# QUALITY OF PRINT MEDIA RESEARCH
## *Title Load per Respondent Measures to Reduce the Interview Length per Respondent*

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### Introduction

More and more print media titles enter the market every year. This applies to all print media segments: consumer magazines, trade magazines, customer journals and newspapers. With respect to financing and economics viability, all publications depend on advertising revenue, i.e. the selling of advertising space. In addition to circulation numbers, the main selling propositions include a proven readership structure, the target groups, as well as audience penetration and the coverage.

The data of the ma (media analysis of the work-group media-analysis e.V. – ag.ma) are generally accepted as the "media coverage currency" in Germany. Therefore, new publications try to be included in the ma list as a basis for consideration in future media planning. This leads to a continuous increase in the number of magazine titles questioned in a ma-interview. Of the 88 consumer journals in the ma in 1980, the number has more than doubled to 183 titles in 2005. In addition to the journals there are also city magazines, TV supplements, religious press and daily newspapers.

The proliferation in titles adds to the title load for the respondent and is accompanied by the phenomenon, that the average interview length has remained virtually unchanged at 48 minutes. It is therefore quite possible that both the reliability and the quality of the answers may suffer. To prevent this, new interview concepts are necessary to provide media coverage results for all titles on the one hand and a reduction of the load for the respondent on the other hand.

The ag.ma has produced a concept which reduces the number of titles per respondent by one third, at the same time keeping the number of interviews per title constant. Considerable preparatory work in which the title genres and the corresponding readership structures were evaluated on a so-called third basis, i.e. a third of the total title number, led to a new interview model which meets these requirements. Simultaneously the number of interviews was increased by one third.

This presentation covers both the extensive preparatory work and its putting into practice, as well as the results of a subsequent test under real conditions with 13,000 interviews. The results were evaluated versus parallel-surveyed, "normal" ma interviews.

In the meantime the ma 2005 Print media II has been published which is based completely on the split-based survey.

### Theoretical Considerations / Preparation Work

The preparation work began in 2001, the number of titles having already increased to 165 by then.

First of all the results of a ma-wave were examined (using the ma 2001 Print) with regard to structure and overlaps of the title genres on a gross-basis. Here especially, similarities in the editorial content of the titles were looked at. Additionally, socio-demographic features such as gender, age, education, employment, household-net-income, amount of contact and duration of the interview, as well as the number of titles in each filter level were included in the evaluation.

Based on these data the magazines were divided into three provisional title-groups. As a result a highly homogenous distribution was arrived at among the three groups. This related both to the structure of the three groups, as well as to the number of titles and therefore to the load for the respondent during the interview.

| | Title group 1 | Title group 2 | Title group 3 |
|---|---|---|---|
| Gross coverage (absolute) | | | |
| Maximum readership | 38,836 | 38,245 | 38,867 |
| Readers per issue | 18,615 | 14,831 | 14,461 |
| Number of titles to be questioned | | | |
| Total | 51 | 55 | 55 |
| Publication interval: monthly | 26 | 27 | 26 |
| Publication interval: fortnightly | 6 | 7 | 7 |
| Publication interval: weekly | 19 | 21 | 22 |

Source: ma 2001 Print

| | Title group 1 | Title group 2 | Title group 3 |
|---|---|---|---|
| Exposure class | | | |
| Structure Maximum readership (gross) in % | | | |
| Men 14 to 44 years | 22 | 22 | 19 |
| Women 14 to 44 years | 29 | 29 | 33 |
| Men 45 years and older | 21 | 20 | 19 |
| Women 45 years and older | 28 | 30 | 29 |
| Reading much (48+ contacts) | 58 | 61 | 62 |
| Reading medium (25-47 c.) | 28 | 27 | 27 |
| Reading less (0-24 c.) | 14 | 12 | 12 |
| Interview length | | | |
| Up to 44 minutes | 30 | 29 | 29 |
| 45 to 54 minutes | 36 | 37 | 37 |
| 55 minutes and more | 34 | 34 | 34 |

