



www.wageindicator.org



Project no. *FP6-2004-506590*

Project acronym *WOLIWEB*

Project title *The socio-economic determinants of citizens' work life attitudes, preferences and perceptions, using data from the continuous web-based European Wage Indicator Survey*

Instrument: STREP

Thematic Priority PRIORITY 7, Research Area 3.2.2.

Evaluation report on Internet surveying and web visitors monitoring

Deliverable: D23 Evaluation report on Internet surveying and web visitors monitoring

Report Version: Final

Report Preparation Date: 31.03.2007

Authors of this report: Magda Andrałojć, Poznan University of Economics, Poland
Paulien Osse/Dirk Dragstra, Webword, Netherlands
Kimmo Kevätsalo, Käyttötieto Oy, Finland
Kea Tijdens, University of Amsterdam, Netherlands

TABLE OF CONTENT

| | |
|--|-----------|
| THE OVERALL OBJECTIVE OF WOLIWEB..... | 3 |
| 1. LITERATURE REVIEW ABOUT WEB-SURVEYS | 4 |
| 2. TRACKING AND TRACING WEB TRAFFIC | 7 |
| 3. INTERNET USAGE | 8 |
| 3.1 Users..... | 8 |
| 3.2 Internet penetration rate..... | 8 |
| 3.3 Conclusion..... | 19 |
| 4. WOLIWEB RESULTS..... | 20 |
| 4.1 Visits, completed questionnaires and response rates..... | 20 |
| 4.2 Visits | 20 |
| 4.3 Completed questionnaires..... | 22 |
| 4.4 Response rates..... | 22 |
| 4.5 The Marketing and Promotion Strategy..... | 23 |
| 4.6 The effects of marketing and promotion activities per country | 25 |
| 4.7 The impact of media: The cases of Germany, the UK and Poland..... | 36 |
| 4.8 The impact of trade unions: The case of Finland | 41 |
| 4.9 Conclusion..... | 46 |
| 5. THE RESPONDENTS' FEED BACK TO THE QUESTIONNAIRE | 47 |
| 5.1 Length of the questionnaire | 47 |
| 5.2 The completion time..... | 48 |
| 5.3 The respondents email feed back | 50 |
| 5.4 Conclusion..... | 53 |
| 6. THE SKEWNESS OF THE DATASET..... | 54 |
| 6.1 Focus on gender, age and education | 54 |
| 6.2 Gender | 54 |
| 6.3 Age..... | 55 |
| 6.4 Education | 55 |
| 6.5 Conclusion..... | 56 |
| 7. CONCLUSIONS..... | 57 |
| 7.1 Internet access and use | 57 |
| 7.2 WOLIWEB results overall | 57 |
| 7.3 Questionnaire response index..... | 57 |
| 7.4 Skewness of the dataset | 58 |
| REFERENCES | 59 |
| APPENDIX | 60 |

THE OVERALL OBJECTIVE OF WOLIWEB

WOLIWEB addresses the impact of the socio-economic framework on attitudes, preferences, and perceptions. Attitudes, preferences, and perceptions are inherently subjective in nature. They are potentially influenced by a host of factors related to one's socio-economic framework, referring to concepts such as occupation; labour market status; earnings; working, household and leisure time; marital status and family phase; socio-economic status; gender and ethnical background. WOLIWEB aims for quantitative analyses, and the data needed are gathered through the international, continuous web-based *WageIndicator*, consisting of

- an attractive website with labour market related information for a large public;
- a crowd-pulling Salary Check providing with very detailed salary information related to a set of variables such as education, firm size, supervisory position;
- a *WageIndicator* questionnaire with 67 – 85 questions; the dataset provides insight in issues related to work and wages;
- nation wide promotion, publicity, and answering visitors' email.

This paper is WOLIWEB's Deliverable D23. It is a research report regarding the experiences with websurveys as far as the WageIndicator survey is concerned. D23 is part of Work Package 6 'Evaluation of Internet-surveying' (p. 27 Annex 1).

Objectives Workpackage 6 and description of work

Objectives

Realise scientific objective 4

1. evaluate the project's experiences with the methodology of volunteer Internet surveying

Description of work

2. install a monitoring tool in the websites for tracking and tracing traffic; the tool counts the number of visits (hourly, daily, monthly or annual averages), page views, unique visitors, time and duration of visits, click paths, and the occupations for which wage information is requested
3. install a specific monitoring tool in the websites designed to generate information as regards the routing of the visitor, whence he/she came, and the quest within the site
4. add a few relevant questions in a so-called pop-up at the homepage or in the questionnaire itself to trace the visitor's motive for the visit and by which medium he/she was prompted to visit in the first place
5. solicit email comments from web visitors to the helpdesk as regards their opinions and expectations of the websites and its tools
6. track and trace the national promotion efforts and media attention
7. analyse the data from these five above mentioned tools in order to evaluate the promotion efforts in terms of media effectiveness
8. review the scientific literature about the methodology of volunteer Internet-surveying
9. analyse the data from the five tools in order to evaluate the methodology of volunteer Internet surveying
10. analyse the skewness in the dataset based on the weights calculated in WP5
11. report about the review of the literature, the results of the visitor's tracking and tracing analyses, and the skewness analyses

1. LITERATURE REVIEW ABOUT WEB-SURVEYS

Only a few years ago the image of the Internet was that is predominantly a medium of communication for highly educated and affluent males living in the metropolitan areas of the industrialized world. Furthermore illiteracy and poverty had been restrictions of Internet use in developing countries like China, Vietnam and India. But despite these restraints the number of Internet users is expected to swell due to the development of telecommunications and reorientation of state policies. Internet use has seen a major influx of women, youngsters and from other areas of the globe following the development of telecommunications infrastructure. The online population has been estimated to grow very rapidly in developing countries. (Slevin 2000; Hewson et al 2001). If extensively recruited by banners, email, publicity or advertisements, large numbers of web visitors and thus of respondents can be reached. In highly Internet penetrated countries, like most of the WOLIWEB-countries, the penetration rate is 50-75 % of the populations. In lowly penetrated countries the growth of users has been 200-300 % during this decade. (Internet World Stats).

The traditional methods for administering surveys include telephone interviewing, self-administered mail questionnaires, and face-to-face interviewing. These are quite expensive and time consuming data gathering methods. Until recently only surveys measuring IT-adoption have been conducted using Internet. Online surveys however provide promising opportunities in today's technological world.

Like all research methods, online survey research has benefits and drawbacks. The method works well for some research projects but is by no means an appropriate data collection tool for all projects. Online survey research is still in its infancy. The method has been dubbed the wave of the future, with supporters citing speedy response, low cost, and easy fielding as major benefits.

The great advantage of volunteer Internet surveys is that the target population is potentially larger and more international than in any other survey mode, because of the worldwide access to the Internet and because multilingual websites may easily cross borders and language barriers. Apart from advantages such as complex routing and preventing inconsistent answers by immediate checks, Internet surveys offer great opportunities to present relatively long choice lists, which is particularly important for measuring e.g. occupations or branches. Developing the online survey instrument offers opportunities for interactivity not previously available. They offer

the opportunity for direct data entry, greatly reducing staff time, data entry errors, and expense. However, there are different views about limitations with respect to the number and type of questions.

The new tool is criticised about its low response rates and that its samples do not adequately represent populations. A great disadvantage of volunteer Internet surveys is said to be that sampling errors are unknown and may be large. Yet, if the characteristics of the target population are known, weighing can be applied.

Although the particulars of the technology are new, the controversy surrounding the research methodology is not. In fact, much of the current debate about online surveys is reminiscent of a previous era when mail and telephone surveys were met with suspicion, Valerie Sue and Lois Ritter (2007, 3) remind us. Much of the current debate about online surveys is reminiscent of a previous era - only some 30 years ago - when mail and telephone surveys were met with suspicion. In the last decades there has been a plethora of methodological research that resulted in techniques for mitigating the deficiencies inherent in the mail and telephone survey methods. It is likely that in the decades to come, researchers will develop procedures for similarly compensating the limitations of online surveys.

Internet surveys may be solicited or voluntary. Solicitation is generally an inherent part of standard survey modes. In case of solicited Internet surveys the respondents are drawn from a known sampling frame and subsequently invited by email or mail, whereas respondents for volunteer Internet surveys are exposed to invitation banners.

The latest methodology books describe how to perform each stage of the data collection process on the Internet, including sampling, instrument design, and administration following the structure of traditional methodology books. (cf. Sue & Ritter 2007; Best & Krueger 2004). They endeavour to approach the Internet as a unique medium that necessitates its own conventions. There are some issues which have to be taken into consideration in Internet surveys like how to perform each stage of the data collection process, including sampling, instrument design, and administration.

The most frequently emphasized difference from traditional survey methods is that the sample is limited to those who have e-mail and/or Internet access. This creates needs to ensure that the target audience is being reached and that coverage bias does not exist. Confidentiality and anonymity issues also need to be addressed differently than when using a traditional method.

In terms of response rate, the literature is divided into the two common types of online research: e-mail surveys and web-based surveys. There is a wide range of response rates that are considered acceptable. Overall, the literature indicates that the response rates for e-mail surveys range between 24% and 76%. The response rates for web-based surveys are approximately 30%, but the studies are limited in number.

In a meta study of different modes of surveys, the characteristics of respondents in the solicited web mode were shown to be almost equal to the Internet users in the telephone mode of the same survey (Vehovar, 2003). Response rates however, appear to be lower, presumably because of the remote nature of Internet surveys, the lack of devices or skills, or the perception of email invitation as spam. For volunteer Internet surveys, by their nature no response rates can be given.

In general, the research indicates that the non-response rate in online surveys is lower than or similar to the rate in mail surveys and the number of words recorded for open-ended questions is higher in online surveys than in mail surveys. In a study that investigated word counts from open-ended questions on mail and Web-based surveys Kawak and Radler (2002) found an average of 10.65 words on mail surveys and 15.56 words on web-based surveys.

Observations of people who try to complete Web surveys suggest that two sources of significant frustration are lack of computer knowledge and poor questionnaire design (Dillman & Bowker, 2001). This often leads to premature termination of the survey.

The latest research on Internet surveying has shown that societies or communities must have a critical mass of Internet users before this tool can be utilised as a 'natural' or self-evident way of gathering information. The modernisation process and connected weakening of traditional social structures has however created a general tendency towards short term and light social connections. This is on the one hand typical for Internet culture. On the other hand it may be an obstacle in those societies, communities and cultures which still are strongly embedded in traditions of heavy data gathering by postal surveys. (Slevin 2000, 105-117)

2. TRACKING AND TRACING WEB TRAFFIC

A monitoring tool was installed in the websites for tracking and tracing traffic. Daily statistics are distributed among the partners. The web statistics can be viewed on www.wagenindicator.org.

3. INTERNET USAGE

3.1 USERS

According to Internet World Stats (IWS)¹ more and more people in the world uses Internet. In March 10 2007 16,9% of total population in the world used Internet. Data of Internet usage for Europe and countries taking part in WOLIWEB project are presented in table 2.

Before we can interpret data of Internet usage, we must first answer a basic question: what is an Internet user? Research firms, analysts, consultancies and other sources all disagree on how to answer this seemingly simple question. For analyzing and comparing Internet users on a global scale, IWS adopts a broad definition and defines an Internet User as **anyone currently in capacity to use the Internet**. According to IWS there are only two requirements for a person to be considered an Internet User:

- the person must have **available access** to an Internet connection point, and
- the person must have the **basic knowledge** required to use this technology.

In order to establish the relative growth rate of the Internet on a global basis, IWS compares the current (latest) Internet usage figures for each country or region with the year 2000 Internet usage figures and expresses this ratio as a percentage.

3.2 INTERNET PENETRATION RATE

The Internet Penetration Rate (**IPR**) corresponds to the percentage of the total population of a given country or region that uses the Internet. It is important to point out that Internet usage and population data go hand in hand. In order to determine the Internet Penetration Rate for each country and region of the world accurate demographic data are required. Therefore IWS updates the population figures regularly and corresponds to the best estimates available for 2007. World population estimates have been updated on March 10/2007. The population figures are based on data published by Stefan Helder, and contained in the website: world-gazetteer.com.

¹ The **Internet World Stats (IWS)** web site presents statistical internet usage and the population data for over 233 countries and regions of the world, consolidated from various periodic surveys, <http://www.internetworldstats.com>

The Internet usage information displayed comes from various sources: mainly from data published by [Nielsen//NetRatings](#) and by the [International Telecommunications Union](#) (ITU). Additional sources are [Computer Industry Almanac](#), the [CIA Fact Book](#), local NIC, local ISP, other public and private sources, and direct information from trustworthy and reliable research sources.

