	100%
EP	11.4%	24.2%	21.0%	19.2%	12.1%	8.3%	0.3%	1.4%	2.1%	100%
JA	0.0%	9.1%	8.5%	9.9%	29.6%	22.8%	17.8%	2.2%	0.1%	100%
OT	13.3%	26.5%	17.7%	28.3%	0.0%	13.3%	0.8%	0.0%	0.0%	100%
US	5.4%	23.8%	18.6%	19.7%	7.2%	11.9%	6.5%	6.7%	0.1%	100%

Table 66: Estimated distribution of EPO applicants by number of employees and residence blocs

12.5 EPO joint 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 **Section 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 16 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 17** shows results for the Biggest group and **Figure 18** shows results for the Random group.

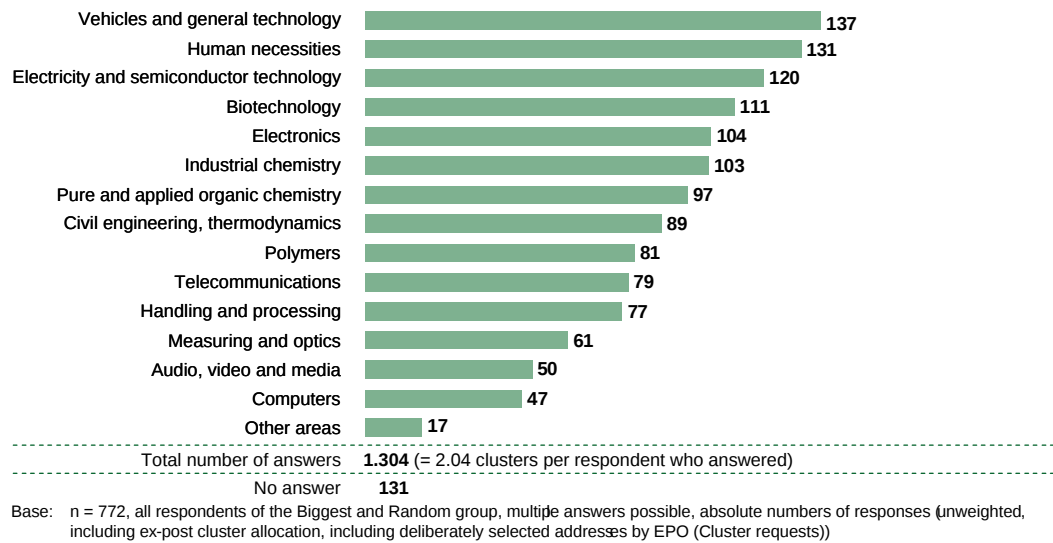


Figure 16: Number of responses per joint cluster (entire sample/net number of interviews)

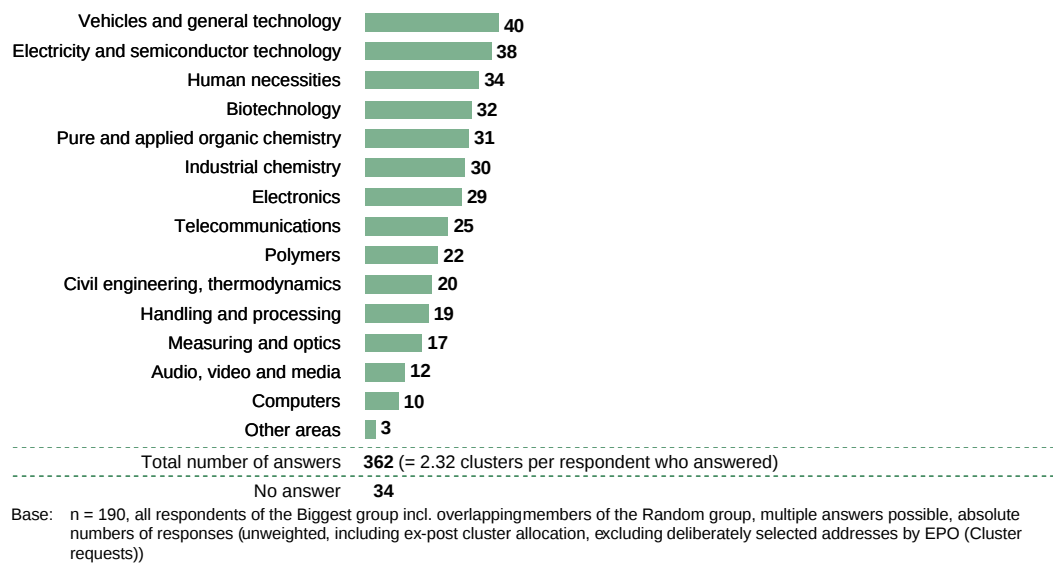


Figure 17: Number of responses per joint cluster (Biggest including overlapping members of the Random group)

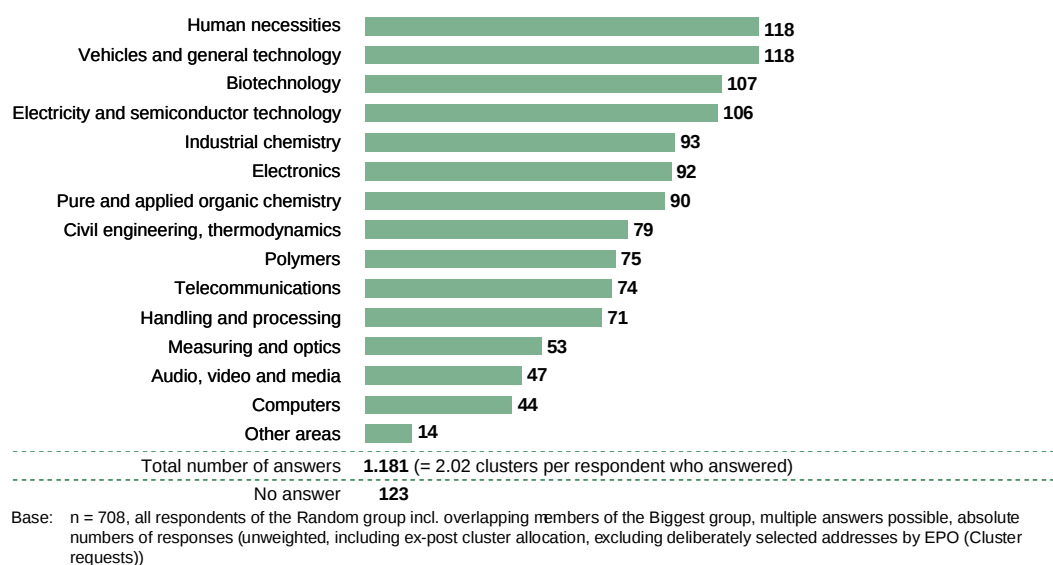


Figure 18: Number of responses per joint cluster (Random including overlapping members of the Biggest group)

Figure 19 shows the distribution of responses in the Biggest and Random groups combined by the number of clusters chosen. On average, the interviewees reported data for 2.04 joint clusters. The Biggest group respondents selected 2.32 clusters on average (see **Figure 20**). The Random group respondents reported 2.02 joint clusters (see **Figure 21**). (The Random group in the previous 2007 and 2006 surveys reported data for 1.91 and 1.88 joint clusters on average respectively.) In terms of the 5 mega clusters (for distribution of joint cluster to joint mega cluster see **Annex III, Section 9**), the average number of mega clusters per respondent is 1.52 for the entire sample, 1.67 for the Biggest group respondents, and 1.51 for Random group respondents.