Source: ma 2001 Print

To get the biggest intersection possible, each of the respondents was interviewed with two of the three title groups.

| | Split A (TG1+2) | Split B (TG1+3) | Split C (TG2+3) |
|---|---|---|---|
| Gross coverage (absolute) | | | |
| Maximum readership | 77,081 | 77,703 | 77,112 |
| Readers per issue | 33,446 | 33,446 | 29,292 |
| Number of titles to be questioned | | | |
| Total | 106 | 106 | 110 |
| Publication interval: monthly | 53 | 52 | 53 |
| Publication interval: fortnightly | 13 | 13 | 14 |
| Publication interval: weekly | 40 | 41 | 43 |

Source: ma 2001 Print

The compilation of the title groups was optimised with the help of a computer programme. Additionally, rules were implemented so that titles with similar editorial content (such as Stern, Spiegel Focus) were always together in one split. Another rule laid down stated that particular genres had to be together such as car-magazines with motorcycle-magazines or wellness-magazines with health-magazines and so on.

## Experiment of Methods

The examination of the reduced titles in relation to the coverage was made via an experiment of methods. A parallel wave was conducted to the ma 2002 Print Trends Autumn wave. These parallel interviews with the split division were conducted with the same sample points. The trend wave as well as the parallel wave both contained about 13,000 interviews, which means that each split had about 4,330 cases. However, the number of interviews per title was about 8,600 as each title group was represented in two splits.

| Composition of the parallel wave | Split A | Split B | Split C | Total |
|---|---|---|---|---|
| Interviews app. | 4,330 | 4,330 | 4,330 | 13,000 |
| Title group 1 | X | X | - | X |
| Title group 2 | X | - | X | X |
| Title group 3 | - | X | X | X |

| Overview of the split experiment | Trend Autumn 2002 | Parallel wave | | |
|---|---|---|---|---|
| | | Split A | Split B | Split C |
| Interviews unweighted | 12,993 | 4,379 | 4,347 | 4,332 |
| Title groups surveyed | 1,2,3 | 1,2 | 1,3 | 2,3 |
| Number of titles per split | 174 | 119 | 111 | 118 |
| + 4 supplements, 2 newspaper-magazines | 6 | 6 | 6 | 6 |
| Ø Titles "Ever read or looked at" | 24,9 | 19,0 | 18,1 | 17,9 |
| Ø Titles Maximum readership | 10,1 | 7,8 | 7,6 | 7,5 |
| Ø Titles Readers per issue | 4,3 | 3,5 | 3,3 | 3,0 |
| Interview length in minutes | 48,1 | 46,1 | 45,9 | 46,5 |

Source: ma 2002 Trend Autumn and Parallel wave

There were numerous quality checks: in addition to examine the number of titles per filter level, the length of the interviews was also subject to detailed analysis.

Within the three different title groups the load in the first filter level was at an almost equal level.

| Number of titles in the first filter | Parallel wave | | |
|---|---|---|---|
| | TG 1 from split A+B n=8,726 | TG 2 from split A+C n=8,711 | TG 3 from split B+C n=8,679 |
| Total | 15.3 | 15.0 | 15.1 |
| Men | 13.9 | 13.4 | 13.6 |
| Women | 16.5 | 16.4 | 16.4 |
| 14 to 29 years | 15.7 | 14.9 | 15.2 |
| 30 to 49 years | 17.0 | 17.0 | 17.0 |
| 50 years and older | 13.9 | 13.6 | 13.7 |
| Secondary school | 14.6 | 13.9 | 14.1 |
| Higher schools | 16.0 | 16.2 | 16.2 |

Source: ma 2002 Trend Autumn and Parallel wave

Here only a marginal change was found concerning the average time load for the respondent in the interview. In the trend wave with 174 titles of consumer magazines, an interview required an average of 48.1 minutes. The different split versions with the title reduction of about one third required an average of 46.1 minutes (split A), 45.9 minutes (split B) and 46.5 minutes (split C).