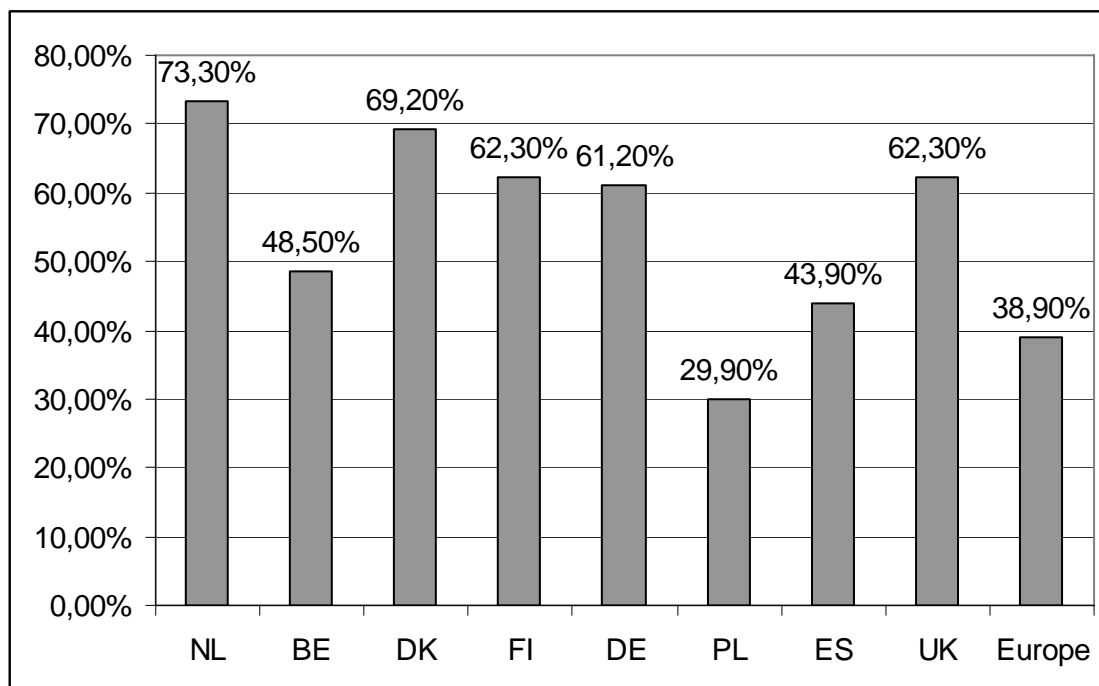
Table 1. Internet usage in Europe and countries taking part in WOLIWEB

| | | Population (2007 Est.) | Internet Users, Latest Data | User Growth (2000- 2007) | Penetration (% Population) | % Users in Europe |
|--------------------|----|-----------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------|
| The Netherlands | NL | 16.447.682 | 12.060.000 | 209,2 % | 73,3 % | 3,8 % |
| Belgium | BE | 10.516.112 | 5,100,000 | 155,0 % | 48,5 % | 1,6 % |
| Denmark | DK | 5.438.698 | 3.762.500 | 92,9 % | 69,2 % | 1,2 % |
| Finland | FI | 5.275.491 | 3.286.000 | 70,5 % | 62,3 % | 1,0 % |
| Germany | DE | 82.509.367 | 50.471.212 | 110,3 % | 61,2 % | 16,0 % |
| Poland | PL | 38.109.499 | 11.400.000 | 307,1 % | 29,9 % | 3,6 % |
| Spain | ES | 45.003.663 | 19.765.032 | 266,8 % | 43,9 % | 6,3 % |
| United Kingdom | UK | 60.363.602 | 37.600.000 | 144,2 % | 62,3 % | 11,9 % |
| Europe | | 809.624.686 | 314.792.225 | 199,5 % | 38,9 % | 100,0 % |

Source: www.InternetWorldStats.com, 10.03.2007

Analyzing WOLIWEB countries - the highest Internet penetration is in the Netherlands - 73,3% population uses Internet, and the lowest in Poland - 29,9% (see Figure 1). Nevertheless Poland has the highest user growth (the number of Internet users has increased three times). In most WOLIWEB countries, i.e. the Netherlands, Denmark, Finland, Germany, and UK, more than half population uses Internet, in Belgium and Spain - almost half. In Poland - about one third. In general it can be assumed that many people use Internet.

Figure 1. Internet penetration in Europe countries taking part in WOLIWEB project in March 10, 2007, according to Internet World Stats



Source: www.InternetWorldStats.com, 10.03.2007

Another important source of Internet usage statistics is data from Eurostat. At the Lisbon European Council in March 2000, the Heads of State and Government of the European Union adopted a strategy to prepare the EU for the challenges of the new century. It is now known as the Lisbon strategy. An important role in achieving the objectives set in Lisbon (increased economic growth, more jobs requiring better qualifications and greater social cohesion) play information and communications technologies (ICT). Official measurement concerning Information Society is an area for continuous revision and improvement. From 2002 the European Commission established annual Information Society surveys to benchmark the ICT-driven development in enterprises and by individuals. Eurostat developed two model surveys, one on enterprises, one on individuals, in close collaboration with Member States and the OECD, which have been regularly adapted to the changing needs of users and policy makers.² These surveys will ensure harmonized and comparable information on the use of ICT in households, by individuals and in enterprises at the European level until 2010. Part of the data collected were used in the context of the eEurope 2005 Action Plan which provides policy or benchmarking indicators.

² More about the surveys see: Methodological Manual for statistics on the Information Society, Eurostat, October 2006,

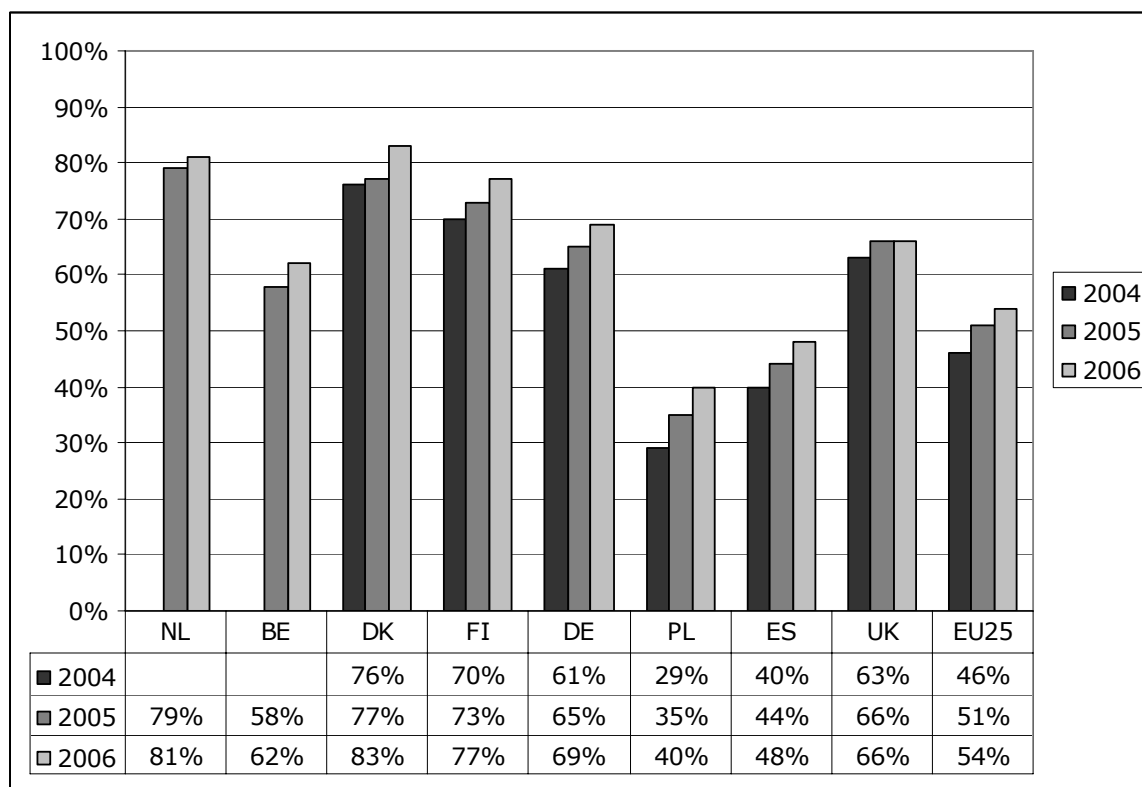
Analyzing Eurostat data in eight WOLIWEB countries we can observe quite big differences between countries taking part in the project as far as Internet penetration is concerned (figure 2). The highest Internet penetration, described as percentage of individuals who used the Internet in the last 3 months, is in Denmark (in 2006 – 83%) and in the Netherlands (in 2006 – 81%), the lowest is in Poland (in 2006 – 40%) and in Spain (in 2006 – 48%). Even though competition between Internet providers in Poland has been growing, the cost of Internet connections is still one of the highest in Europe, and the society is relatively poor. These are the main reasons for low Internet usage in Poland.

Comparing data from Internet World Statistics and Eurostat it can be observed that Eurostat statistics show higher Internet penetration. It is caused by methodological issues, mainly because Eurostat takes into account only adults (people between 16 and 74 years old), and Internet World Statistics – all population.

Since the beginning of the WOLIWEB project in 2004 Internet penetration in all analyzed countries has been gradually growing. The most significant growth was observed in countries with relatively low Internet penetration i.e. Poland (from 29% in 2004 to 40% in 2006) and Spain (from 40% in 2004 to 48% in 2006). According to the Polish Public Opinion Research Center (COBOS) increasing trend of Internet usage in Poland will continue.³

³ Internet i komputery: wyposażenie gospodarstw domowych, sposoby i cele korzystania, Centrum Badań Opinii Społecznej, Warszawa, April 2006, <http://www.cobos.pl>

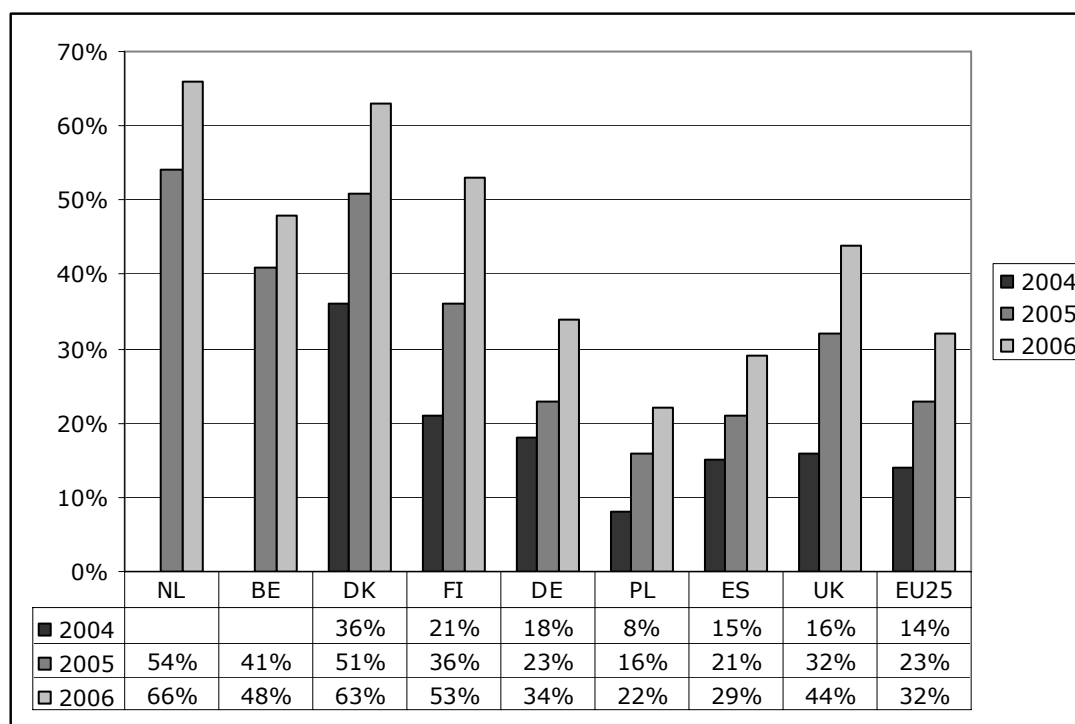
Figure 2. Internet penetration in WOLIWEB countries. Percentage of individuals who used the Internet in the last 3 months



Source: Eurostat

More and more people use the broadband Internet connection. Since 2004 the percentage of households with broadband connections has significantly increased in all WOLIWEB countries (figure 3). In 2006 it was most widespread in the Netherlands and Denmark (more than 60% of households have access to Internet through broadband connections).

Figure 3. Percentage of households using a broadband connection

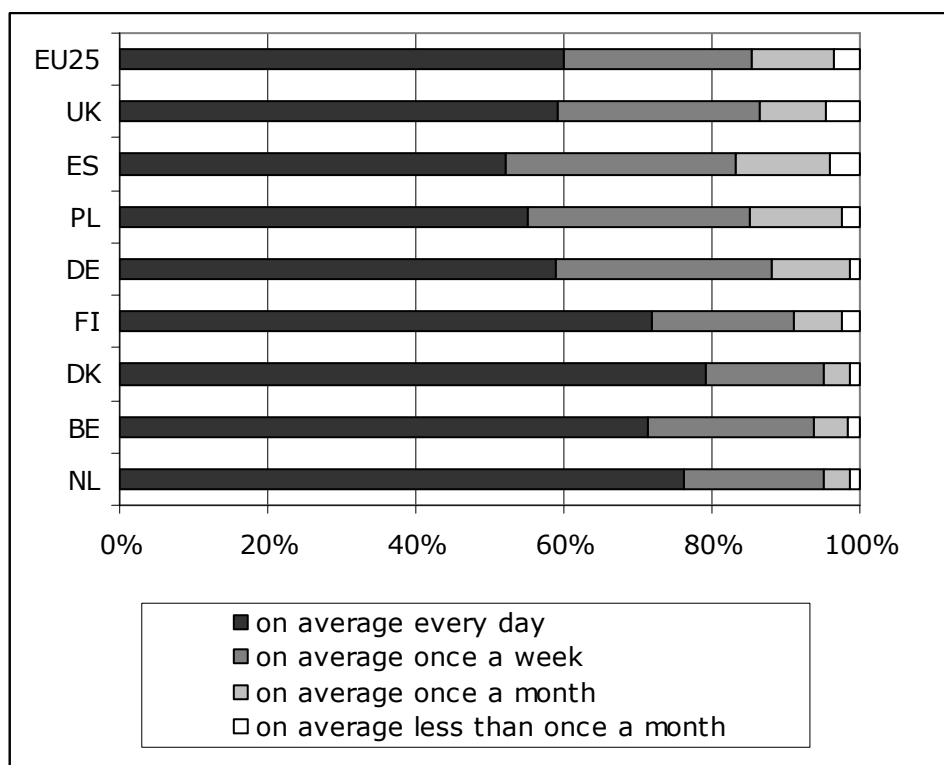


Source: Eurostat

In most countries among large enterprises and SMEs Internet penetration has reached saturation point. The percentage of employees working in enterprises with access to Internet comparing to the total of employees comes to 100% in Finland and 97-99% in the rest of WOLIWEB countries. It means that almost all employees have access to the Internet at work.

Internet penetration in most countries is rather high (it exceeds 50% of individuals), but how often people use the Internet? Frequency of Internet usage is an important issue in Internet survey research. People who use the Internet less than once a month, probably are not willing to fill in an Internet questionnaire. The potential respondents are presumably found among individuals who use Internet more often. The frequency of Internet use in WOLIWEB countries is shown in figure 4. Among individuals who used Internet in the last 3 months, the biggest group make up people who use Internet on average once a day – in all countries they constitute more than 50%. The second group are individuals who use the Internet on average once a week, the third group – once a month and fourth – less than once a month. The highest percentage of everyday Internet users in 2006 was observed in Denmark (79%), followed by the Netherlands (76%), Finland (72%) and Belgium (71%). The lowest percentage of everyday Internet users was in Spain (52%).