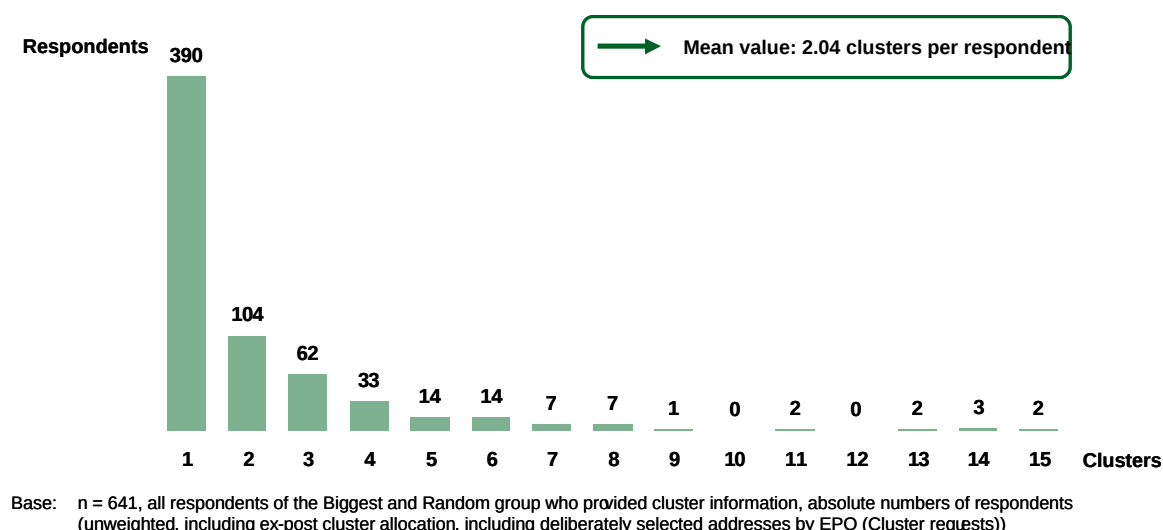
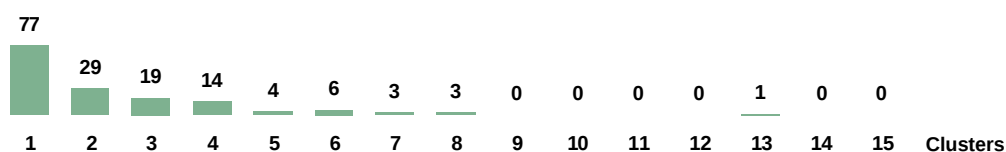


Figure 19: Number of joint clusters selected per respondent (entire sample/net number of interviews)

Respondents

Mean value: 2.32 clusters per respondent

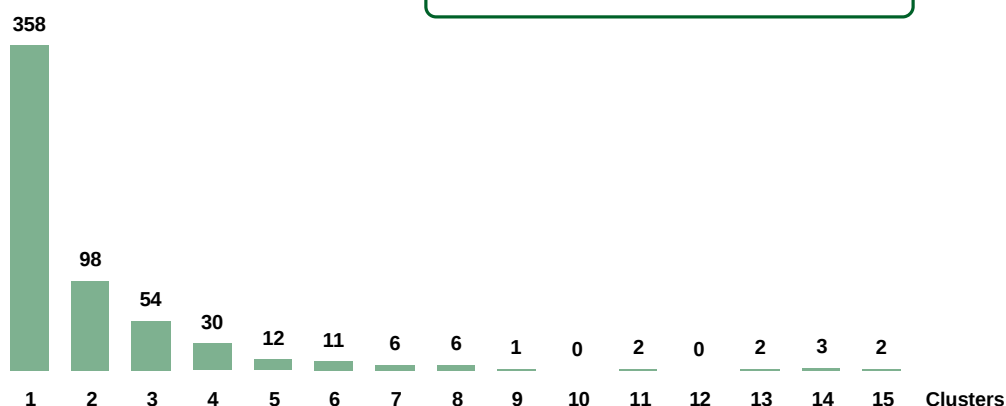


Base: n = 156, all respondents of the Biggest group incl. overlapping members of the Random group who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, excluding deliberately selected addresses by EPO (Cluster requests))

Figure 20: Number of joint clusters selected per respondent (Biggest including overlapping members of the Random group)

Respondents

Mean value: 2.02 clusters per respondent



Base: n = 585, 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 (Cluster requests))

Figure 21: Number of joint clusters selected per respondent (Random including overlapping members of the Biggest group)

Table 67 to **Table 69** below indicate which combinations of clusters are cited most frequently. Each table shows a two-way matrix describing the joint cluster combinations selected by the interviewees of the Biggest and Random groups combined (**Table 67**), Biggest group (**Table 68**), and Random group (**Table 69**). The tables indicate pairwise combinations but, as **Figure 19** to **Figure 21** show, responses sometimes indicate activities in considerably more than two joint clusters.

Joint cluster	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Other areas
1. Audio, video and media	50	12	10	18	22	24	11	14	13	14	13	12	26	13	7
2. Biotechnology	12	111	13	9	15	18	16	40	32	16	29	50	13	12	3
3. Civil engineering, thermodynamics	10	13	89	12	25	21	13	17	18	18	20	14	14	25	5
4. Computers	18	9	12	47	24	29	14	14	10	18	11	12	28	11	5
5. Electricity/semiconductor tech.	22	15	25	24	120	55	26	21	24	30	24	19	43	37	8
6. Electronics	24	18	21	29	55	104	20	20	19	30	21	20	38	20	7
7. Handling and processing	11	16	13	14	26	20	77	17	22	20	17	13	18	24	7
8. Human necessities	14	40	17	14	21	20	17	131	27	21	24	27	17	18	5
9. Industrial chemistry	13	32	18	10	24	19	22	27	103	19	43	39	12	14	5
10. Measuring and optics	14	16	18	18	30	30	20	21	19	61	17	16	27	17	5
11. Polymers	13	29	20	11	24	21	17	24	43	17	81	37	15	19	3
12. Pure/applied organic chemistry	12	50	14	12	19	20	13	27	39	16	37	97	14	13	2
13. Telecommunications	26	13	14	28	43	38	18	17	12	27	15	14	79	22	7
14. Vehicles and general technology	13	12	25	11	37	20	24	18	14	17	19	13	22	137	8
Other areas	7	3	5	5	8	7	7	5	5	5	3	2	7	8	17

Base: n = 641, all respondents who provided cluster information, absolute numbers of respondents (unweighted, including ex-post cluster allocation, including deliberately selected addresses by EPO (Cluster requests))

Table 67: Number of responses per joint cluster combination (two-way matrix, entire sample/net number of interviews)

Joint cluster	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Other areas
1. Audio, video and media	12	1	1	5	6	6	1	4	3	3	2	1	7	2	1
2. Biotechnology	1	32	2	0	4	5	5	13	9	2	9	17	3	4	0
3. Civil engineering, thermodynamics	1	2	20	1	7	7	3	4	5	4	3	2	3	10	1
4. Computers	5	0	1	10	6	8	2	1	3	1	0	0	7	1	0
5. Electricity/semiconductor tech.	6	4	7	6	38	18	10	7	9	10	6	4	14	11	2
6. Electronics	6	5	7	8	18	29	6	5	8	9	5	6	12	7	2
7. Handling and processing	1	5	3	2	10	6	19	5	8	6	6	4	4	7	1
8. Human necessities	4	13	4	1	7	5	5	34	9	5	7	8	4	6	1
9. Industrial chemistry	3	9	5	0	9	8	8	9	30	7	12	11	2	6	2
10. Measuring and optics	3	2	4	3	10	9	6	5	7	17	3	4	6	5	1
11. Polymers	2	9	3	0	6	5	6	7	12	3	22	14	3	6	0
12. Pure/applied organic chemistry	1	17	2	1	4	6	4	8	11	4	14	31	3	5	0
13. Telecommunications	7	3	3	7	14	12	4	4	2	6	3	3	25	5	1
14. Vehicles and general technology	2	4	10	1	11	7	7	6	6	5	6	5	5	40	2
Other areas	1	0	1	0	2	2	1	1	2	1	0	0	1	2	3

Base: n = 156, 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 (Cluster requests))

Table 68: Number of responses per joint cluster combination (two-way matrix, Biggest including overlapping members of the Random group)