| Interview length | Trend Autumn 2002 | Parallel wave | | | |
|---|---|---|---|---|---|
| | | Total | Split A | Split B | Split C |
| Interviews unweighted | 12,993 | 13,058 | 4,379 | 4,347 | 4,332 |
| Ø Interview length (minutes) | 48.1 | 46.1 | 46.1 | 45.9 | 46.5 |
| | % | % | % | % | % |
| Up to 30 minutes | 8.9 | 15.8 | 17.2 | 15.4 | 15.0 |
| 31 to 35 minutes | 11.3 | 11.9 | 11.3 | 11.8 | 12.7 |
| 36 to 40 minutes | 17.9 | 14.5 | 13.5 | 16.2 | 13.8 |
| 41 to 45 minutes | 17.9 | 16.6 | 16.4 | 17.4 | 16.0 |
| 46 to 50 minutes | 13.8 | 13.7 | 13.8 | 12.9 | 14.3 |
| 51 to 60 minutes | 17.0 | 16.4 | 16.4 | 15.9 | 16.9 |
| 61 to 70 minutes | 7.4 | 6.6 | 6.9 | 6.3 | 6.6 |
| 71 min. and longer | 5.8 | 4.4 | 4.6 | 4.0 | 4.7 |

Source: ma 2002 Trend Autumn and Parallel wave

The results relating to coverage were also satisfactory, so that this model could be pursued further.

| General filter: Ever read or looked at | Coverage | Index, Max. data base in Parallel wave = 100 |
|---|---|---|

| Number titles | Gross-reach of of the title group | Trend wave Total | Parallel wave | | | | | | | Trend wave Total | Parallel wave | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total | A | B | C | TG 1 (from A+B) | TG 2 (from A+C) | TG 3 (from B+C) | | Total | A | B | C | TG 1 (from A+B) | TG 2 (from A+C) | TG 3 (from B+C) |
| | Base (interviews) | 12,993 | 13,058 | 4,379 | 4,347 | 4,332 | 8,726 | 8,711 | 8,679 | | | | | | | | |
| 56 | Title group 1: 10 genres | 817.9 | - | 914.8 | 885.7 | - | 900.3 | - | - | 91 | - | 102 | 98 | - | 100 | - | - |
| 63 | Title group 2: 9 genres | 837.3 | - | 938.6 | - | 889.8 | - | 914.4 | - | 92 | - | 103 | - | 97 | - | 100 | |
| 55 | Title group 3: 10 genres | 784.7 | - | - | 844.0 | 843.3 | - | - | 843.7 | 93 | - | - | 100 | 100 | - | - | 100 |
| 6 | without split query: 2 genres | 83.9 | 86.6 | 89.1 | 85.9 | 84.7 | 87.5 | 86.9 | 85.3 | 97 | 100 | 103 | 99 | 98 | 101 | 100 | 98 |
| 119 | Titles from split A | 1655.2 | - | 1853.4 | - | - | - | - | - | 89 | - | 100 | - | - | - | - | - |
| 111 | Titles from split B | 1602.6 | - | - | 1729.8 | - | - | - | - | 93 | - | - | 100 | - | - | - | - |
| 118 | Titles from split C | 1622.0 | - | - | - | 1733.1 | - | - | - | 94 | - | - | - | 100 | - | - | - |