Figure 4. Frequency of internet use (percentage of people who used the Internet in the last 3 months)



Source: Eurostat, 2006

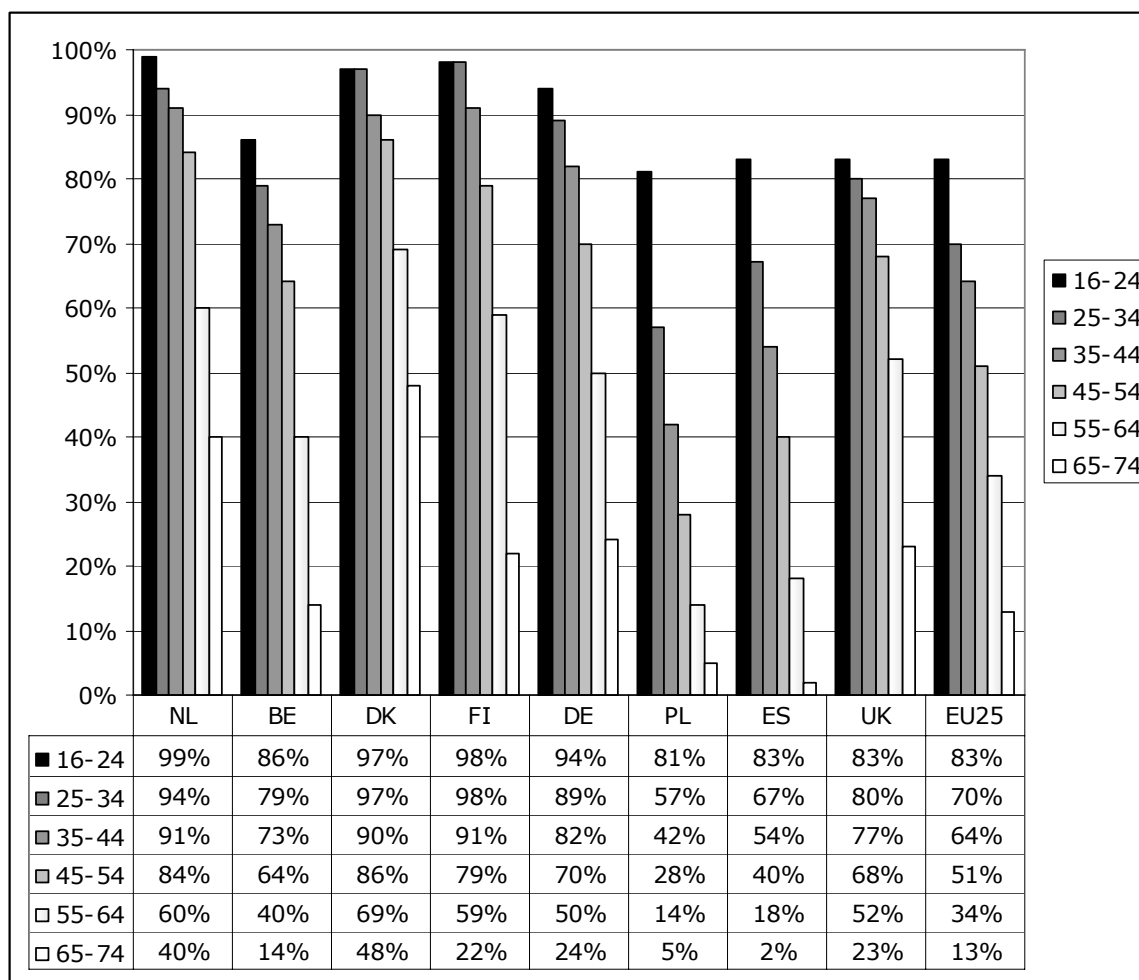
In general people who use Internet are young, well educated and are living in big cities. Moreover, according to Eurostat, overall there is a gender gap in Internet use, but it narrows in the 16 – 24 age group.⁴

Figure 5 shows the Internet users breakdown by age. Taking into account six age groups: 16-24, 24-34, 35-44, 45-54, 55-64, 65-74, in all countries the Internet penetration is the highest in the first (the youngest) group. People in the oldest group use the Internet relatively rare (the penetration index for this group is the lowest in Spain – 2% and in Poland – 5%). Differences between age groups are most significant in the countries where Internet penetration is low i.e. in Poland and Spain. In Poland for instance, the Internet penetration for the first age group (16-24 years) amounts to 81%, for the second group (25-34) – 57%, for the third group (35-44) – 42%, for the fourth group (45-54) – 28%, for fifth group (55-64) – 14%, and for the oldest group – 5%. The smallest differences between age groups are found in

⁴ M. Ottens, Internet usage by individuals and enterprises 2004, Statistics in focus Industry, trade and services Population and social conditions - Science and technology , 18/2005, Eurostat 2005,

Denmark, where almost half of the people in the age group 65-74 used the Internet in the last 3 months.

Figure 5. Internet users breakdown by age (percentage of individuals in age group who used the Internet in the last 3 months)

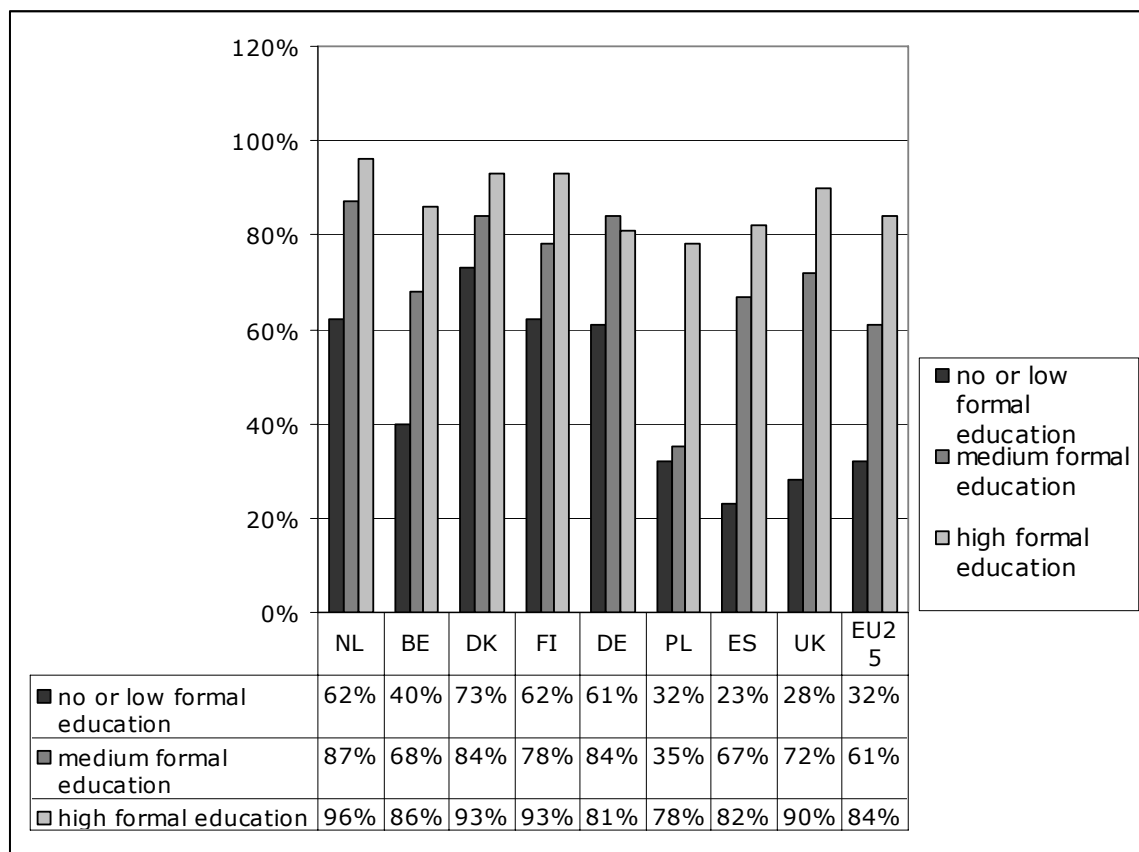


Source: Eurostat, 2006

Internet penetration is the highest in the group of individuals with high formal education (figure 6). Only in Germany the Internet penetration in the group of individuals with medium education is higher than in the high educated group. In most WOLIWEB countries (apart from Poland) Internet penetration among high educated people exceeds 80%. In Poland the percentage of individuals with high education who use Internet is the lowest (78%), but comparing to individuals with medium and low education in this country – relatively high (more than two times higher than Internet penetration in the group with medium education). Internet penetration among people

with low education is highest in Denmark (73%) and the differences between educational groups in this country are the smallest.

Figure 6. Internet users breakdown by education level (percentage of individuals in educational group who used the Internet in the last 3 months)



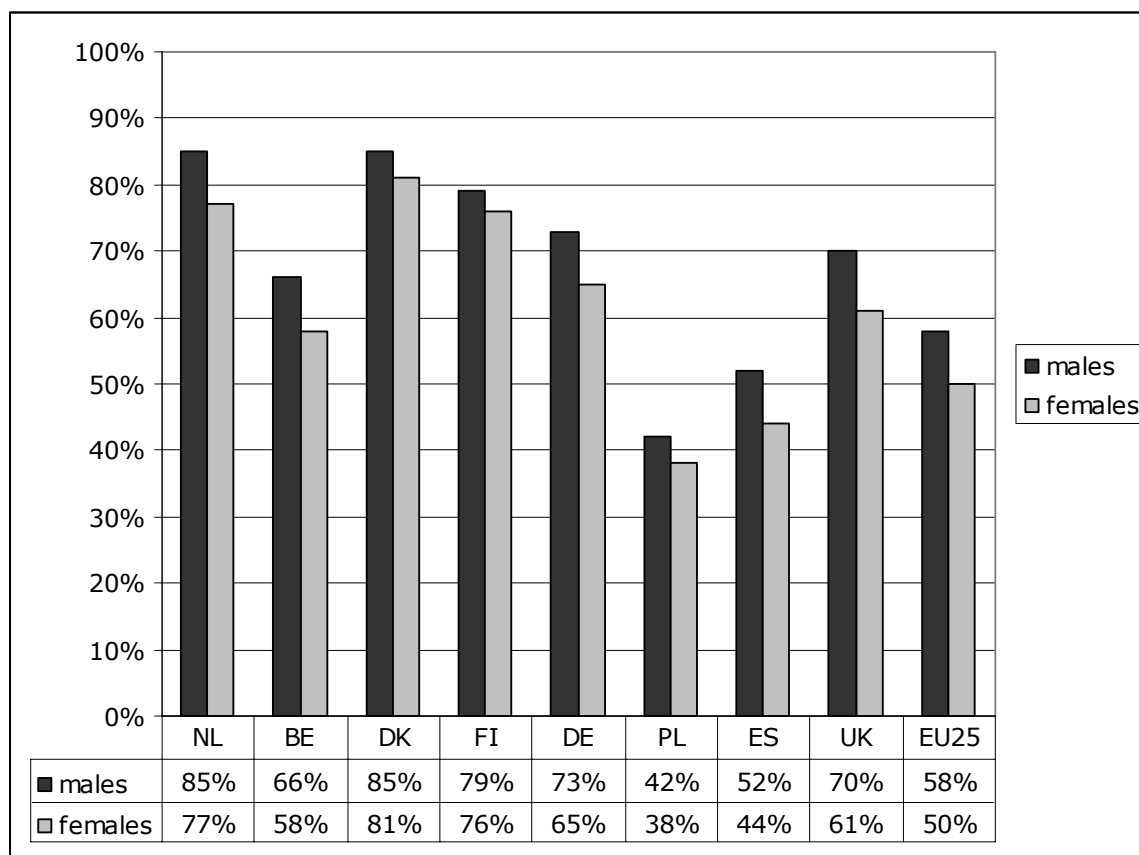
Source: Eurostat, 2006

As far as gender is concerned, the Internet penetration is higher among men (figure 7). The smallest gender differences are found in Denmark and Finland, the highest in the UK.

In general people use the Internet both at home and at work. The percentage of people who accessed the Internet at home, comparing to other places, is the highest in all WOLIWEB countries (table 2).

The most popular Internet activity is communication (table 3). The percentage of individuals who used the Internet in the last 3 months for communication, is the highest in the Netherlands and in Denmark. The other popular activities are: financial services, travel and accommodation services, training and education, playing or downloading games and music. Many people use the Internet to look for jobs.

Figure 7. Internet users breakdown by gender (percentage of individuals in gender group who used the Internet in the last 3 months)



Source: Eurostat, 2006

Table 2. Place of internet use

| country | internet cafe | place of education | home | work |
|---------|---------------|--------------------|------|------|
| NL | 1% | 9% | 77% | 39% |
| BE | 1% | 6% | 53% | 21% |
| DK | : | 14% | 77% | 46% |
| FI | 4% | 18% | 65% | 39% |
| DE | : | 8% | 61% | 27% |
| PL | 4% | 10% | 26% | 13% |
| ES | 6% | 7% | 33% | 22% |
| UK | 5% | 10% | 55% | 30% |
| EU25 | : | 8% | 43% | 23% |

Source: Eurostat, 2006

Table 3. Internet activities

| country | communication | financial services | travel and accomodation | training and education | playing/ downloading games and music | looking for a job |
|---------|---------------|--------------------|-------------------------|------------------------|--------------------------------------|-------------------|
| NL | 76% | 59% | 43% | 23% | 42% | 19% |
| BE | 55% | 28% | 30% | 15% | 20% | 9% |
| DK | 75% | 57% | 45% | 20% | 26% | 20% |
| FI | 68% | 63% | 53% | 27% | 33% | 26% |
| DE | 62% | 32% | 41% | 36% | 18% | 17% |
| PL | 34% | 9% | 11% | 4% | 16% | 7% |
| ES | 39% | 15% | 16% | 8% | 23% | : |
| UK | 54% | 28% | 47% | 33% | 24% | 16% |
| EU25 | 46% | 22% | 27% | 17% | 18% | 11% |

Source: Eurostat, 2006

Summing up this analysis concerning Internet usage, the following conclusions for Internet surveying may be drawn:

- High Internet penetration is crucial for success of Internet surveying. In most analysed countries Internet penetration is rather high, and in countries with the lowest Internet penetration (i.e. Poland and Spain) it is growing very fast.
- Filling in questionnaires takes time, so it is important to have a fast Internet connection. As data shows the percentage of households using the broadband connection is growing.
- Some people use Internet sparingly (less than once a month). Such Internet users probably will not be interested in filling in an Internet questionnaire. It means that an important indication concerning Internet users is the percentage of individuals who use Internet every day or at least once a week. As Eurostat data shows, such groups constitute the majority of Internet users in all WOLIWEB-countries (they make up more than 80% individuals, who used Internet during the last 3 months).
- People who use Internet are in general young, well educated, living in big cities. It means that it might be difficult to get to older respondents, with low education and living in rural areas.
- The percentage of employees working in enterprises with access to Internet, comparing to the total of employees, has reached in most analyzed countries saturation point (100% in Finland and 97-99% in the rest of WOLIWEB countries). It means that most of employees have got access to the Internet at work.
- Individuals use Internet mostly at home. This circumstance is favorable for Internet surveys (more privacy and time).
- People use Internet mostly for communicating and playing. Such information might suggest that people look for entertainment. In such situations it could be

effective to link the *WageIndicator* websites not only to portals focusing on work. Moreover the websites of the project should be eye-catching and playful to make visitors enjoy their stay.