Joint cluster	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Other areas
1. Audio, video and media	47	12	10	17	20	23	11	13	13	13	13	12	25	13	7
2. Biotechnology	12	107	13	9	14	17	16	40	31	16	28	48	13	12	3
3. Civil engineering, thermodynamics	10	13	79	11	21	16	12	15	17	16	19	13	12	21	4
4. Computers	17	9	11	44	21	26	13	14	10	16	11	11	26	10	5
5. Electricity/semiconductor tech.	20	14	21	21	106	48	22	18	20	27	22	17	39	30	7
6. Electronics	23	17	16	26	48	92	18	18	16	26	20	18	36	15	5
7. Handling and processing	11	16	12	13	22	18	71	16	18	18	15	12	18	21	6
8. Human necessities	13	40	15	14	18	18	16	118	25	19	23	27	17	17	5
9. Industrial chemistry	13	31	17	10	20	16	18	25	93	17	39	36	12	11	4
10. Measuring and optics	13	16	16	16	27	26	18	19	17	53	16	14	25	14	5
11. Polymers	13	28	19	11	22	20	15	23	39	16	75	34	15	18	3
12. Pure/applied organic chemistry	12	48	13	11	17	18	12	27	36	14	34	90	13	12	2
13. Telecommunications	25	13	12	26	39	36	18	17	12	25	15	13	74	20	7
14. Vehicles and general technology	13	12	21	10	30	15	21	17	11	14	18	12	20	118	6
Other areas	7	3	4	5	7	5	6	5	4	5	3	2	7	6	14

Base: n = 585, 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 (Cluster requests))

Table 69: Number of responses per joint cluster combination (two-way matrix, Random including overlapping members of the Biggest group)

13 Annex VII: Analysis of R&D budgets, inventions, first filings, sales and expenditures

In **Section 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 2007 throughout the world, both split by joint cluster. The questions included in Section C for the 2008 applicant panel survey have not changed since the 2007 survey.

For the questions on R&D budget, sales and operating and capital expenditures, currencies had to be specified by the respondents. Therefore, before analysing Section C, the numbers given for R&D budget and sales were recalculated to EUR. Interbank exchange rates current as of February 9, 2009, were applied to the responses to those questions.

Ten different indicators are reported for the results that are reported in the following tables. Three of these are directly taken from the questionnaire, namely the total number of inventions considered for patent application, the proportion of inventions patented, and the number of first patent filings. Four indicators are company-specific ratios averaged for all companies filings in a specific class. These indicators are: total sales by first patent filing, R&D budget by first patent filing, total operating and capital expenditures by first patent filing, and first patent filings by number of inventions. The remaining three indicators are ratios derived by apportioning company activities to the specific mega cluster through the proportion of first filings in said mega cluster. These ratios are: total sales in mega cluster, approximate total operating and capital expenditures in mega cluster, and R&D budget in mega cluster.

Summary results for each sample grouping are shown in **Table 70**. Bearing in mind the likely asymmetry of some distributions among the population, and also on the grounds of considering the robustness of the estimates, 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 in the previous 2007 survey (Table 81 of 2007 report) and there is a broad degree of similarity between the statistics generated in the two surveys.

Detailed tables are shown in unweighted and structurally weighted versions for the Random group in **Tables 71 to 74**. Each set of tables is shown once itemised by mega cluster and once by residence bloc.

For the analyses itemised by mega cluster, **Table 71** contains the unweighted analyses for the Random group and **Table 72** contains the weighted results of the Random group. Not many differences are seen between statistics generated for the various mega clusters in the weighted Table. However, organic chemistry has the highest weighted medians for R&D budget per first patent filing, total operating and capital expenditures by first patent filing, approximate R&D budget and proportions of first patent filings per numbers of inventions. This may reflect the higher average levels of industrial concentration and research intensity within the pharmaceutical sector. Inorganic chemistry ranks highest in terms of total operating and capital expenditure.

For the analyses broken down by residence bloc, **Table 73** contains the unweighted analyses for the Random group and **Table 74** contains the weighted results of the Random group. Here it is the case for most statistics that Japan gives the highest values, not only for absolute measures but also for the ratio measure "Total sales by first patent filing". The U.S. reports a particularly high ratio of first patent filings by number of inventions.

This year, the technology breakdowns are made by the smaller set of mega clusters while tables in previous years were given for the larger set of joint clusters. This aggregation of data should make the statistics more dependable this time. 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 of results should be made with caution. As last year, these economic analyses were made using all data, while in surveys before 2007, some outliers had been 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 patented throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Approximate total operating and capital expenditures by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2007
Biggest Unweighted	N	132	132	109	32	52	191
	MIN	4	10	22	291	6 026	1
	MAX	6 000	100	493 968 750	19 758 750	1 041 304 348	6 677
	MEAN	680	58	37 194 544	3 110 629	39 366 807	442
	MEDIAN	180	60	14 139 817	933 674	4 843 478	143
	SE	99	2	6 032 157	915 832	20 130 081	62
Random Unweighted	N	500	502	356	121	214	652
	MIN	1	0	22	742	1 875	1
	MAX	22 000	100	1 421 052 632	54 668 478	1 368 421 053	15 123
	MEAN	415	55	43 283 986	2 550 392	18 053 666	297
	MEDIAN	35	55	12 500 000	538 875	2 491 056	27
	SE	73	1	7 009 083	591 839	6 580 559	41
Random Weighted	N	500	502	356	121	214	652
	MIN	1	0	22	742	1 875	1
	MAX	22 000	100	1 421 052 632	54 668 478	1 368 421 053	15 123
	MEAN	17	52	36 101 371	995 087	9 952 105	19
	MEDIAN	4	50	6 035 200	239 500	500 000	2
	SE	3	1	4 834 139	269 569	2 333 888	3

Approximate total sales throughout the world in 2007 [EUR]	Approximate total operating and capital expenditures in 2007 [EUR]	Approximate R&D budget in 2007 [EUR]	First patent filings by number of inventions
110	54	33	129
89 901	524 300	38 948	13%
85 501 500 000	83 346 000 000	2 442 900 000	1000%
8 603 139 635	6 140 567 761	444 849 181	86%
2 861 632 000	836 687 000	160 000 000	78%
1 313 152 758	2 085 963 455	107 770 163	0.08
377	237	133	478
7 500	908	1 000	3%
85 501 500 000	83 346 000 000	5 819 850 000	928%
4 694 351 437	2 060 842 610	256 078 459	81%
620 000 000	18 000 000	17 962 500	73%
595 746 599	588 198 590	60 279 147	0.03
377	237	133	478
7 500	908	1 000	3%
85 501 500 000	83 346 000 000	5 819 850 000	928%
835 583 143	86 721 224	22 563 219	75%
12 000 000	1 437 000	500 000	67%
121 923 058	28 845 530	10 212 686	0.02

Table 70: Main statistics for the various sample groups

**Random group
Unweighted**

Joint Cluster	Statistic	Total number of inventions considered for patent application in mega cluster	Proportion of inventions patented throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Approximate total operating and capital expenditures by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2007
Electricity	N	115	132	92	52	52	141
	MIN	1	5	22	742	10 886	1
	MAX	7 200	100	239 500 000	11 383 929	23 875 091	6 049
	MEAN	362	54	19 281 721	1 476 210	5 080 594	305
	MEDIAN	50	51	10 794 155	487 652	3 109 091	35
	SE	85	2	3 605 052	370 847	854 150	64
Organic Chemistry	N	106	119	77	58	53	132
	MIN	1	1	0	742	9 098	1
	MAX	852	100	1 249 084 615	54 668 478	169 306 200	701
	MEAN	78	56	62 194 486	5 632 850	19 193 488	60
	MEDIAN	20	50	16 129 032	1 455 125	3 164 557	19
	SE	14	2	18 950 962	1 293 273	4 940 114	10
Inorganic Chemistry	N	94	106	77	53	43	113
	MIN	1	5	0	204	8 607	1
	MAX	951	100	1 100 000 000	10 625 000	58 694 364	1 288
	MEAN	132	58	53 363 915	1 370 387	8 567 762	112
	MEDIAN	49	60	17 008 787	500 000	2 395 000	22
	SE	20	3	15 647 229	324 509	1 979 212	20
ICT	N	83	89	62	24	38	97
	MIN	1	5	3 750	11 496	1 875	1
	MAX	10 800	95	184 210 526	12 310 594	79 377 143	9 074
	MEAN	629	49	19 875 047	1 767 592	11 222 543	478
	MEDIAN	62	50	6 668 796	335 396	4 478 611	54
	SE	162	3	4 253 195	696 422	2 724 464	116
Traditional	N	234	267	185	111	93	275
	MIN	1	0	0	742	3 283	1
	MAX	4 365	100	1 421 052 632	39 526 316	1 368 421 053	3 433
	MEAN	170	59	40 000 165	1 479 729	25 761 199	128
	MEDIAN	23	60	12 000 000	351 094	2 155 500	17
	SE	30	2	9 156 994	408 652	14 837 420	22