Source: ma 2002 Trend Autumn and Parallel wave

| Number of titles | Gross reach of the title group | Gross coverage ma 2002 Trend Autumn | | | | | Index, Max. data base in Parallel wave = 100 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Everread | Maximum readership | Reader per issue | Core readers | Occasional readers | Everread | Maximum readership | Reader per issue | Core readers | Occasional readers |
| | Base (interviews) | 12,993 | 12,993 | 12,993 | 12,993 | 12,993 | | | | | |
| 56 | Title group 1: 10 genres | 817.9 | 332.5 | 157.1 | 99.3 | 192.4 | 91 | 90 | 92 | 95 | 89 |
| 63 | Title group 2: 9 genres | 837.3 | 324.5 | 125.6 | 69.7 | 215.6 | 92 | 90 | 92 | 95 | 89 |
| 55 | Title group 3: 10 genres | 784.7 | 323.3 | 114.5 | 49.4 | 228.0 | 93 | 90 | 88 | 82 | 92 |
| 6 | without split query: 2 genres | 83.9 | 53.1 | 41.0 | 39.6 | 9.5 | 97 | 100 | 101 | 102 | 92 |
| 119 | Titles from split A | 1655.2 | 657.1 | 282.7 | 169.1 | 408.0 | 89 | 88 | 89 | 94 | 87 |
| 111 | Titles from split B | 1602.6 | 655.9 | 271.6 | 148.8 | 420.4 | 93 | 90 | 93 | 93 | 90 |
| 118 | Titles from split C | 1622.0 | 647.9 | 240.1 | 119.2 | 443.6 | 94 | 91 | 90 | 87 | 93 |

Source: ma 2002 Trend Autumn and Parallel wave

Of special importance was the examination whether there would be any influential effect if several groups were left out in the interview. This could be negated. The influence on the coverage by leaving out genres was so insignificant that it was not statistically relevant.

| Gross Reach in % | | Split A | | Split B | | Split C | |
|---|---|---|---|---|---|---|---|
| Reading intensity in general | | | | | | | |
| 10 genres | | 174.9 | > | 166.4 | | - | A reads more than B |
| 13 genres | | - | | 125.1 | < | 134.8 | C reads more than B |
| Reach per single title genre | | | | | | | |
| Magazines (Focus, Spiegel. Stern) | | 27.6 | > | 25.3 | | - | same as above |
| Weekly and reg. Sunday newspapers | | - | | 21.1 | < | 24.2 | same as above |
| Women's mag. fortnightly and 5 others | | - | | 18.9 | < | 20.4 | same as above |
| Others women's magazines | | 28.9 | > | 27.7 | | - | same as above |

Source: ma 2002 Trend Autumn and Parallel wave

After this first experiment of methods was viewed as a success, the preparations for the "real" employment could be started.

Parallel to this, CASI (Computer Assisted Self Interviewing) was used in a part-sample as a technique for the survey. (See also the paper of Dr. Eva-Maria Hess and Gabriele Ritter: CASI research in Germany 1992-2004 - Studies by the Arbeitsgemeinschaft Media-Analyse in the context of print media coverage surveys)

**Title Split Model in the ma 2005 Print Media**

The ma Print was based on 26,000 interviews until the ma 2004. Because of the title-split model in which the total number of titles was divided into three groups and in which each interviewee got two out of three groups to answer to, the number of interviews was increased by 13,000 cases. Thus 39,000 interviews were conducted from then on. This model was employed for the first time in the ma 2005 Print first wave.

| Composition of the ma 2005 Print media in total (wave 1 and 2) | Split A | Split B | Split C | Total |
|---|---|---|---|---|
| Interviews app. | 13,000 | 13,000 | 13,000 | 39,000 |
| Title group 1 | X | X | - | X |
| Title group 2 | X | - | X | X |
| Title group 3 | - | X | X | X |

The increase in the number of interviews was necessary because the ma-model employs 26,000 interviews as a basis for examining coverage. This is also the basis for the reporting threshold of 351 cases in the Maximum readership. As the readership of a title was only measured in two out of three splits, each split version had to include 13,000 interviews to be able to go back to the 26,000 interviews per title. Thus the statistical basis for measuring did not change.