- Many people use the Internet for job search. This means that the combination of *WageIndicator* survey and jobsites is a promising one.
- Data shows that Internet becomes more popular in all WOLIWEB countries. It suggests that this tool might be a very helpful and effective research instrument in the future.

3.3 CONCLUSION

The exhaustive presentation of actual Internet presence, availability and use by the working populations in the WOLIWEB-countries leaves no room for doubt. If saturation points have not yet been reached, they will be in the foreseeable future. This projection does not take into account new technological developments. Only in Poland and Spain increasing Internet penetration of society still may make a significant difference for the potential of Internet based labor market research. But also in these 2 countries, the working population by and large finds its way on the Internet from their work places. These findings are completely in line with estimations made in the early stages of the WOLIWEB-project (Amsterdam Conference June 2005).

4. WOLIWEB RESULTS

4.1 VISITS, COMPLETED QUESTIONNAIRES AND RESPONSE RATES

Against this background of Internet penetration and usage we now project the overall results of WOLIWEB in the 9 participating EU-countries. This section is followed by a presentation of the marketing and promotion strategy that was put into play in order to achieve those results. Thereafter the results are presented broken down per country and in somewhat greater detail. This chapter concludes with the evaluation of the impact media partners can have on webvisits and data intake, or alternatively, the results reliance on trade union channels and influence may bring.

4.2 VISITS

The highest number of visits was and still is in the Netherlands. The project in this country has got the longest history. The Dutch team implemented and evolved an advanced marketing and promotion strategy for some years now. In the ensuing discussion of the marketing and promotion strategy most assumptions underlying the approach derive from earlier Dutch experience. WOLIWEB provided a most welcome opportunity to put these assumptions to the test in several other countries under differing conditions.

The most general picture that emerges from the WOLIWEB-period is reflected in the increasing number of visits overall, in all participating countries, even where levels in absolute numbers remain low. This basic fact should not be overlooked, as it indicates clearly a popular interest in wage related information on the Internet, regardless of national labour market characteristics and cultural peculiarities.

Table 4. Web visits per month 2005/2006 in thousands

| | BE | DE | DK | ES | FI | NL | PL | UK |
|-------------|-----|-----|----|----|----|-----|----|----|
| 2005 | 12 | 33 | 1 | 30 | 1 | 303 | 2 | 37 |
| | 7 | 23 | 0 | 16 | 1 | 176 | 2 | 6 |
| | 10 | 40 | 0 | 15 | 1 | 238 | 2 | 7 |
| | 4 | 37 | 1 | 10 | 5 | 186 | 2 | 7 |
| | 10 | 29 | 1 | 9 | 6 | 160 | 2 | 6 |
| | 17 | 40 | 1 | 9 | 4 | 167 | 2 | 7 |
| | 16 | 46 | 1 | 8 | 3 | 233 | 2 | 5 |
| | 15 | 47 | 1 | 10 | 4 | 281 | 2 | 22 |
| | 12 | 33 | 1 | 9 | 1 | 183 | 2 | 20 |
| | 25 | 47 | 2 | 17 | 3 | 322 | 3 | 20 |
| | 21 | 40 | 2 | 15 | 3 | 457 | 5 | 19 |
| | 21 | 49 | 1 | 12 | 2 | 345 | 8 | 14 |
| 2006 | 31 | 94 | 3 | 20 | 3 | 304 | 7 | 38 |
| | 24 | 70 | 2 | 20 | 3 | 281 | 7 | 20 |
| | 33 | 73 | 2 | 22 | 3 | 278 | 7 | 29 |
| | 30 | 90 | 3 | 27 | 4 | 475 | 7 | 26 |
| | 33 | 87 | 3 | 34 | 42 | 427 | 7 | 25 |
| | 27 | 78 | 3 | 31 | 17 | 588 | 7 | 19 |
| | 32 | 132 | 2 | 28 | 15 | 428 | 8 | 17 |
| | 54 | 94 | 3 | 28 | 10 | 348 | 7 | 19 |
| | 45 | 94 | 3 | 34 | 9 | 340 | 7 | 16 |
| | 119 | 101 | 4 | 4 | 14 | 334 | 9 | 18 |

Source: WOLIWEB

4.3 COMPLETED QUESTIONNAIRES

Based on the Dutch experience, at the outset of WOLIWEB a target of 350,000 questionnaires for all participating 9 countries lumped together was forecast. The final count, Mach 31rst 2007, amounted to a little over 323,000 submitted questionnaires. Only the last release, data from the first quarter of 2007, still were not yet cleaned at the time of reporting. This might result in a slightly lower endfigure for WOLIWEB.

Table 5. Valid data per country for the WOLIWEB-period (except 2004 and except Jan-Mar 2007)

| | | | | | | | |
|--------|--------|-------|--------|--------|--------|-------|--------|
| BE | DE | DK | ES | FI | NL | PL | UK |
| 17,300 | 78,800 | 2,600 | 13,100 | 22,100 | 87,600 | 7,500 | 31,600 |

Source: WOLIWEB

4.4 RESPONSE RATES

Comparing the number of completed questionnaires Q and number of visits V in countries' response indexes RI can be calculated as follows: $RI = (Q/V) \cdot 100\%$. Table 6 shows the overall response indexes for WOLIWEB.

Table 6. Response rates, visits and Internet penetration 2005/2006

| Country | IP % households in 2006 | total visits as % of working population | response as % of working population |
|---------|-------------------------|---|-------------------------------------|
| NL | 73,3 | 113,5 | 1,32 |
| FI | 62,3 | 8,8 | 0,90 |
| BE | 48,5 | 26,7 | 0,51 |
| DE | 61,2 | 5,3 | 0,26 |
| UK | 62,3 | 1,7 | 0,12 |
| DK | 69,2 | 2,0 | 0,09 |
| ES | 43,9 | 3,4 | 0,09 |
| PL | 29,9 | 1,1 | 0,06 |

Sources: InternetWorldStats, Eurostat, WOLIWEB

4.5 THE MARKETING AND PROMOTION STRATEGY

Marketing the website(s) is crucial. For if there's nobody to complete the questionnaire there is no data. And without data no salary check, not much traffic and not enough body to do research on. Therefore, initially a lot of effort must go into the marketing and promotion of any new *WageIndicator* website in any newly participating country. It must attract many visitors.

4.5.1 Introduction

At the start of WOLIWEB, the project already had a foundation to build on. This foundation had been laid in The Netherlands. Each new national *WageIndicator* website would reflect the Dutch prototype. The first Dutch wage indicator was brought online in 2001. Early 2004 in the Netherlands 60,000 valid questionnaires had been completed by satisfied visitors. The Dutch *WageIndicator* websites at the time received each month over 300,000 visits. This early success was – at least – in part due to the successful implementation of a marketing strategy. The lessons learned would be used as assumptions underlying and recommendations guiding the marketing effort during the WOLIWEB-project period.

4.5.2 Model for a national coalition

The marketing strategy in a country had to be performed, tested and – if necessary - adapted by a dedicated national team, preferably consisting of researchers, trade unionists and web journalists. Experience suggested that the most promising mix of institutional partners was:

- top research institutes at universities
- trade unions
- large media groups or publishing houses with a strong internet presence
- the best job sites

In combination these preferred partners offer added value. The mix consists of well known mass organizations and mass media, combined with scientific institutes. The first two offer outreach to the public at large (i.e. the working population), a precondition for building up huge datasets. The research depends on popular brands to bring in enough data. In return science offers prestige. As these popular brands link with science they increase their reliability: all parties gain and none stand to lose. This guarantees that no party can claim the *WageIndicator* for itself. The strategy throughout the WOLIWEB-period has been to include all parties with an interest in labour market transparency.

In this report the national coalitions that took shape in WOLIWEB-countries will be described as the starting point for analysis of their marketing performances in terms of the assumptions which guided the marketing effort and the data intake realized.

4.5.3 ASSUMPTIONS AND RECOMMENDATIONS

Here are the assumptions/commandments (insight 2004) which were believed to attract crowds:

- embed your website in the Internet
- use search engines
- check statistics
- know your virtual competitors

These points are interrelated, of course. Try and get your website in all the search engines you can think of. Install a statistical programme. Monitor and analyse, also the performance of your online competitors, such as career sites. List media (old and new, online and offline), ngo's, ministries, companies and websites with whom you want to be associated. Try to have one or more links to your website on theirs. Sell banners and licences. You will, if you offer attractive content that generates a lot of traffic. Huge traffic makes your website a public place, a good proposition for advertising.

The next points are all about interaction with individuals. You must:

- know what your visitors want
- use web language and tone of voice
- answer email

The domain name must fit visitors' expectations. Will it be (in)formal, colloquial? Does it fit the culture (on the labour market)? Are there similar names online? Buy all extensions like, .. com, org etc. And words, like 'pay, wage, salary'. Once you have decided, never change. Put your name all over the place: business cards, letterheads, T-shirts, caps, in printed matter.

Consider target group-oriented websites: for women, young workers, workers over 40, the self-employed. This had been done in the Netherlands. These websites are basically the same, but vary in content, look & feel, tone of voice.

Write web language: short but friendly, serving your visitor's needs, using figures, bullets, graphs or pictures where content allows.

Get in touch. People appreciate a daily email answering service enormously. In this way you get to know their work related worries. That helps to guide research.

And last but not least, it can generate free publicity too, through the news that such research may come up with. Such publicity should be reflected in increased traffic and submitted questionnaires the days after publication/broadcast. In the section on the impact of media (4.7), we will present a few examples of how this can work.

4.5.4 CRITERIA FOR MEASURING SUCCESS

All this should lead to the fastest possible gathering of national datasets comprising 15,000 data, as this amount would suffice to calculate Salary Checks for several dozen occupations to start with. And as stated at the outset of this chapter, Salary Checks are proven crowd pullers. They act as catalysts for ever increasing data intake. Thus the evaluation at the end of each of the following paragraphs measures success foremost in figures of submitted questionnaires in 2005 and 2006 – allowing for a start up period from April 2004 till the end of 2004. Here also the response rate, i.e. the relationship between numbers of submitted questionnaires and visits will be presented.

The other criterium used for measuring success is the outreach of the project. Its ultimate aim is – in the long run – to cover the whole working population. Of course the WOLIWEB period of 3 years was too short to achieve that ambition. Yet, something relevant can be said looking at the composition of the population participating in research. This will be done, zooming in on the breakdown in age groups, gender and educational levels, in the chapter on the skewness of the dataset resulting from the WOLIWEB-project.

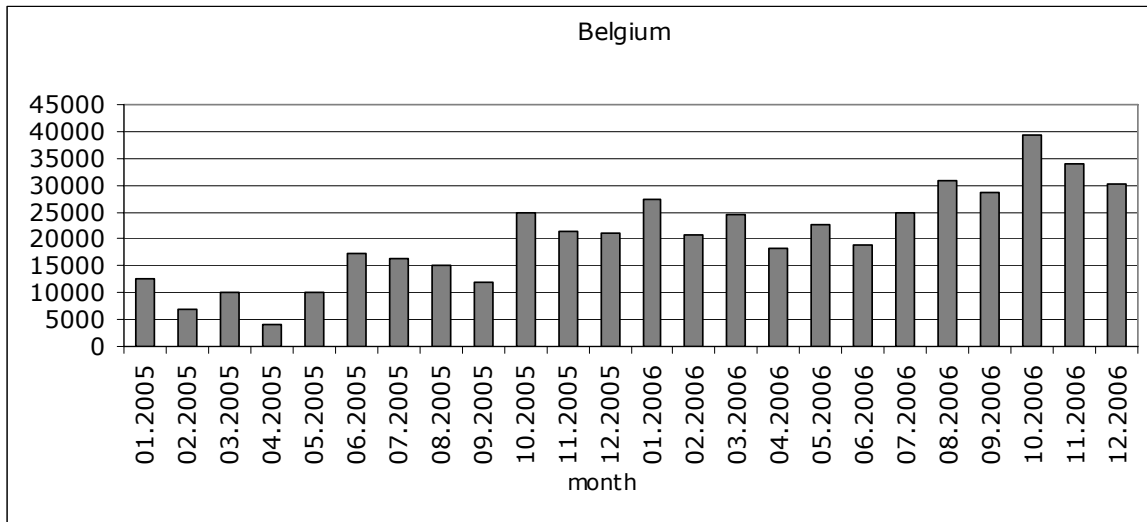
4.6 THE EFFECTS OF MARKETING AND PROMOTION ACTIVITIES PER COUNTRY

BE

Partners in Belgium for *VotreSalaire*, *Loonwijzer*, *MijnLoonwijzer* and *MonSalaire*  Higher Institute of Labour Studies - *HIVA*, the confederations of trade unions *CSC* and *ACV*, *ABVV* and *FGTB*, EU fund *ESF - Equal* and *Institut pour l'égalité des femmes et des hommes*.