Approximate total sales per mega cluster throughout the world in 2007 [EUR]	Approximate total operating and capital expenditures per mega cluster in 2007 [EUR]	Approximate R&D budget per mega cluster in 2007 [EUR]	First patent filings by number of inventions
92	52	59	126
7 857	87 091	2 500	6%
32 411 830 515	23 273 356 356	919 427 460	928%
2 914 403 382	1 418 732 860	89 851 231	80%
606 158 173	38 332 490	7 000 000	69%
615 886 393	570 716 925	25 198 406	0.07
77	53	64	115
0	21 555	20 000	13%
34 775 400 000	9 179 556 000	5 819 850 000	300%
2 829 217 932	885 479 910	421 633 390	81%
416 111 111	18 000 000	19 848 475	75%
705 135 744	296 393 606	137 468 178	0.04
77	43	57	106
0	32 828	23 856	3%
23 179 666 959	3 805 669 000	538 875 000	280%
2 790 731 928	341 802 952	54 259 156	75%
901 912 974	11 496 000	11 235 000	77%
539 056 472	114 288 893	12 154 833	0.04
62	38	26	92
23 950	15 000	57 480	4%
85 501 500 000	83 346 000 000	1 308 465 200	928%
6 326 455 085	4 909 268 627	239 250 613	83%
956 945 066	103 161 750	12 639 821	67%
1 803 156 781	2 373 163 429	79 708 222	0.10
185	93	124	247
0	6 566	1 000	4%
59 423 076 923	26 000 000 000	2 442 900 000	928%
2 926 961 206	792 688 331	97 983 655	83%
431 100 000	7 315 700	3 745 000	75%
567 778 899	317 005 050	28 939 929	0.05

Table 71: Main statistics for activities in various sectors – Random group (unweighted)

Random group
Cases weighted with structural weight

Joint Cluster	Statistic	Total number of inventions considered for patent application in mega cluster	Proportion of inventions patented throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Approximate total operating and capital expenditures by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2007
Electricity	N	115	132	92	52	52	141
	MIN	1	5	22	742	10 886	1
	MAX	7 200	100	239 500 000	11 383 929	23 875 091	6 049
	MEAN	16	48	31 481 885	1 026 652	2 615 523	14
	MEDIAN	5	50	2 874 000	239 261	287 400	2
	SE	7	3	7 845 090	217 216	596 588	4
Organic Chemistry	N	106	119	77	58	53	132
	MIN	1	1	0	742	9 098	1
	MAX	852	100	1 249 084 615	54 668 478	169 306 200	701
	MEAN	6	46	22 493 909	760 970	17 510 585	4
	MEDIAN	3	50	1 000 000	359 250	1 077 750	2
	SE	1	3	6 691 746	500 922	6 316 685	1
Inorganic Chemistry	N	94	106	77	53	43	113
	MIN	1	5	0	204	8 607	1
	MAX	951	100	1 100 000 000	10 625 000	58 694 364	1 288
	MEAN	23	55	40 101 361	1 150 291	9 072 256	17
	MEDIAN	5	60	7 000 000	250 000	676 235	2
	SE	5	3	12 387 250	340 659	1 891 386	3
ICT	N	83	89	62	24	38	97
	MIN	1	5	3 750	11 496	1 875	1
	MAX	10 800	95	184 210 526	12 310 594	79 377 143	9 074
	MEAN	8	44	2 404 793	128 887	3 146 536	10
	MEDIAN	3	50	14 370	119 630	287 400	2
	SE	4	3	778 862	105 889	946 750	3
Traditional	N	234	267	185	111	93	275
	MIN	1	0	0	742	3 283	1
	MAX	4 365	100	1 421 052 632	39 526 316	1 368 421 053	3 433
	MEAN	17	58	43 426 208	675 718	11 080 693	16
	MEDIAN	3	60	15 000 000	133 333	500 000	3
	SE	3	2	4 887 007	136 524	4 078 542	2

Approximate total sales per mega cluster throughout the world in 2007 [EUR]	Approximate total operating and capital expenditures per mega cluster in 2007 [EUR]	Approximate R&D budget per mega cluster in 2007 [EUR]	First patent filings by number of inventions
92	52	59	126
7 857	87 091	2 500	6%
32 411 830 515	23 273 356 356	919 427 460	928%
73 410 930	9 374 789	2 446 793	67%
14 370 000	1 437 000	239 261	60%
37 456 758	11 962 799	1 060 805	0.04
77	53	64	115
0	21 555	20 000	13%
34 775 400 000	9 179 556 000	5 819 850 000	300%
154 234 298	64 144 571	11 747 068	71%
1 000 000	3 592 500	574 800	92%
118 496 208	77 019 605	19 858 735	0.04
77	43	57	106
0	32 828	23 856	3%
23 179 666 959	3 805 669 000	538 875 000	280%
1 023 426 477	28 896 408	13 205 540	53%
35 925 000	11 496 000	1 437 000	50%
220 107 653	6 272 395	3 131 411	0.04
62	38	26	92
23 950	15 000	57 480	4%
85 501 500 000	83 346 000 000	1 308 465 200	928%
41 735 422	31 847 790	483 125	58%
71 850	1 437 000	239 261	63%
75 891 238	89 721 746	840 784	0.04
185	93	124	247
0	6 566	1 000	4%
59 423 076 923	26 000 000 000	2 442 900 000	928%
753 970 517	193 402 326	19 976 124	74%
43 110 000	1 437 000	350 000	67%
117 152 513	62 308 053	6 309 810	0.03

Table 72: 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 patented throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Approximate total operating and capital expenditures by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2007
EP	N	292	300	198	53	112	375
	MIN	1	0	22	2 500	1 875	1
	MAX	4 300	100	1 421 052 632	11 038 961	1 368 421 053	4 079
	MEAN	124	58	48 589 371	1 712 484	24 706 344	91
	MEDIAN	15	60	14 270 833	671 500	2 000 000	11
JP	SE	26	2	10 443 817	352 435	12 391 214	18
	N	111	102	101	34	50	141
	MIN	2	0	3 745	742	3 560	1
	MAX	18 000	95	239 500 000	19 445 192	100 826 923	15 123
	MEAN	1 153	50	22 831 498	1 585 900	9 707 060	1 004
OT	MEDIAN	300	51	7 612 970	218 507	2 350 129	301
	SE	238	2	4 170 192	718 917	2 712 481	173
	N	16	19	4	0	6	22
	MIN	1	3	1 431 528	n/a	28 362	1
	MAX	22 000	100	33 161 538	n/a	3 316 154	1 667
US	MEAN	1 469	61	14 755 517	n/a	1 249 423	187
	MEDIAN	18	60	12 214 500	n/a	742 450	26
	SE	1 370	7	7 657 859	n/a	575 910	86
	N	81	81	53	34	46	114
	MIN	1	1	3 929	11 496	9 098	1
	MAX	2 000	100	1 249 084 615	54 668 478	165 567 391	1 615
	MEAN	241	51	64 592 460	4 821 036	13 120 097	124
	MEDIAN	60	50	22 313 665	866 937	2 963 813	40
	SE	53	3	24 855 879	1 869 068	4 155 487	22