For analysis and reporting purposes however, the split surveys of the media information has to be combined in one complete data record. Here the missing data of the titles that were not surveyed are supplemented. The fusion process was chosen as method. Fusions are suitable to build title specific structures as well as relations among the titles. Through simulation every respondent gets the title information of the missing split.

The sample conditions in the title split are excellent. The ratio of donor to recipient-sample is about 2:1 which means that there are on average two donors for every recipient at hand.

The survey of the splits is conducted in parallel with independent samples. The sampling points are covered simultaneously by all splits. This system of sample composition ensures that distortions among the splits can be held to a minimum.

The common characteristics of the simulation are available as the original media information of a title group from two splits in addition to the socio-demographic data and other information about the interviewee. The intersections between titles that have not been surveyed together can thus be controlled during the transfer process.

|  | Split A | Split B | Split C |
|---|---|---|---|
| Title groups | 1 + 2 | 1 + 3 | 2 + 3 |
| Supplementary title group | 3 | 2 | 1 |
| Transfer of the missing title information |  |  |  |
| Donor | Split B + Split C | Split A + Split C | Split A + Split B |
| Respondents in the donor-samples | 26,000 | 26,000 | 26,000 |
| Respondents in the recipient-samples | 13,000 | 13,000 | 13,000 |

The surveyed original information has to be completed by: First filter level (Maximum readership), second filter level (Readers per issue) and frequency of reading.

The fusion is supposed to show the titles which were surveyed by split in such a way as if they had been surveyed during the complete data record. This means that not only are the values of the donor reproduced for the potential but also for the structure. By doing this, checkable criteria result:

1.     Correspondence of the gross sums of Maximum readership and Readers per issue in the donor data record and in the total data record

2.     Correspondence of coverage Maximum readership and Readers per issue in the single title of donor data record and total data record

3.     Correspondence of the structure of Maximum readership and Readers per issue in the common features in the donor data record and in the total data record

4.     Reproduction of the donor in the intersections to the complementary title groups as well as within the title groups

Criteria 1 and 2 were well fulfilled by transfer except for minimal deviations. There are no significant incidences in the comparison between donor and total data record.

To verify criterion 3 the shares of Readers per issue, rest Maximum readership and of non Maximum readership were compared in target groups, donors and total data record. Measurement and assessment of the differences in the samples was done by a modified t-test, taking into consideration of the respective weight of work.

| Share of significant tests |  | Shares %  Basis: valid tests |  |  |
|---|---|---|---|---|
| Test: donor < > recipient totally merged | Basis | > .99 | >.95 | >.90 |
| Common characteristics x title group 1 | 56,056 | 0.0 | 0.1 | 0.1 |
| Common characteristics x title group 2 | 62,027 | 0.0 | 0.1 | 0.1 |
| Common characteristics x title group 3 | 52,061 | 0.0 | 0.1 | 0.1 |

Source: ISBA Informatik Service-Gesellschaft mbH, Hamburg: Supplementation of split-based original data in the German Print media, Documentation to the ma 2005 Print media II, April 2005

Significant incidents could practically not be found and therefore the third criterion is also fulfilled.

To verify the fourth criteria the Maximum readership of the titles was counted against each other in contingency tables for the donor and the total sample. Again, these were then compared to each other by a modified t-test.

| Shares of significant t-tests | | Shares %  Basis: valid tests | | |
| --- | --- | --- | --- | --- |
| Test: donor < > total merged | Basis | > .99 | >.95 | >.90 |
| Title group 1 x Title group 1 | 3,114 | 0.0 | 0.1 | 0.4 |
| Title group 2 x Title group 2 | 3,822 | 0.0 | 0.1 | 0.1 |
| Title group 3 x Title group 3 | 2,683 | 0.0 | 0.0 | 0.2 |
| Title group 1 x Title group 2 | 6,944 | 0.3 | 1.7 | 4.9 |
| Title group 1 x Title group 3 | 5,824 | 0.5 | 2.2 | 4.8 |
| Title group 2 x Title group 3 | 6,448 | 0.4 | 2.2 | 5.1 |