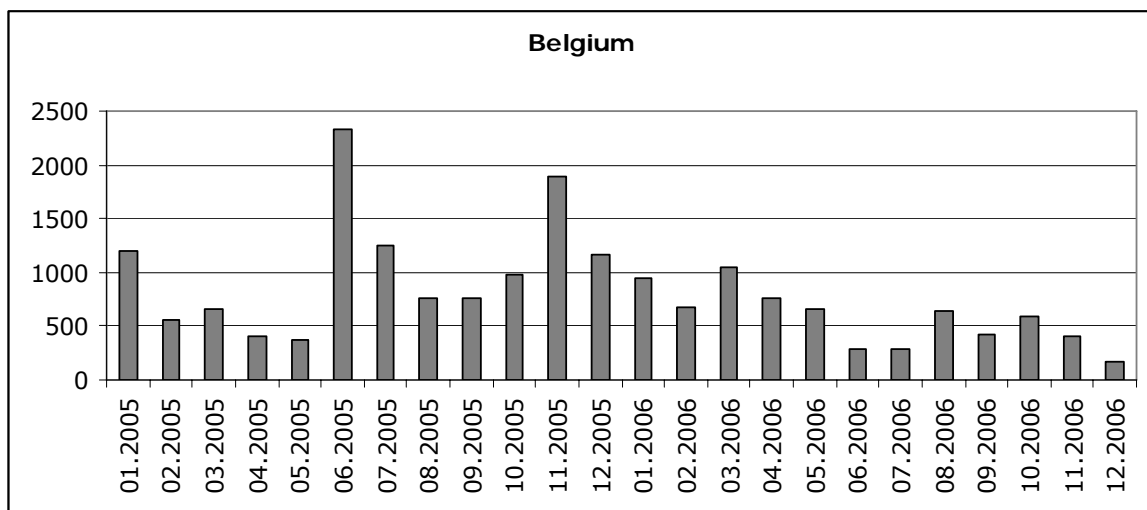
The composition of the Belgian team shows that a major media player was lacking. The leading partner was trade union ACV-CSC.

First we present the progress of visits during the 24 months of 2005/2006.



Halfway 2006 the critical mass of 15,000 submitted questionnaires was achieved.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



The emerging picture comparing these graphs of increasing visits and slumping data intake is accounted for by a sorry personal factor: during the second half of the WOLIWEB-project the very energetic and creative trade union web marketer fell ill. A replacement with like qualities was not easy to find. This mishap pierces through all statistical evidence as a reminder: marketing and promotion of Internet surveys is very much a matter of the right persons on the team with the right qualifications and stamina to make it happen.

Nevertheless, outreach in Belgium, especially Flanders, was a success. In total during WOLIWEB 17,300 Belgians participated in research by contributing their work-life data. This corresponds with 0.41% of the working, i.e. employed population in 2005.

DE



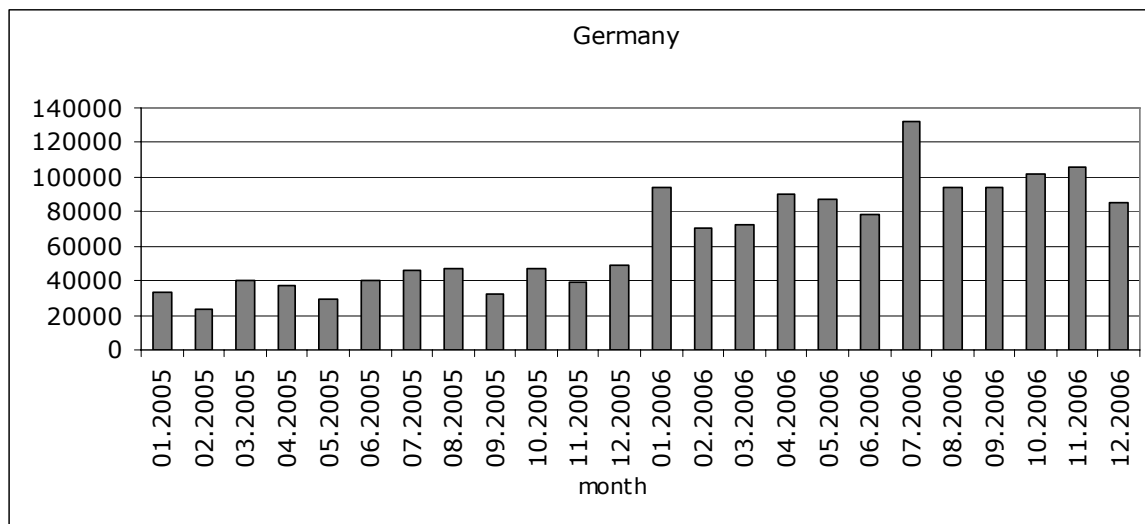
The German partners for LohnSpiegel are The Hans Böckler Stiftung and the Wirtschafts- und Sozialwissenschaftliche Institut (WSI). The confederation of Trade Unions Deutscher Gewerkschaftsbund, unions IG Bau, IGBCE, NGG, IGMetall, GEW, GDP, Transnet, Verdi. Take a look how the LohnSpiegel works for visitors of the digital edition of the newspapers Sueddeutsche, Tagesspiegel and Stern, and on MyJob Online.

The German team pretty much reflected the ideal type formulated above:

- Scientific institute (in this case trade union linked)
- Trade unions
- Leading national media, both online and offline

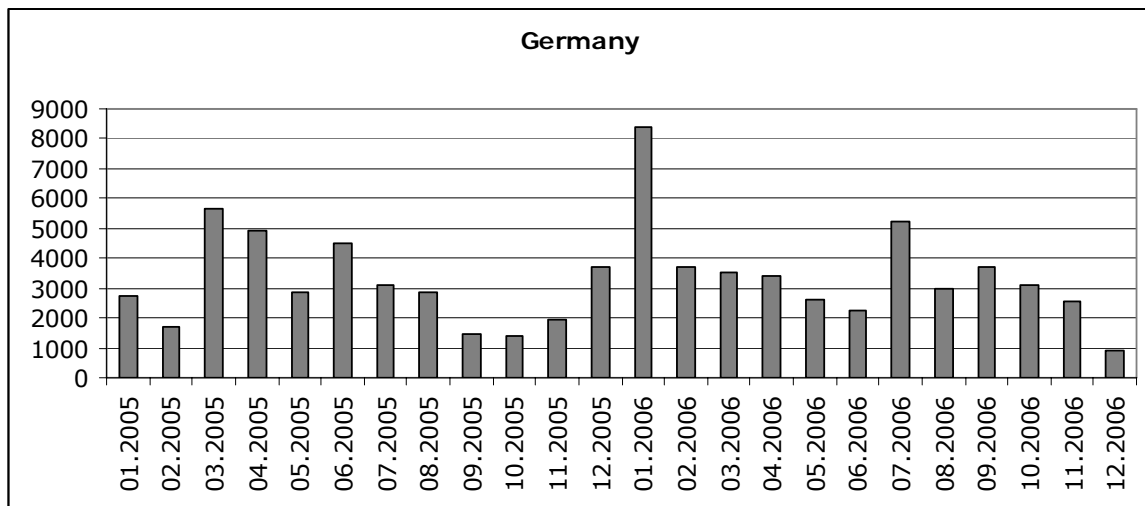
The scientific institute provided the coordinator.

First we present the progress of visits during the 24 months of 2005/2006.



By the end of 2005 the critical mass of 15,000 submitted questionnaires was achieved.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



Comparing the progress of visits and submitted questionnaires one may observe:

- After one year the number of visits stabilizes at a much higher level
- Data intake steady, peaking with newsy events

More details in section 4.7.

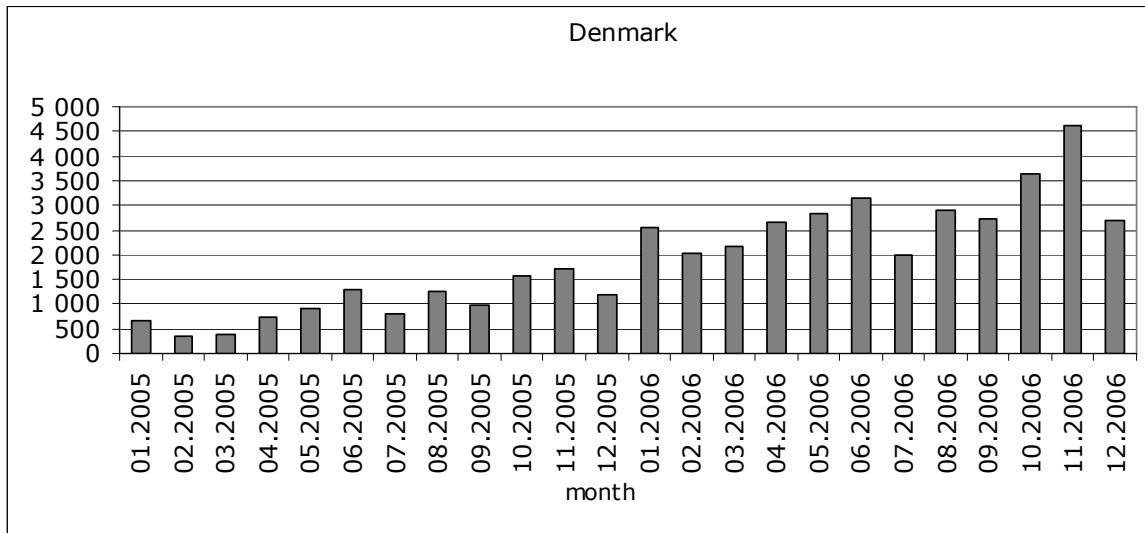
In total during WOLIWEB 78,800 Germans participated in research by contributing their work-life data. This corresponds with 0.22% of the working, i.e. employed population in 2005.

DK

Partners in Denmark for Løntjek  The Fagligt Fælles Forbund and Newsinsight.

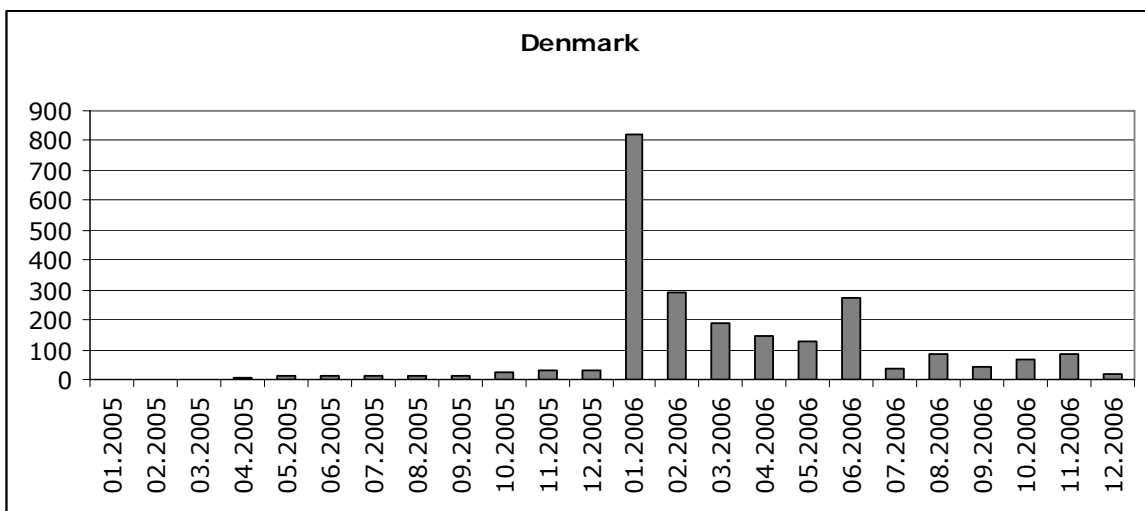
As the Danish team from the outset did not yet include a big media player, an effort was made to involve the national daily Politiken later on. A short version of the questionnaire was made especially for its involvement. It seemed to work for a while, but failed to bring in much additional exposure. The scientific partner took the lead, the trade union did not participate in the marketing effort.

First we present the progress of visits during the 24 months of 2005/2006.



The critical mass of 15,000 submitted questionnaires was not reached during the project.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



Even though visits and data intake remain at low levels, yet they show the typical positive correlation over time.

In total 2,600 Danes participated in research by contributing their work-life data. This corresponds with 0.09% of the working, i.e. employed population in 2005.

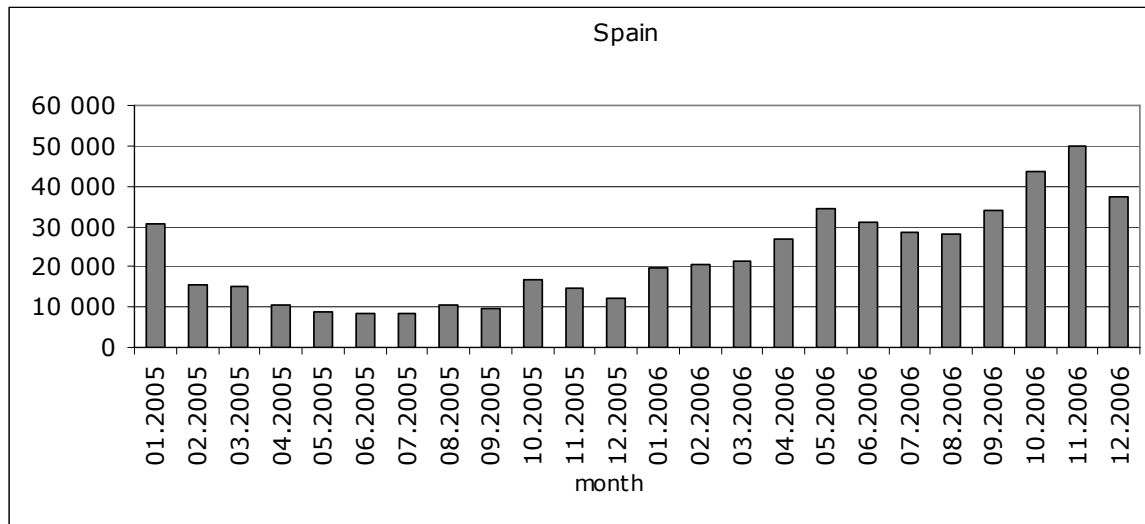
ES



Partners in Spain for Tusalarío **Tusalarío** in Spain has found a partner in the **Confederación Sindical de Comisiones Obreras** and in the **Union General de Trabajadores**. Other partners are the University of Salamanca: **Universidad de Salamanca** and **Infojobs**.