Approximate total sales throughout the world in 2007 [EUR]	Approximate total operating and capital expenditures in 2007 [EUR]	Approximate R&D budget in 2007 [EUR]	First patent filings by number of inventions
212	128	61	276
7 500	908	1 000	4%
60 000 000 000	26 000 000 000	1 380 000 000	667%
3 096 930 104	741 371 425	138 105 417	82%
156 535 170	10 000 000	3 200 000	74%
626 771 939	240 650 693	43 160 064	0.04
104	53	36	107
142 310	58 528	224 700	4%
84 088 245 150	81 500 330 310	2 758 274 890	928%
7 224 675 269	4 997 124 056	237 978 542	82%
2 321 900 000	189 864 010	58 047 500	76%
1 379 650 584	1 983 017 144	86 964 093	0.08
6	8	1	16
1 431 528	28 740	359 250	8%
2 155 500 000	215 550 000	359 250	229%
370 010 988	28 720 956	359 250	81%
9 293 700	2 381 463	359 250	79%
357 156 284	26 695 001	n/a	0.13
55	48	35	79
35 925	21 555	21 555	3%
85 501 500 000	83 346 000 000	5 819 850 000	300%
6 538 818 473	2 675 975 282	487 611 937	75%
1 149 600 000	108 852 750	25 457 892	66%
1 910 236 090	1 741 388 708	193 685 473	0.05

Table 73: 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 patented throughout the world [%]	Total sales by first patent filing [EUR per first filing]	R&D budget by first patent filing [EUR per first filing]	Approximate total operating and capital expenditures by first patent filing [EUR per first filing]	Number of first patent filings throughout the world in 2007
EP	N	292	300	198	53	112	375
	MIN	1	0	22	2 500	1 875	1
	MAX	4 300	100	1 421 052 632	11 038 961	1 368 421 053	4 079
	MEAN	7	50	39 230 195	1 259 218	17 426 860	5
	MEDIAN	3	50	6 250 000	200 000	1 309 560	2
	SE	1	2	8 006 599	308 506	4 255 616	0
JP	N	111	102	101	34	50	141
	MIN	2	0	3 745	742	3 560	1
	MAX	18 000	95	239 500 000	19 445 192	100 826 923	15 123
	MEAN	71	50	77 521 901	1 505 810	4 137 587	150
	MEDIAN	30	60	60 403 226	134 149	1 263 938	67
	SE	17	2	8 156 991	256 466	768 512	16
OT	N	16	19	4	0	6	22
	MIN	1	3	1 431 528	n/a	28 362	1
	MAX	22 000	100	33 161 538	n/a	3 316 154	1 667
	MEAN	10	60	12 157 713	n/a	213 500	12
	MEDIAN	5	60	2 874 000	n/a	287 400	2
	SE	29	10	5 402 240	n/a	122 119	16
US	N	81	81	53	34	46	114
	MIN	1	1	3 929	11 496	9 098	1
	MAX	2 000	100	1 249 084 615	54 668 478	165 567 391	1 615
	MEAN	26	52	22 557 265	618 058	1 718 114	20
	MEDIAN	5	60	1 437 000	239 500	676 235	5
	SE	7	3	6 362 041	644 505	1 631 298	4

Approximate total sales throughout the world in 2007 [EUR]	Approximate total operating and capital expenditures in 2007 [EUR]	Approximate R&D budget in 2007 [EUR]	First patent filings by number of inventions
212	128	61	276
7 500	908	1 000	4%
60 000 000 000	26 000 000 000	1 380 000 000	667%
379 469 314	112 758 536	6 006 358	74%
10 000 000	1 000 000	250 000	67%
94 528 044	38 539 003	2 686 528	0.03
104	53	36	107
142 310	58 528	224 700	4%
84 088 245 150	81 500 330 310	2 758 274 890	928%
3 536 719 650	197 702 742	93 794 587	48%
510 069 000	20 223 000	8 988 000	60%
441 030 464	78 448 903	26 903 446	0.03
6	8	1	16
1 431 528	28 740	359 250	8%
2 155 500 000	215 550 000	359 250	229%
19 862 612	716 506	359 250	70%
14 370 000	179 082	359 250	67%
17 110 131	1 326 429	n/a	0.09
55	48	35	79
35 925	21 555	21 555	3%
85 501 500 000	83 346 000 000	5 819 850 000	300%
966 671 944	40 250 538	25 982 536	88%
4 311 000	1 437 000	718 500	83%
316 172 536	77 995 406	29 269 484	0.05

Table 74: Main statistics for activities by residence bloc – Random group (weighted).

14 Annex VIII: Importance of fees for filing behaviour

In this year's **Section D** of the questionnaire, respondents were asked about the effects of various procedural fees on their filing behaviour. The effects on filing behaviour of a hypothetical general 25% percentage increase or decrease of fees were also asked about.

For this section, results are reported broken down by mega clusters as well as by residence blocs.

Table 75 to **Table 78** contain the results regarding the influence of the amounts of specific fees on decisions to pursue a patent application. The results are diverse and no attempt has been made to calculate average scores between the qualitative classes given (from 1 = "No influence" to 5 = "Very much influence"). Insofar as comparative inferences can be drawn at all, it appears that appeal fees and opposition fees have less influence on filings than the other fees that are incurred at earlier stages in the procedure. There is a possibility that the claim fee may be more important than other fee types. No special differences are seen between residence blocs or between mega clusters.

Random group
Unweighted

Residence Bloc	Fee type	Valid N	Extent of Influence on Filing Decisions				
			No Influence 1	2	3	4	Very much Influence 5
Total	Filing Fee	608	29%	27%	23%	15%	5%
	Search Fee	609	25%	26%	25%	17%	7%
	Substantive examination Fee	600	23%	24%	28%	18%	7%
	Claim Fee	599	21%	22%	26%	19%	13%
	Renewal fees at EPO during examination	604	24%	23%	24%	20%	9%
	Appeal Fees	599	29%	32%	22%	12%	5%
	Opposition Fees	599	31%	31%	22%	11%	6%
EP	Filing Fee	348	31%	29%	22%	15%	3%
	Search Fee	349	26%	26%	26%	17%	6%
	Substantive examination Fee	344	24%	24%	30%	16%	6%
	Claim Fee	342	22%	21%	26%	20%	11%
	Renewal fees at EPO during examination	346	25%	25%	25%	20%	6%
	Appeal Fees	341	29%	32%	21%	14%	4%
	Opposition Fees	341	31%	30%	22%	12%	5%
JA	Filing Fee	134	25%	25%	28%	16%	7%
	Search Fee	134	28%	25%	23%	16%	7%
	Substantive examination Fee	132	25%	22%	27%	19%	7%
	Claim Fee	133	23%	23%	24%	22%	8%
	Renewal fees at EPO during examination	132	24%	21%	26%	18%	11%
	Appeal Fees	133	34%	35%	24%	7%	1%
	Opposition Fees	133	37%	35%	20%	7%	1%
OT	Filing Fee	24	33%	21%	25%	17%	4%
	Search Fee	24	29%	21%	21%	25%	4%
	Substantive examination Fee	23	30%	22%	17%	26%	4%
	Claim Fee	22	27%	18%	23%	14%	18%
	Renewal fees at EPO during examination	24	38%	17%	13%	13%	21%
	Appeal Fees	23	30%	26%	17%	13%	13%
	Opposition Fees	23	30%	30%	13%	13%	13%
US	Filing Fee	102	25%	26%	23%	15%	12%
	Search Fee	102	20%	28%	25%	17%	11%
	Substantive examination Fee	101	18%	26%	25%	19%	13%
	Claim Fee	102	14%	22%	25%	16%	24%
	Renewal fees at EPO during examination	102	16%	24%	25%	21%	16%
	Appeal Fees	102	20%	30%	25%	15%	11%
	Opposition Fees	102	24%	26%	25%	14%	11%