Source: ISBA Informatik Service-Gesellschaft mbH, Hamburg: Supplementation of split-based original data in the German Print media, Documentation to the ma 2005 Print media II, April 2005

In independent samples which come from the same universe about 1% significant tests are expected for the level of significance 0.99. For the levels 0.95 and 0.90, 5 % and 10 % are to be expected. These results were well short of these values. Therefore, criterion 4 is also fulfilled.
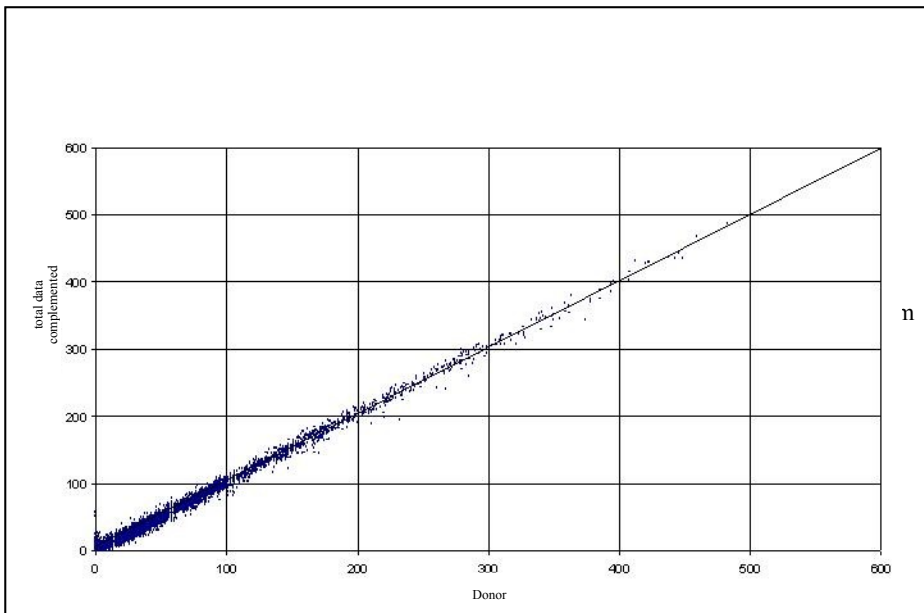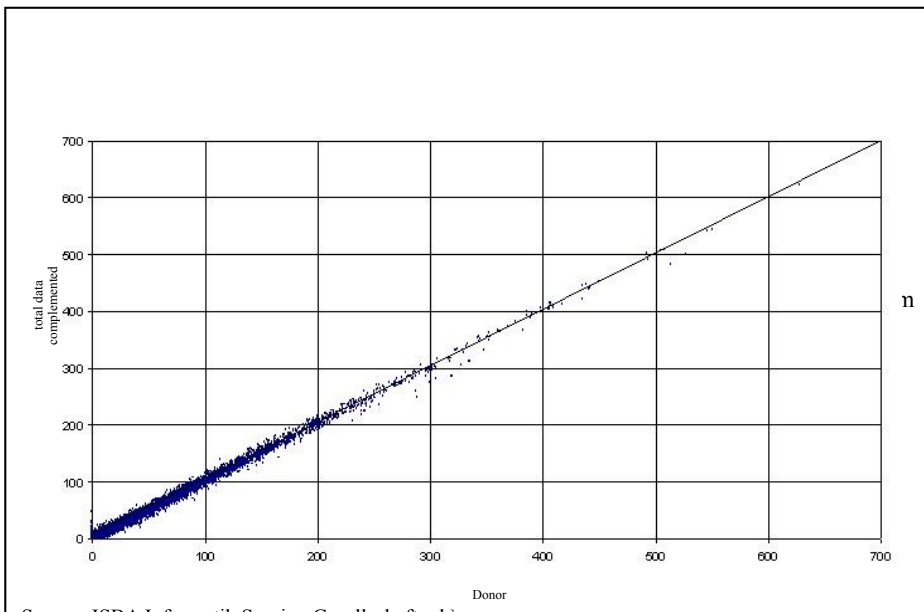