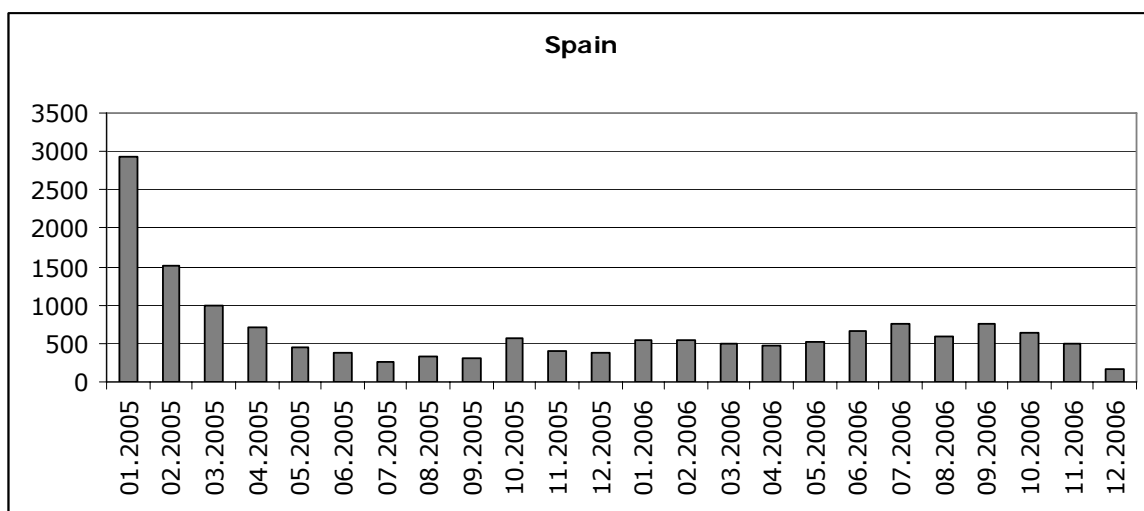
The Spanish team missed a strong media partner. To make up for this defect cooperation was sought with El Pais, but it failed to take off, although a formal relationship was established and a short version of the questionnaire was made available. The team was coordinated by CCOO, one of the trade unions.

First we present the progress of visits during the 24 months of 2005/2006.



The critical mass of 15,000 submitted questionnaires was not quite achieved by the end of 2006, but almost.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



Also in Spain a positive correlation can be observed comparing progress of visits and data intake. Here, it may be noted, the lack of an active and important media partner

was made good by consistent and intense promotion and marketing through trade union channels, reflected in relatively high and steadily increasing numbers of visits.

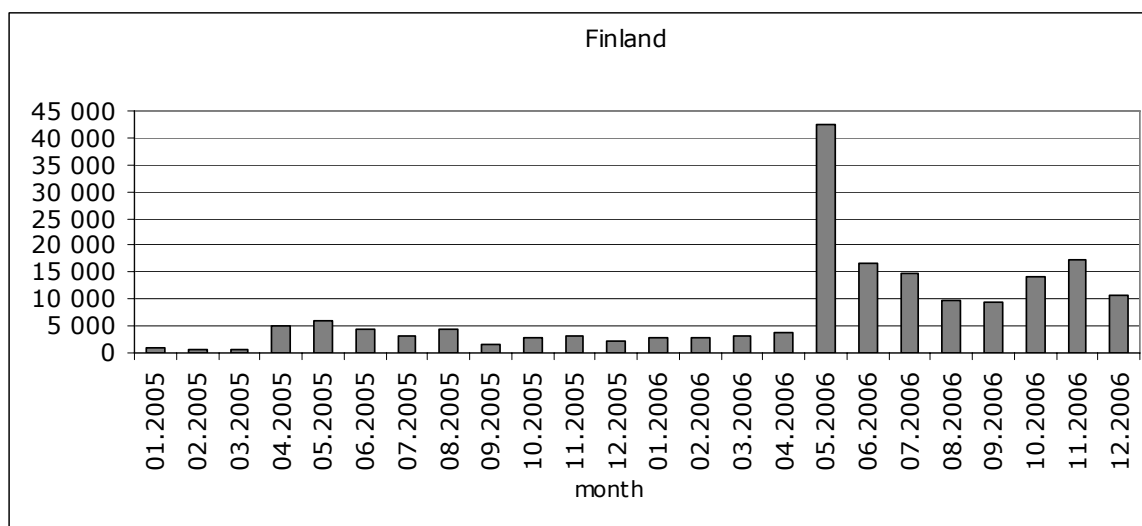
In total during WOLIWEB 13,100 Spaniards participated in research by contributing their work-life data. This corresponds with 0.07% of the working, i.e. employed population in 2005.

FI

Partners in Finland for Palkkalaskuri  Partners of the Finnish wageindicator Palkkalaskuri: **STTK**, **AKAVA**, the Confederation of Unions for Academic Professionals in Finland, **SAK**, **Kayttotieto**.

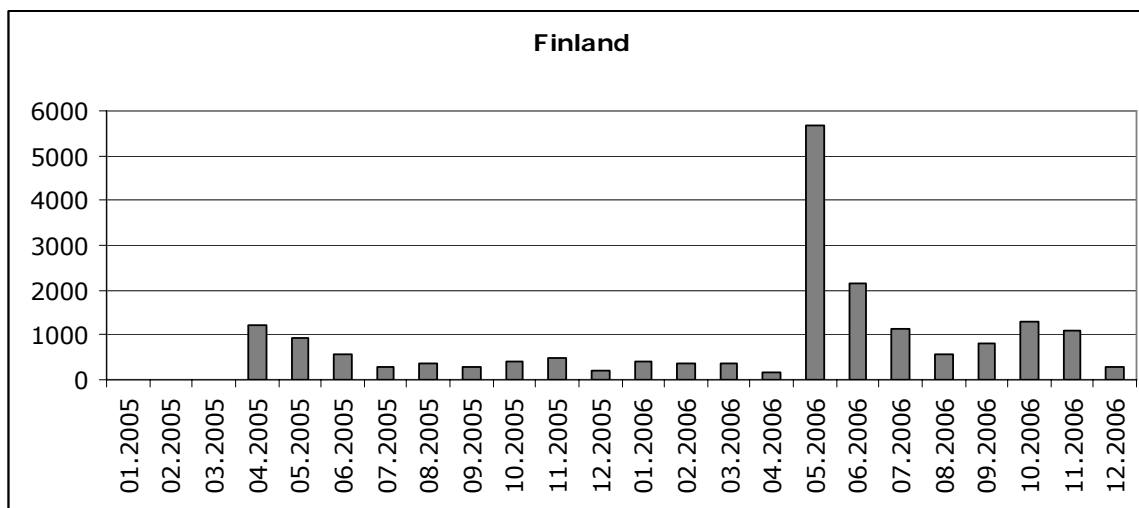
The Finnish team set off as a cooperation between 3 trade unions and a small, specialized research company. No attempt was made to forge an alliance with media groups, publishing houses or job sites.

First we present the progress of visits during the 24 months of 2005/2006.



Halfway 2006 the critical mass of 15,000 submitted questionnaires was achieved.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



Finnish figures point out that its team is a high achiever, though leaning heavily on trade union channels. Its case is presented in greater detail in section 4.8.

In total during WOLIWEB 22,100 Fins participated in research by contributing their work-life data. This corresponds to 0.92% of the working population in 2005.

IT

Italian partners for Iltuosalarario



Partner in Italy is the Centre for Household, Income, Labour and Demographic economics: **CHILD**.

An Italian team never really got started. Several attempts to involve trade unions, media and alternative research institutes failed.

In Italy intake of data was negligible.

NL

Dutch partners for 7 Loonwijzers

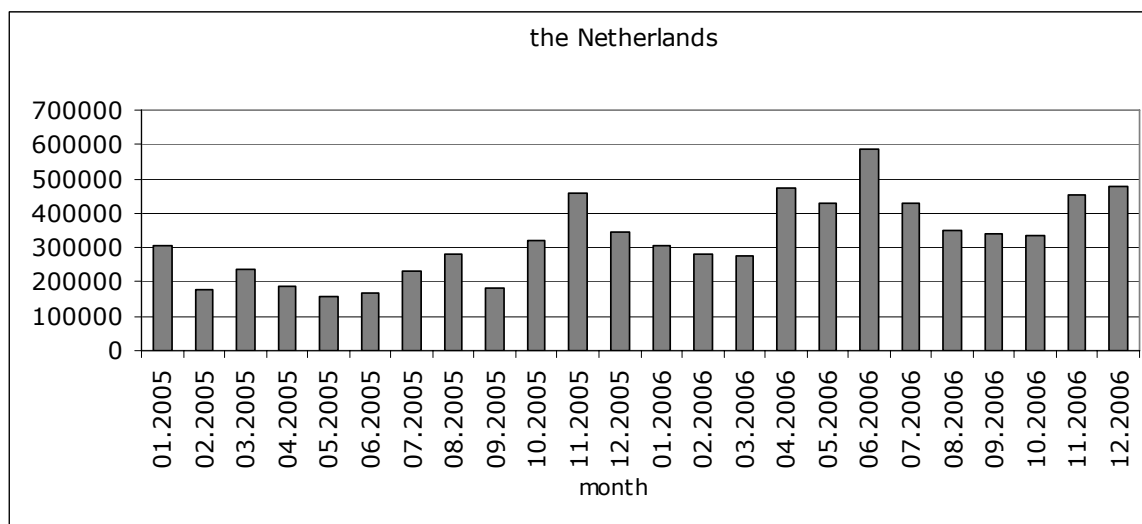


In The Netherlands there are seven WageIndicators: except the general Loonwijzer there is one for youngsters, one for women, one for men, one for elder workers, one about the subject time and one for freelancers. Partners are careersite **Monsterboard**, Confederation of Trade Unions **FNV**, University of Amsterdam/**AIAS** and some special partners: **de Telegraaf**, **Content Uitzendbureau**, **Vrouwonline**, **NWO**, **Ministry of Social Affairs (SZW)**, **Commissie Dagindeling**, **Taskforce Ouderen**.

A broad Dutch coalition was already in place when WOLIWEB started. It remained intact throughout the project. Therefore the Dutch team could and did play the role of international WOLIWEB-coach, stimulator, trainer, advisor and developer of new web

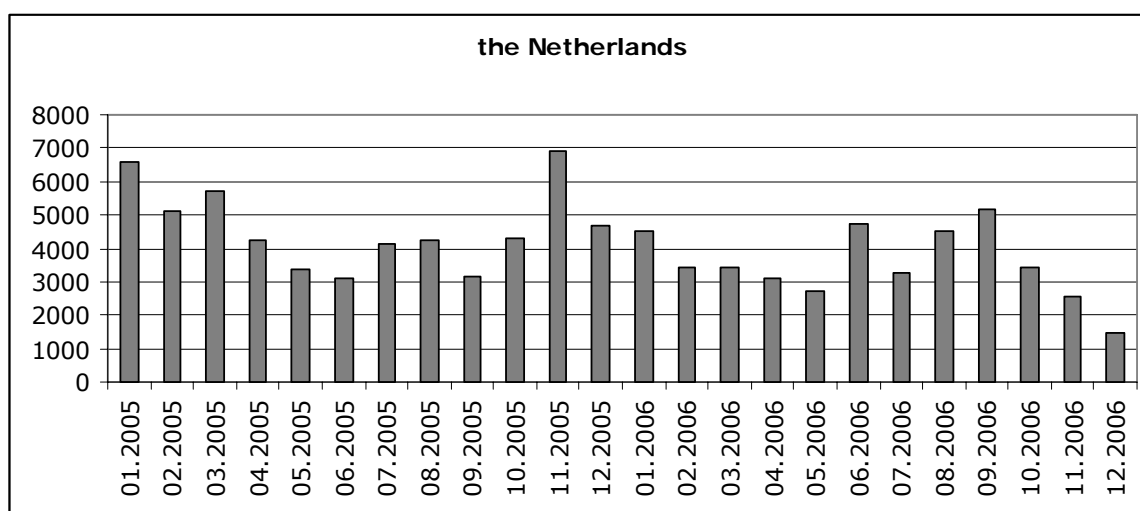
applications, which were put at the disposal of the other national teams, e.g. gross-net checker, minimum wage checker, VIP pay checker and the like.

First we present the progress of visits during the 24 months of 2005/2006.



Early 2005 the critical mass of 15,000 submitted questionnaires was achieved.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



Again the positive correlation between visits and data intake over time. Peaks indicate special exposure by making news or introducing applications like the VIP paycheck in the summer of 2006.

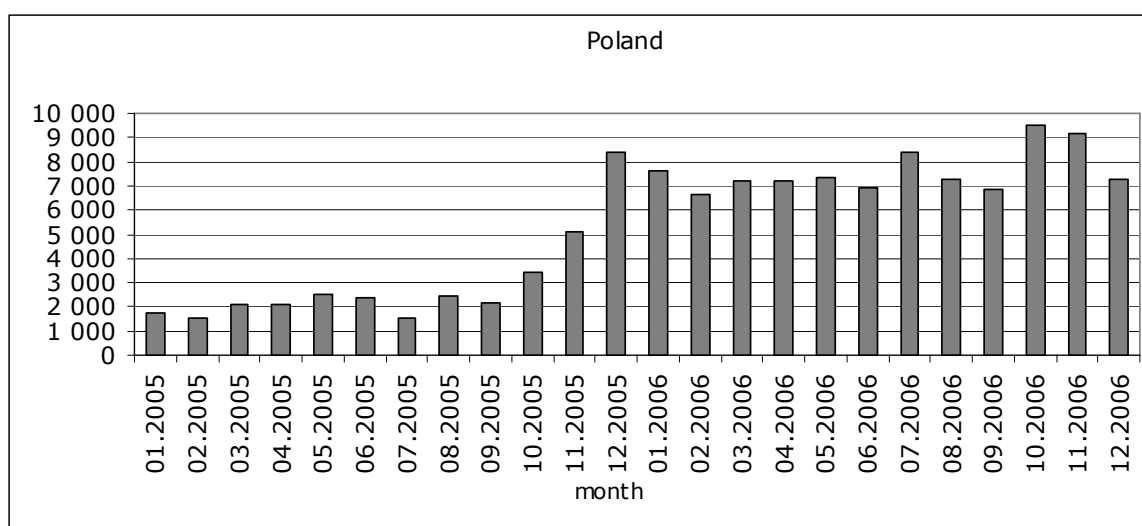
In total during WOLIWEB 87,600 Dutchmen participated in research by contributing their work-life data. This corresponds with 1.08% of the working, i.e. employed population in 2005.

PL

Partners in Poland for Twojzarobki [redacted] In Poland there are some strong partners: [Solidarnosc](#), the [Gazeta.pl](#) and the [Akademia Ekonomiczna w Poznaniu](#).