Table 75: Influence of specific fees on filing decisions by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence Bloc	Fee type	Extent of Influence on Filing Decisions					
		Valid N	No Influence 1	2	3	4	Very much Influence 5
Total	Filing Fee	608	21%	26%	29%	16%	8%
	Search Fee	609	17%	24%	28%	21%	11%
	Substantive examination Fee	600	15%	24%	30%	21%	10%
	Claim Fee	599	16%	27%	24%	17%	16%
	Renewal fees at EPO during examination	604	17%	20%	24%	25%	14%
	Appeal Fees	599	25%	25%	25%	19%	6%
	Opposition Fees	599	24%	24%	27%	19%	7%
EP	Filing Fee	348	22%	21%	37%	17%	3%
	Search Fee	349	19%	14%	39%	20%	8%
	Substantive examination Fee	344	15%	17%	39%	22%	7%
	Claim Fee	342	12%	25%	29%	24%	10%
	Renewal fees at EPO during examination	346	17%	15%	36%	27%	5%
	Appeal Fees	341	23%	26%	31%	17%	3%
	Opposition Fees	341	22%	23%	35%	17%	3%
JA	Filing Fee	134	32%	33%	13%	22%	0%
	Search Fee	134	21%	33%	13%	32%	0%
	Substantive examination Fee	132	21%	23%	33%	22%	0%
	Claim Fee	133	32%	22%	23%	12%	11%
	Renewal fees at EPO during examination	132	24%	13%	3%	60%	0%
	Appeal Fees	133	64%	12%	2%	22%	0%
	Opposition Fees	133	54%	22%	1%	22%	0%
OT	Filing Fee	24	29%	28%	15%	14%	14%
	Search Fee	24	29%	28%	1%	28%	14%
	Substantive examination Fee	23	29%	28%	1%	28%	14%
	Claim Fee	22	34%	33%	17%	0%	16%
	Renewal fees at EPO during examination	24	30%	28%	14%	0%	28%
	Appeal Fees	23	29%	29%	14%	14%	14%
	Opposition Fees	23	29%	29%	14%	14%	14%
US	Filing Fee	102	8%	36%	24%	12%	20%
	Search Fee	102	2%	42%	24%	13%	19%
	Substantive examination Fee	101	2%	36%	30%	13%	19%
	Claim Fee	102	8%	30%	18%	13%	31%
	Renewal fees at EPO during examination	102	7%	30%	6%	25%	31%
	Appeal Fees	102	12%	25%	25%	25%	13%
	Opposition Fees	102	12%	25%	25%	25%	13%

Table 76: Influence of specific fees on filing decisions by residence bloc – Random group (weighted)

Random group
Unweighted

Joint Mega Cluster	Fee type	Extent of Influence on Filing Decisions					
		Valid N	No Influence 1	2	3	4	Very much Influence 5
Electricity	Filing Fee	164	24%	26%	27%	18%	5%
	Search Fee	164	20%	24%	28%	19%	9%
	Substantive examination Fee	161	18%	22%	32%	19%	9%
	Claim Fee	160	16%	20%	25%	21%	18%
	Renewal fees at EPO during examination	162	17%	25%	23%	23%	12%
	Appeal Fees	160	23%	36%	24%	14%	3%
	Opposition Fees	160	28%	34%	24%	11%	3%
Organic Chemistry	Filing Fee	144	33%	23%	27%	11%	6%
	Search Fee	144	27%	24%	31%	10%	8%
	Substantive examination Fee	141	28%	20%	30%	13%	9%
	Claim Fee	142	21%	18%	25%	20%	15%
	Renewal fees at EPO during examination	143	28%	17%	23%	22%	10%
	Appeal Fees	142	32%	27%	25%	7%	10%
	Opposition Fees	142	36%	26%	21%	6%	11%
Inorganic Chemistry	Filing Fee	122	31%	25%	25%	13%	5%
	Search Fee	122	26%	26%	28%	13%	7%
	Substantive examination Fee	121	24%	25%	30%	16%	6%
	Claim Fee	120	25%	18%	20%	23%	14%
	Renewal fees at EPO during examination	122	23%	29%	25%	16%	8%
	Appeal Fees	119	31%	38%	18%	7%	6%
	Opposition Fees	119	34%	33%	20%	6%	7%
ICT	Filing Fee	111	20%	29%	24%	20%	7%
	Search Fee	111	16%	26%	26%	23%	9%
	Substantive examination Fee	108	17%	21%	27%	24%	11%
	Claim Fee	108	17%	22%	19%	23%	19%
	Renewal fees at EPO during examination	110	15%	25%	18%	20%	21%
	Appeal Fees	108	29%	29%	20%	16%	6%
	Opposition Fees	108	36%	26%	19%	13%	6%
Traditional	Filing Fee	306	28%	30%	20%	15%	7%
	Search Fee	306	27%	26%	21%	18%	8%
	Substantive examination Fee	301	24%	25%	26%	17%	7%
	Claim Fee	298	21%	20%	24%	23%	12%
	Renewal fees at EPO during examination	302	24%	24%	25%	20%	9%
	Appeal Fees	300	28%	33%	21%	14%	5%
	Opposition Fees	300	31%	30%	21%	12%	6%

Table 77: Influence of specific fees on filing decisions by mega cluster – Random group (unweighted)

Random group
Cases weighted with structural weight

Mega Cluster	Fee type	Extent of Influence on Filing Decisions					
		Valid N	No Influence 1	2	3	4	Very much Influence 5
Electricity	Filing Fee	164	21%	23%	35%	8%	12%
	Search Fee	164	13%	19%	35%	19%	14%
	Substantive examination Fee	161	10%	16%	36%	25%	12%
	Claim Fee	160	16%	28%	20%	11%	25%
	Renewal fees at EPO during examination	162	18%	21%	28%	17%	15%
	Appeal Fees	160	31%	28%	17%	13%	12%
	Opposition Fees	160	28%	25%	22%	13%	12%
Organic Chemistry	Filing Fee	144	19%	8%	35%	11%	27%
	Search Fee	144	22%	12%	28%	11%	27%
	Substantive examination Fee	141	16%	9%	31%	12%	32%
	Claim Fee	142	12%	8%	19%	25%	35%
	Renewal fees at EPO during examination	143	15%	7%	18%	33%	27%
	Appeal Fees	142	19%	8%	27%	16%	30%
	Opposition Fees	142	19%	8%	27%	16%	30%
Inorganic Chemistry	Filing Fee	122	12%	27%	25%	22%	15%
	Search Fee	122	8%	19%	29%	26%	18%
	Substantive examination Fee	121	5%	23%	33%	23%	15%
	Claim Fee	120	13%	21%	28%	19%	19%
	Renewal fees at EPO during examination	122	11%	23%	30%	23%	12%
	Appeal Fees	119	20%	37%	15%	17%	12%
	Opposition Fees	119	16%	30%	25%	17%	12%
ICT	Filing Fee	111	15%	32%	28%	14%	11%
	Search Fee	111	4%	35%	22%	28%	11%
	Substantive examination Fee	108	4%	33%	18%	33%	12%
	Claim Fee	108	15%	33%	12%	18%	22%
	Renewal fees at EPO during examination	110	11%	32%	17%	22%	18%
	Appeal Fees	108	20%	18%	18%	33%	11%
	Opposition Fees	108	20%	14%	21%	33%	11%
Traditional	Filing Fee	306	28%	24%	24%	15%	9%
	Search Fee	306	23%	18%	27%	21%	10%
	Substantive examination Fee	301	21%	15%	32%	21%	10%
	Claim Fee	298	24%	17%	21%	22%	15%
	Renewal fees at EPO during examination	302	26%	9%	19%	27%	19%
	Appeal Fees	300	33%	17%	22%	23%	5%
	Opposition Fees	300	33%	14%	25%	23%	6%

Table 78: Influence of specific fees on filing decisions by mega cluster – Random group (weighted)

Table 79 to **Table 82** contain the results regarding the effect of percentage fee changes on filing behaviour. The weighted analyses regarding sensitivity to fee changes in the rightmost column contain a crude estimate of sensitivity, by dividing the mean percentage change in fee activity by the corresponding 25% increase or decrease in fees. It appears that sensitivities to fee increases are higher than to decreases. It also appears that EP resident bloc applicants have a rather lower sensitivity than Japan and US resident bloc applicants. This is a logical result bearing in mind that EPO is within the home patenting area for EP residents. With respect to mega clusters, organic chemistry shows the highest, ICT the lowest sensitivity to fee changes.