Source: ISBA Informatik Service-Gesellschaft mbH, Hamburg



Source: ISBA Informatik Service-Gesellschaft mbH, Hamburg

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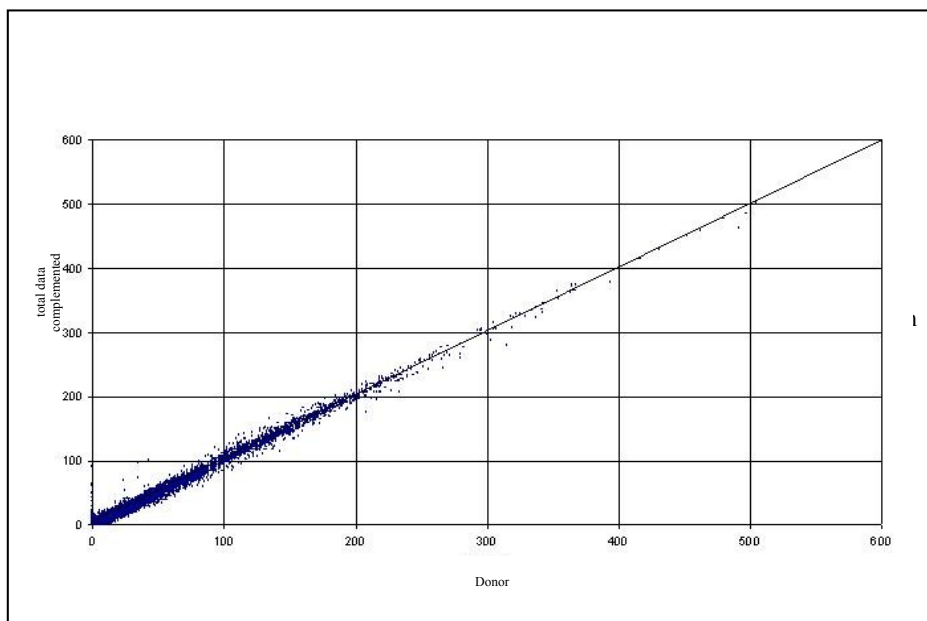
Source: ISBA Informatik Service-Gesellschaft mbH, Hamburg

## Conclusion

By introducing the title split model, the load for the respondents in the print media interview of the ma was reduced considerably, thereby improving the quality of the data.

The absolute length of the interviews was hardly shortened although the number of titles was reduced by one third. This shows very clearly that interviewers as well as interviewees take more time to answer the questions and thus go through the interview more carefully.

The examination of effects created by leaving out special genres or by showing "mother-daughter titles" (such as Focus and Focus Money) together at one time and apart from each other the next time, showed that there are obviously no systematic connections. If titles were left out, there were very small effects which were however insignificant. The effects on coverage were so small that there were no objections to a publication.

However, examination continues:

>        Each new title has to be classified and assigned to one split

>        The load for the respondents based on the individual amount of reading material per split has to be further examined and checked, taking into account possible effects

>        It should be checked whether there are still possibilities to optimise the division of the splits

>        Continuous observation of "the mother-daughter-effects"

| ma 2005 Print Gross coverage Target group: total | | Maximum readership | | Readers per issue | |
|---|---|---|---|---|---|
| Number of titles | Gross value title groups: | Donor | Recipient | Donor | Recipient |
| 56 | Title group 1: in split AB | 373.1 | 374.0 | 158.0 | 158.3 |
| 62 | Title group 2: in split AC | 387.2 | 389.0 | 137.2 | 138.1 |
| 52 | Title group 3: in split BC | 349.7 | 350.4 | 115.0 | 115.3 |

Source: ma 2005 Print media II