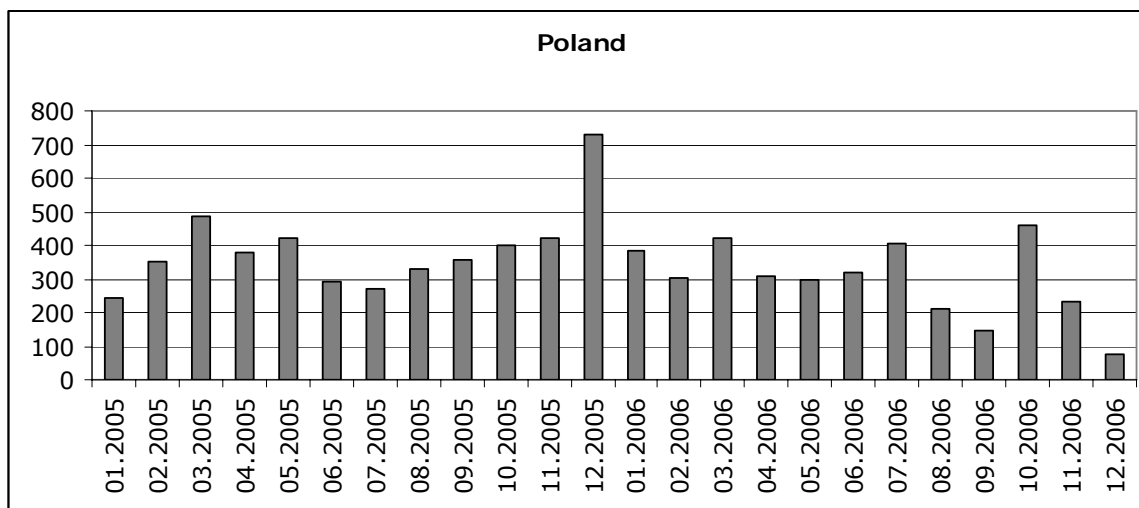
Omens for the Polish project were good with the initial participation of trade union Solidarity and the large publishing group Agora. Coordinator was the Economic University of Poznan. However, active promotion and marketing of the website through their networks did not really take off, although here also a short version of the questionnaire was made available. At the end of WOLIWEB a new national media partner was sought and found.

First we present the progress of visits during the 24 months of 2005/2006.



The critical mass of 15,000 submitted questionnaires was not reached during the project period.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



Data intake slowed down from the second half of 2006. We suppose that this is due to the combined effects of trade union disregard and failure on the part of the national media partner to wholeheartedly support the project. The Polish marketing and promotion case is described in greater detail in section 4.7.

In total during WOLIWEB 7,500 Poles participated in research by contributing their work-life data. This corresponds with 0.05% of the working, i.e. employed population in 2005.

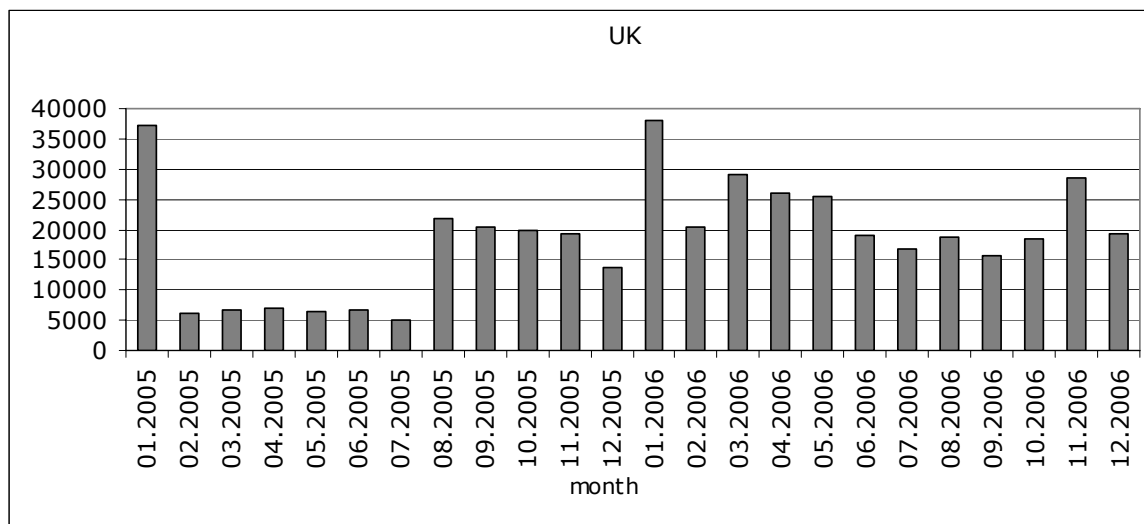
UK



Partners in the UK for Paywizard and Londonpaywizard In the UK salaries in an around London are quite different from the rest of the UK. That's why there are two different WageIndicators. The partners: [Trades Union Congress \(TUC\)](#), [Incomes Data Services \(IDS\)](#), [Mayor of London](#).

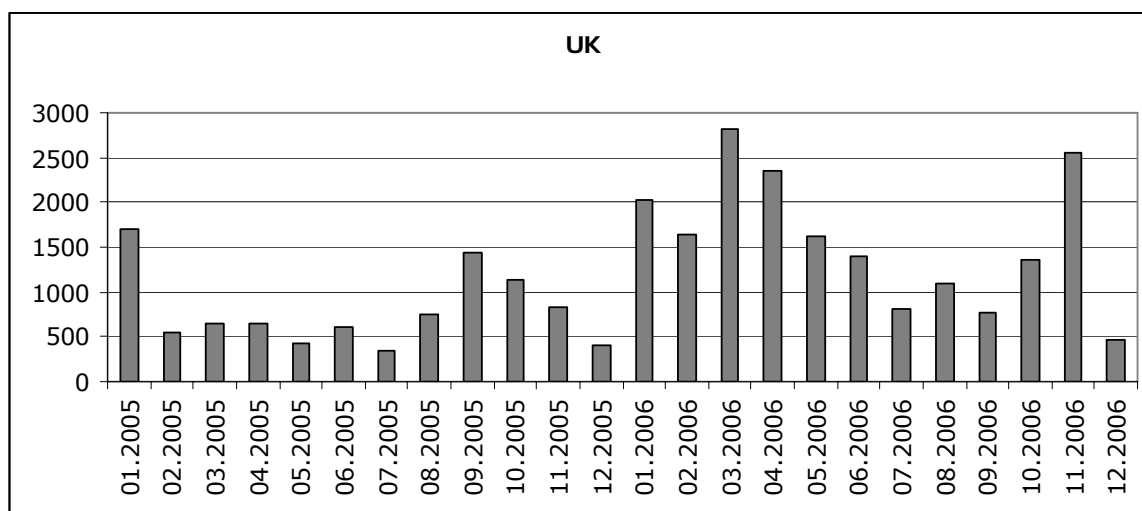
The British team did at the outset not include a media partner. It was decided however early on to make available a regional version of the national website for the greater London area. In this respect the UK was unique in the WOLIWEB-project. The TUC saw fit later to cooperate closely with the MSN-portal and jobsite Monster.uk .

First we present the progress of visits during the 24 months of 2005/2006.



Early 2006 the critical mass of 15,000 submitted questionnaires was achieved.

The graph below shows the monthly distribution of completed questionnaires 2005/2006.



Clearly there is a positive correlation between number of visits and submitted questionnaires. Peak moments are the result of high exposure on Internet portals. For more details see section 4.7.

4.7 THE IMPACT OF MEDIA: THE CASES OF GERMANY, THE UK AND POLAND

Many institutions need to be involved to make the project successful. The idea was cooperation of three strong institutions in each country: research institute, trade union and media partner. The role of media partner is crucial as far as marketing and

promotion of the project is concerned. Cooperation with media was considered to be a precondition for the intake of large numbers of completed questionnaires.

Table 7. Cooperation with a strong media partner

| Country | Media partner |
|-----------------|---------------|
| Germany | Yes |
| The Netherlands | Yes |
| Poland | Yes |
| Denmark | Yes |
| Finland | No |
| Spain | No |
| UK | No |
| Italy | No |
| Belgium | No |

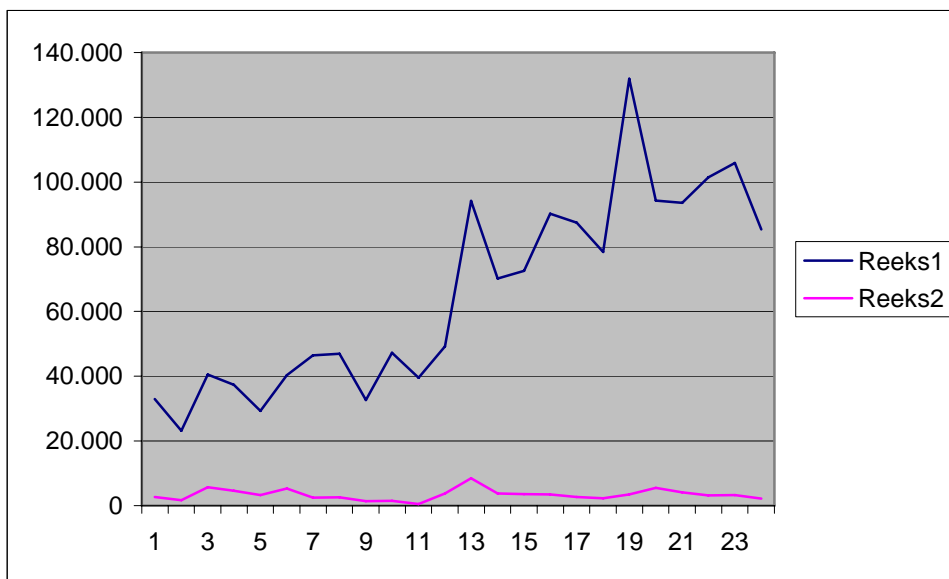
Source: Woliweb data

Four out of nine countries involved in WOLIWEB had got at least one strong media partner. In Germany (Stern, Sueddeutsche), the Netherlands (Telegraaf, MSN, Monsterboard), Poland (Gazeta Wyborcza) and Denmark (Politiken).

The rest of the countries (Finland, Spain, UK, Italy and Belgium) did from the outset not yet cooperate with one strong media partner. In Spain and the UK however, later working relationships with some media were established. The case of the UK will be illustrated here in its effect, as is the case of Germany, which saw significant results in both visits and submitted questionnaires, correlating with the forging of alliances with strong media partners. Poland is interesting in its account of micro moves.

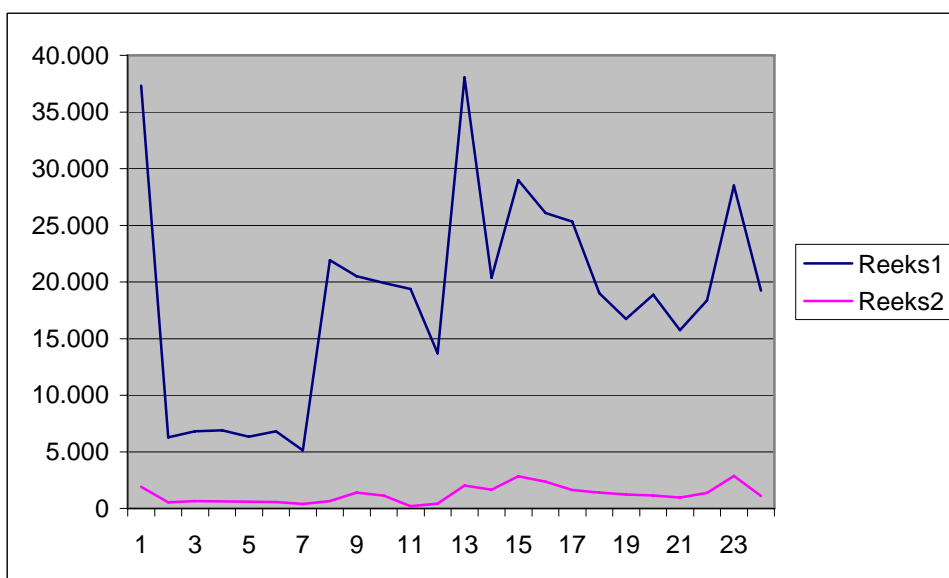
DE

In Germany at the outset there already were some promising contacts with national and large regional dailies, as well as the influential weekly Der Spiegel. These contacts however did not immediately lead to high exposure of Lohnspiegel.de through those channels. Yet, as the graph shows, there was a significant rise in both visits and data intake from early 2006 after which things settled down consistently at a structurally higher level. This quantum jump coincides in time with the exposure given on those media. Also the positive effect of publicity (based on research outcomes analysing the dataset on sensitive issues, such as the gender pay gap) can be traced back in terms of increased visits and data intake in the aftermath of publications.



Structural cooperation with nationwide dailies gathered momentum at the beginning of 2006 and led to more visits and a surge in data intake. Another peak, leading to a trebling of visits and intake, especially through the womens' website, fell on March 9 and 10 2007 (not covered by this graph) after news on the gender pay gap was prominently brought in the evening bulletin and large dailies the day after. The occasion being March 8th, international womens' day of the UN, the news based on WOLIWEB-stats.

UK



As in the case of Germany, a clear correlation over time emerges between number of visits and intake of data. But different from the German case, this additional exposure came mainly through cooperation with huge webportals, notably MSN and – the last upsurge - through intensified cooperation with Monster.co.uk, the largest job site in Britain. This 'cooperation' essentially consists of a prominent link on the homepage of such main gates to the Internet. MSN offers the additional advantage of a far more general outreach, including the lower rungs of the labour market.

PL

Marketing and promotion in Poland was done both directly and indirectly. Direct consisted of meetings (conferences, seminars, symposiums), corresponding, and distribution of paper promotion materials. At the beginning of the project most meetings took place at the Poznan University of Economics and then at other universities and research institutes (in Wroclaw and Warsaw). Simultaneously cooperation with trade union and media partner started. The first meeting with trade union Solidarnosc (the main trade union in Poland) took place in Gdansk, 1-2 April 2004 with the aim to start close cooperation. The main event took place 13-15 October 2005, when two Polish researchers involved in WOLIWEB participated in the annual trade union meeting (XIX National Convention of Trade Union Delegates), to entice delegates to fill in questionnaire. There were two working stations at the Convention Hall for this purpose.

A different type of direct promotion was sending e-mails to individuals (friends, family, co-workers at the university, trade union members), encouraging them to visit the project website and fill in questionnaire.

Indirect promotion mainly related to newspapers and portals, publishing scientific papers, and improving the project website. As mentioned above, the main Polish media partner was Gazeta Wyborcza. From the beginning of the project there was a link at <http://praca.gazeta.pl>. Short reports concerning working conditions and employees satisfaction were published in the paper version and online by Gazeta. These press releases at the end of 2005 and beginning of 2006 contributed to the high in data intake in December 2005. During WOLIWEB a link was sported by www.solidarnosc.pl. Articles and short interviews were published in the trade union newspaper.