Random group
Unweighted

Joint Mega Cluster	Fee Change	Extent of Influence on Overall Filing levels at			
		Decrease N	No change N	Increase N	Mean % Change
Electricity	General EPO fee fall by 25%	2	76	77	8.7%
	General EPO fee increase by 25%	93	55	6	-8.9%
Organic Chemistry	General EPO fee fall by 25%	3	88	48	5.7%
	General EPO fee increase by 25%	68	66	3	-8.9%
Inorganic Chemistry	General EPO fee fall by 25%	2	73	43	4.8%
	General EPO fee increase by 25%	60	55	2	-8.8%
ICT	General EPO fee fall by 25%	3	44	56	9.6%
	General EPO fee increase by 25%	64	32	5	-12.3%
Traditional	General EPO fee fall by 25%	3	173	123	7.1%
	General EPO fee increase by 25%	160	127	7	-10.1%

Table 79: Influence of fee increases or decreases on filing decisions by mega cluster – Random group (unweighted)

Random group
Cases weighted with structural weight

Mega Cluster	Fee Change	Extent of Influence on Overall Filing levels at EPO				
		Decrease N	No change N	Increase N	Mean % Change	Mean percentage change divided by fee change (25%)
Electricity	General EPO fee fall by 25%	2	76	77	8.4%	0.34
	General EPO fee increase by 25%	93	55	6	-18.3%	0.73
Organic Chemistry	General EPO fee fall by 25%	3	88	48	15.9%	0.63
	General EPO fee increase by 25%	68	66	3	-18.3%	0.73
Inorganic Chemistry	General EPO fee fall by 25%	2	73	43	7.6%	0.30
	General EPO fee increase by 25%	60	55	2	-10.8%	0.43
ICT	General EPO fee fall by 25%	3	44	56	5.9%	0.24
	General EPO fee increase by 25%	64	32	5	-7.4%	0.30
Traditional	General EPO fee fall by 25%	3	173	123	8.0%	0.32
	General EPO fee increase by 25%	160	127	7	-11.1%	0.44

Table 80: Influence of fee increases or decreases on filing decisions by mega cluster – Random group (weighted)

Random group
Unweighted

Residence Bloc	Fee Change	Extent of Influence on Overall Filing levels at			
		Decrease N	No change N	Increase N	Mean % Change
Total	General EPO fee fall by 25%	7	347	233	6.2%
	General EPO fee increase by 25%	298	265	14	-8.4%
EP	General EPO fee fall by 25%	4	200	128	6.0%
	General EPO fee increase by 25%	159	157	8	-7.6%
JA	General EPO fee fall by 25%	3	84	43	5.3%
	General EPO fee increase by 25%	70	56	3	-9.7%
OT	General EPO fee fall by 25%	0	16	8	6.2%
	General EPO fee increase by 25%	11	12	0	-11.4%
US	General EPO fee fall by 25%	0	47	54	8.1%
	General EPO fee increase by 25%	58	40	3	-9.2%

Table 81: Influence of fee increases or decreases on filing decisions by residence bloc – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence Bloc	Fee Change	Extent of Influence on Overall Filing levels at EPO				
		Decrease N	No change N	Increase N	Mean % Change	Mean percentage change divided by fee change (25%)
Total	General EPO fee fall by 25%	7	347	233	8.5%	0.34
	General EPO fee increase by 25%	298	265	14	-10.2%	0.41
EP	General EPO fee fall by 25%	4	200	128	6.3%	0.25
	General EPO fee increase by 25%	159	157	8	-7.0%	0.28
JA	General EPO fee fall by 25%	3	84	43	6.5%	0.26
	General EPO fee increase by 25%	70	56	3	-16.2%	0.65
OT	General EPO fee fall by 25%	0	16	8	4.2%	0.17
	General EPO fee increase by 25%	11	12	0	-12.5%	0.50
US	General EPO fee fall by 25%	0	47	54	18.6%	0.74
	General EPO fee increase by 25%	58	40	3	-15.4%	0.62

Table 82: Influence of fee increases or decreases on filing decisions by residence bloc – Random group (weighted)

15 Annex IX: Effect of patent rule changes on filing behaviour

In this year's **Section D** of the questionnaire, respondents were asked about the effects of two rule changes on their filing behaviour. Specifically the questionnaire enquired about the effect on filing behaviour of the "EPC2000" revision of the European Patent Convention adopted in December 2007, and about the "London Agreement" enacted in May 2008, which modifies translation requirements for texts of patents after grant by EPO before lodging at certain national offices.

For this section, results are reported using residence bloc breakdown.

Table 83 contains the unweighted results of the Random group and **Table 84** contains the weighted results of the Random group.

Random group
Unweighted

Residence Bloc	Rule Change	Extent of influence on Overall Filing levels at EPO					
		Valid N	Lower filing levels	No change	Higher filing levels	Not yet decided	Do not know this change at all
Total	EPC 2000 London Agreement	595 592	1% 2%	66% 52%	6% 24%	13% 11%	14% 11%
EP	EPC 2000 London Agreement	341 338	1% 1%	69% 53%	4% 25%	11% 11%	15% 9%
JA	EPC 2000 London Agreement	131 131	1% 2%	69% 59%	13% 23%	6% 5%	11% 11%
OT	EPC 2000 London Agreement	23 23	0% 0%	57% 52%	9% 26%	13% 4%	22% 17%
US	EPC 2000 London Agreement	100 100	1% 4%	54% 41%	4% 21%	28% 21%	13% 13%

Residence Bloc	Rule Change	Extent of influence on number EPC national office used for validation					
		Valid N	Lower number of national offices	No change	Higher number of national offices	Not yet decided	Do not know this change at all
Total	EPC 2000 London Agreement	589 594	2% 3%	68% 43%	3% 29%	13% 13%	14% 11%
EP	EPC 2000 London Agreement	337 341	1% 2%	68% 37%	5% 38%	12% 15%	13% 9%
JA	EPC 2000 London Agreement	131 131	1% 5%	78% 68%	1% 7%	7% 7%	14% 14%
OT	EPC 2000 London Agreement	22 22	0% 0%	68% 55%	0% 23%	5% 9%	27% 14%
US	EPC 2000 London Agreement	99 100	5% 7%	54% 31%	2% 31%	26% 19%	13% 12%

Table 83: Effects of rule changes on filing behaviour – Random group (unweighted)

Random group
Cases weighted with structural weight

Residence Bloc	Rule Change	Extent of Influence on Overall Filing levels at EPO					
		Valid N	Lower filing levels	No change	Higher filing levels	Not yet decided	Do not know this change at all
Total							
	EPC 2000	595	1%	54%	4%	10%	31%
	London Agreement	592	1%	48%	15%	7%	29%
EP							
	EPC 2000	341	1%	52%	4%	11%	32%
	London Agreement	338	1%	49%	17%	9%	23%
JA							
	EPC 2000	131	0%	86%	0%	1%	13%
	London Agreement	131	0%	62%	12%	1%	25%
OT							
	EPC 2000	23	0%	51%	0%	16%	33%
	London Agreement	23	0%	50%	17%	0%	33%
US							
	EPC 2000	100	0%	52%	6%	8%	33%
	London Agreement	100	1%	39%	13%	8%	40%

Residence Bloc	Rule Change	Extent of influence on number EPC national office used for validation					
		Valid N	Lower number of national offices	No change	Higher number of national offices	Not yet decided	Do not know this change at all
Total							
	EPC 2000	589	0%	57%	3%	10%	30%
	London Agreement	594	2%	42%	19%	11%	26%
EP							
	EPC 2000	337	0%	50%	5%	15%	30%
	London Agreement	341	1%	38%	22%	16%	23%
JA							
	EPC 2000	131	0%	86%	0%	1%	14%
	London Agreement	131	12%	74%	0%	1%	14%
OT							
	EPC 2000	22	0%	67%	0%	0%	33%
	London Agreement	22	0%	49%	18%	1%	33%
US							
	EPC 2000	99	1%	58%	0%	8%	33%
	London Agreement	100	1%	38%	20%	7%	33%

Table 84: Effects of rule changes on filing behaviour – Random group (weighted)

The general conclusions of these analyses are that the implementation of EPC 2000 will have little or no effect on filing or validation behaviours. On the other hand, the London Agreement will have some positive effect on filing levels and an even more positive overall effect on validation rates at national offices after grant, particularly for the EPC and US-based applicants.

16 Annex X: Estimating birth & death effects in the applicant population

The method that is used to calculate correction factors was explained in **Annex VI, Section 12** of the 2007 survey report. A slightly modified method was used in this survey that is based on database information from December 2008. The calculation is shown first for total filings (Euro-direct + Euro-PCT-RP), then results are 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

		Also filed in								
		1999	2000	2001	2002	2003	2004	2005	2006	2007
Filers in	1999	27 419	9 381	8 889	7 910	7 432	6 975	6 247	5 661	5 042
	2000	9 381	29 750	10 224	9 114	8 600	7 899	7 093	6 478	5 776
	2001	8 889	10 224	31 538	10 399	9 798	9 031	8 043	7 343	6 572
	2002	7 910	9 114	10 399	31 383	10 920	10 126	9 026	8 138	7 309
	2003	7 432	8 600	9 798	10 920	33 147	11 715	10 411	9 410	8 462
	2004	6 975	7 899	9 031	10 126	9 026	34 077	11 860	10 743	9 506
	2005	6 247	7 093	8 043	9 026	10 411	11 860	35 133	12 257	10 940
	2006	5 661	6 478	7 343	8 138	9 410	10 743	12 257	37 268	13 052
	2007	5 042	5 776	6 572	7 309	8 462	9 506	10 940	13 052	39 704

A similar table can be drawn up to show the numbers of filings that were made in each case by the re-filers and pre-filers.

Recurrent applications

		Also filed in								
		1999	2000	2001	2002	2003	2004	2005	2006	2007
Filings in	1999	89 579	66 952	65 379	62 714	61 063	58 547	55 585	52 704	49 992
	2000	74 579	100 915	76 461	73 210	71 370	68 193	65 171	62 128	58 908
	2001	78 314	82 556	110 317	83 122	81 098	77 704	74 090	70 943	66 865
	2002	71 372	75 217	79 290	106 504	80 580	77 576	74 185	70 478	66 594
	2003	75 642	79 545	83 907	87 641	117 122	89 653	85 874	81 907	77 708
	2004	76 754	81 018	85 412	88 907	94 612	124 121	95 587	91 420	86 253
	2005	74 599	79 576	83 867	86 839	92 258	97 896	129 057	99 221	94 348
	2006	69 412	75 219	79 704	81 918	87 216	92 813	101 149	135 799	103 850
	2007	60 523	66 098	70 584	73 427	79 007	83 092	92 372	103 442	141 630

The following table shows the numbers of filings that are made by applicants in the test year who did not file in the base year.²⁵

Non recurrent applications

		Did not file in								
		1999	2000	2001	2002	2003	2004	2005	2006	2007
Filings in	1999	0	22 627	24 200	26 865	28 516	31 032	33 994	36 875	39 587
	2000	26 336	0	24 454	27 705	29 545	32 722	35 744	38 787	42 007
	2001	32 003	27 761	0	27 195	29 219	32 613	36 227	39 374	43 452
	2002	35 132	31 287	27 214	0	25 924	28 928	32 319	36 026	39 910
	2003	41 480	37 577	33 215	29 481	0	27 469	31 248	35 215	39 414
	2004	47 367	43 103	38 709	35 214	29 509	0	28 534	32 701	37 868
	2005	54 458	49 481	45 190	42 218	36 799	31 161	0	29 836	34 709
	2006	66 387	60 580	56 095	53 881	48 583	42 986	34 650	0	31 949
	2007	81 107	75 532	71 046	68 203	62 623	58 538	49 258	38 188	0

²⁵ Further analysis of historical numbers of applicants and applications appears in a presentation by P. Hingley and S. Bas at <http://www.epo.org/about-us/events/archive/2008/patent-statistics2008/programme.html> and in an article to appear in "World Patent Information".

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

$$CF' = \frac{(\# \text{ applications year } i+j \text{ from applicants that did not file in year } i) - ((\# \text{ applications year } i \text{ from applicants that did not file in year } i+j) \times ((\# \text{ applications in year } i+j \text{ in population})/(\# \text{ applications in year } i \text{ in population})))}{(\# \text{ applications year } i+j \text{ from applicants that did not file in year } i)}$$

In comparison to the previous method, a multiplicative term has been added to the last line of the above formula in order to inflate the term corresponding to filings in years $i+j$ by a factor that shows the relative numbers of applications in the population for years " $i+j$ " and " i ". This reduces the correction factor to some extent and compensates for the continual growth in numbers of applications in the population from year to year.

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 is 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 is collected in the following table.

Applicant Panel correction factors

Survey Year	Base Year	Correction factors for Total filings (Euro-direct+Euro-PCT-RP)		
		Survey Year	Survey Year + 1	Survey Year + 2
2003	2002	959	2 048	3 191
2004	2003	972	2 194	3 287
2005	2004	399	1 501	2 015
2006	2005	1 492	2 367	3 055
2007	2006	3 255	7 208	7 752
2008	2007	4 867	11 168	15 328

It should be noted that this table differs to some extent from the analogous table that was presented in Annex VIII of the 2007 survey report, because of the new calculation method and also to a slight degree because of changes to the database since then. In particular the two-year-ahead CF' values are now sometimes only a little greater than the one-year-ahead CF' values.

	Survey Year	Survey Year + 1	Survey Year + 2
Base year for calculation	2006	2005	2004
Total filings (Euro-direct+Euro-PCT-RP)	4 867	11 168	15 328
Euro-direct filings	2 757	5 434	7 616
Euro-PCT-RP filings	2 394	6 410	6 735
Difference Total - (ED + PCT-RP)	-284	-676	978

This table shows CF' values for the current survey for Euro-direct filings and for Euro-PCT-RP filings, considered first together and then separately from each other. Then appear also the discrepancies between the sums of the correction factors for Euro-direct and Euro-PCT-RP individually and total filings Euro-direct + Euro-PCT-RP. These discrepancies seem to be acceptably small.

17 Annex XI: Sizes of Populations and Samples for the 2008 EPO Applicant Panel Survey

	Euro-applications in 2007	Euro-applicants in 2007
	Total (Euro-direct + Euro-PCT-RP)	Total (Euro-direct + Euro-PCT-RP)
1. Population in 2007*	140 908	39 655
Sample: Biggest group		
2. Number asked* as percentage of 1.	68 473 48.6%	419 1.1%
Number of quantitative responses (questionnaires) as percentage of 1. as percentage of 2.	20 775 14.7% 30.3%	182 0.5% 43.4%

* From the EPO database (EPASYS)

	Euro-applications in 2007				Euro-applicants in 2007			
			Total (Euro-direct + PCT-IP)	Euro-PCT-RP			Total (Euro-direct + PCT-IP)	Euro-PCT-RP
	Euro-direct	PCT-IP			Euro-direct	PCT-IP		
1. Population in 2007*	62 211	159 835	222 046	78 697	17 510	50 346	63 377	26 005
Sample: Random group								
2. Number asked* as percentage of 1.	27 278 43.8%	27 560 17.2%	54 838 24.7%	27 255 34.6%	1 262 7.2%	1 069 2.1%	1 594 2.5%	1 454 5.6%
Number of quantitative responses (questionnaires) as percentage of 1. as percentage of 2.	21 395 34.4% 78.4%	37 168 23.3% 134.9%	58 563 26.4% 106.8%	17 704 22.5% 65.0%	489 2.8% 38.7%	524 1.0% 49.0%	648 1.0% 40.7%	507 1.9% 34.9%

* From the EPO database (EPASYS)



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