Apart from these short texts and reports, four scientific papers using WOLIWEB data were published.⁵

⁵ J. Szambelańczyk, M. Andrałojć, "Zróżnicowanie kultur narodowych a systemy wynagrodzeń w wybranych krajach Unii Europejskiej", w *Praca i zarządzanie kapitałem ludzkim w perspektywie europejskiej*

Indirect promotion also consisted of improving the website by adding new information about the labour market and offering Salary Checks, first made available in summer 2006 for 19 occupations. All of this was supported by the prize – a trip to Africa.

Promotion actions in Poland and their effects

| Action | | Target group/number of people reached | Response rate (number of people that responded in comparison to potentially reached) | Cost |
|----------|--|---------------------------------------|--|--|
| direct | meetings with possibility to fill in questionnaire | small | high | high |
| | scientific conferences, seminars, | small | medium | depends on the place of the event |
| | e-mails | medium | medium | low |
| | leaflets | medium | low | medium/high |
| indirect | newspapers | big | very low | low (with media partner)/ high (without media partner) |
| | Internet portals | big | medium | low (with media partner) /medium (without media partner) |
| | improving project website (Salary Checker) | medium | Strengthen possitie effect of promotion actions | medium/high |

Source: author

In conclusion of the Polish case:

(Differences in the wage systems across EU countries, in the book: Work and human resource management in the European perspective), ed. A. Poczowski, Oficyna Ekonomiczna, Kraków 2005, ISBN 83-89355-84-1, M. Andrałojć, Nierówności płacowe w świetle różnic w kulturach narodowych (Wage inequality on the labor market in light of cultural differences), Zarządzanie Zasobami Ludzkimi, no 1, 2006, pp. 67-84, M. Andrałojć, Skuteczność motywacyjnej funkcji wynagrodzeń, w: Ku doskonałości HRM (Effectiveness of motivational role of compensation, in: Towards improving HRM), ed. S. Borkowska, Instytut Pracy i Spraw Socjalnych, 2006, M. Andrałojć, Zalety i ograniczenia ankiety internetowej jako metody zbierania materiału badawczego w dziedzinie zrl (The advantages and limitations of internet surveys as a method for collecting research materials in the field of HRM), Zarządzanie Zasobami Ludzkimi, no 5, 2006, pp. 109-123,

- People who were reached directly, felt that they were an important partner in the research, that the information about the project was prepared especially for them, which made them feel special. Such individuals almost always responded. But direct promotion is expensive and time consuming. The group reached is small. Yet such actions may be considered when a strictly defined target group should be reached, e.g. when it is underrepresented in the dataset.
- Indirect promotion depends on the used instrument. Publishing in papers in Poland gave little effect. Very positive effects were observed when information was put on the Internet. It didn't have to be a big report. Short, eye-catching information with a link to the project website was enough. Very important was the place of putting information. Most effective was posting the link or banner at the main webpage of media partner. This is not easy, since every media operator have got their own policy and priorities.
- The prize (trip to Africa) and the introduction of the Salary Check made the promotion more interesting and successful.

More recent (early 2007) *WageIndicator* experiences in Argentina, Brazil and Mexico suggest that smart Internet-linkage is the most effective way to increase at one stroke both number of visits and data intake, as well as to advance in the hierarchy of search engines and other referring websites.

4.8 THE IMPACT OF TRADE UNIONS: THE CASE OF FINLAND

Table 8. Cooperation with trade unions

| Country | Trade union partner(s) |
|-----------------|------------------------|
| Germany | Yes |
| The Netherlands | Yes |
| Poland | No(t effectively) |
| Denmark | No(t effectively) |
| Finland | Yes |
| Spain | Yes |
| UK | Yes |
| Italy | No |
| Belgium | Yes |

Source: *Woliweb data*

A presumption for the WOLIWEB/*WageIndicator*-project is the view that employees and others in the labour force are interested in their incomes as such and in comparison with other people in similar and different positions. This is of topical interest when people are looking for a job or plan to change their job or prepare

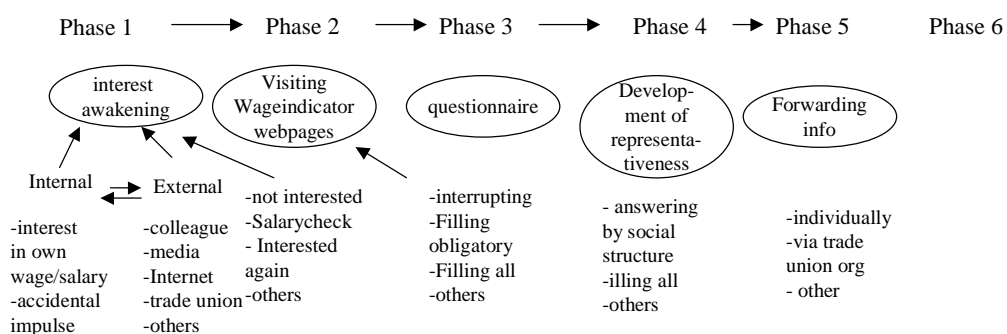
themselves for negotiations in an employment relationship. Moreover there is a general and continuous interest in earnings for different reasons, e.g. informal exchange between people, news in media and disputes between employer and employee at various levels of industrial relations. This is represented in the figure below as **Phase 1, internal impulses**.

Figure 8. Model of the WageIndicator (Palkkalaskuri in Finnish) response-process

Phase 1 - external impulses

In Finland the WOLIWEB-process started by 'selling' the idea to all trade union confederations. The confederation of blue-collar workers (SAK, the biggest confederation, slowly declining membership) and the biggest confederation of white collar workers (STTK) were active from the beginning. They had an official involved,

Phases of response process



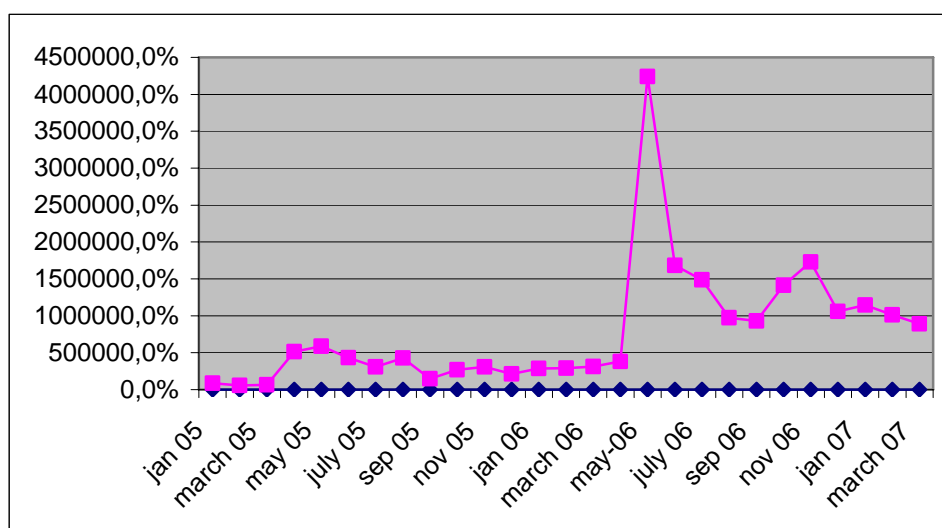
one of whose tasks was to dedicate some time to the project. These officials became interested while participating in a European conference, where the idea was presented by the *WageIndicator* Foundation.

As for the third participant AKAVA - the Confederation of Unions for Academic Professionals in Finland - the idea was presented to them by the Finnish researcher

Kevätsalo. The confederation acceded but withdrew later on the pretext that the Internet method is statistically weak. During later discussions another reason behind their attitude proved to be worries about their own membership surveys which had produced a kind of monopoly on salary information for highly educated (academic) employees. Some officials of AKAVA affiliated unions were however interested in the project and informed members of their unions about it in the beginning. SAK and STTK affiliated unions were informed about the project by the Finnish WOLIWEB – team members. This information was quite casual, depending on the personal contacts of the team members. The Finnish team also organised an informative occasion for interested trade union officials.

Phase 2 – visiting the website

Figure 9. Visiting the website



The visit figures point out the following:

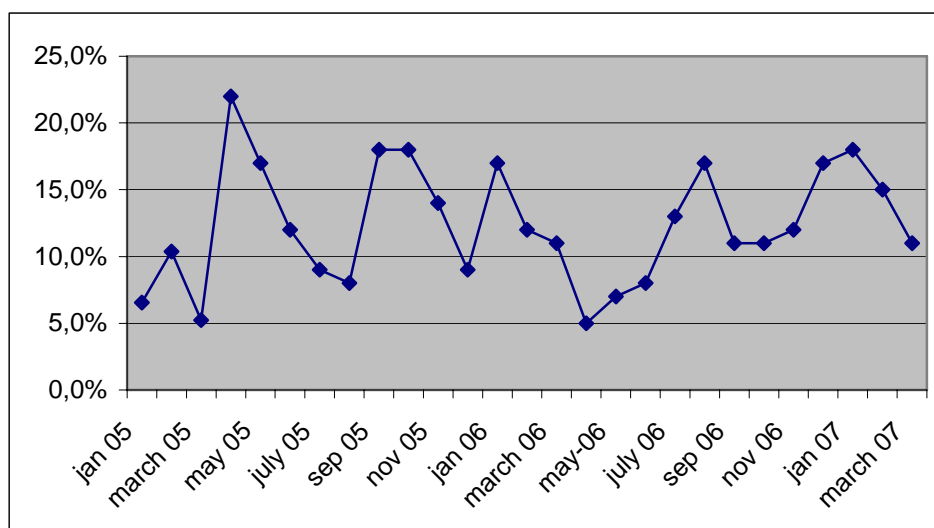
- *The preparation phase.* From January till April 2005 the team members of trade union confederations and research organisation Käyttötieto informed trade unions, for example by asking their representatives to participate in the development of the main questionnaire. Some trade union newspapers published articles and placed a link to the Palkkalaskuri-website. The Finnish team organised also an informative occasion for trade union representatives. In Finland the team decided not to publish Salary Checks before they could give reliable information about wages and salaries. After this preparation period the figures jumped from 550-800 visitors to 3,000-5,800 visitors. Thereafter visits stabilized between 1,500-3,000 from September 2005 till March 2006.

- *The launching phase.* By the end of April 2006 there were finally enough data to make a reliable Salary Checker and it was launched. There was increased publicity via different channels, too. Perhaps the most important channels were the largest newspaper in Finland, Helsingin Sanomat which published a news article about the Salary Checker and the largest afternoon newspaper Ilta-Sanomat which made a 2 pages feature story. There was a peak of visitors (about 10 times more in May than in April and thereafter 4-7 times more in a month time than before the peak). The team continued informing SAK and STTK affiliated trade unions.
- *The focused activating phase.* In September-November 2006 Käyttötieto started a focused research together with several trade unions which activated their members to visit the pages and answer the questionnaire. This is probably one of the explanations of the peak of visits in October-December 2006.

Phase 3 - Responding to the questionnaire

The proportion of respondents as to the total of visits shows several peaks. The first one is in April-May 2005 when the team offered opportunity for interested people to 'test' the questionnaire. Thereafter the response rate has been quite stable with the exception of holidays (June, July and December). During the highest peaks of visits there are understandable relative declines in response rates (the launching of the Salary Check in April - June 2006 and the start of focused projects in September 2006 - February 2007). It is noteworthy however that during the focused research project there are both high visit numbers and response rates (December 2006 - February 2007).

Figure 10. Response related to visits



Filling up the questionnaire demands a different attitude towards Internet than just making a short visit to the website. The following preconditions seem to be necessary.

- experience in using Internet
- visiting the website
- trust in the aims of the surveying organisation
- interest in participating in the survey

The latest research on Internet surveying has shown that societies or communities must have a critical mass of Internet users before this tool can be utilised as a 'natural' or self-evident way of gathering information. The modernisation process and connected weakening of traditional social structures has however created a general tendency towards short term and light social connections. This is on the one hand typical for Internet culture. On the other hand it may be an obstacle in those societies, communities and cultures which still are strongly embedded in traditions of heavy data gathering by postal surveys.

Using the WOLIWEB questionnaire we cannot confirm or refute this hypothesis as such. But using the Internet penetration figures in countries we can make some preliminary interpretations and assumptions for future research. It is quite understandable that visits to websites correlate with the number of sites and the time they have been used. The Netherlands and Belgium have had the sites longer and they have several sites for different target groups, e.g. separate sites for women, elderly people and both languages in Belgium.

For research purposes the most important figure is the response rate. Of the top 3 WOLIWEB-countries in this respect, the Netherlands and Belgium have got a high response rate by a long(er) use of the website and differentiated sites. Finland has got a high response rate using a different marketing strategy. The Finnish team has not been very interested in the number of visit(or)s, but mainly concentrated on high reliability of questionnaire results among trade unionists. They started to use the Salary Check only when it was credible enough. By this strategy they succeeded also to get a high proportion of visitors compared with other countries which started late. The 'efficiency rate' i.e. visits in proportion to responses was only 1/10 compared with e.g. the Netherlands 1/86. It is however important to emphasize that the Netherlands has the highest proportion of respondents as a result of long use of the *WageIndicator* tool and hard efforts to increase the number of visitors. It is also self-evident that that the number of visits increases absolutely and proportionally more rapidly than the number of respondents in all countries.

Phase 4 - skewness of the dataset

Some respondents (27 % of all in Finland by the end of 2006) have filled in only the compulsory questions. There are statistically significant differences by sex, age and educational level among the respondents in this respect. For example older

(over 50, 30 %), less educated (below university degree, 31 %) and female (29 %) respondents have more often than average answered only the compulsory questions.

See chapter 6 for a first overall presentation of the skewness due to gender, age and education biases of the responding populations.

Phase 5 - extending information

In Finland a focused research project started in September 2006 together with the unions of nurses, auxiliary nurses, pharmacists, chemical workers, electricians and lawyers. Comparing the response rates of these occupational groups with the development among all other occupations in October 2006, in December 2006 and in March 2007 we got case study information about what influence union mobilisation may have during quite a short period. These insights could not yet be made available for this report because the latest quarterly dataset - from January till April 2007 - was not delivered before the deadline of the report.

4.9 CONCLUSION

At the time the WOLIWEB project proposal was written, autumn 2003, the only concrete evidence of its viability available were the visits to and the intake levels of data on the Dutch *WageIndicator* websites. At the time they stood at roughly 300,000 visits per month and cumulative data of 60,000 from the beginning of the online data intake in autumn 2000. Therefore the calculated guess of 350,000 data, to be gathered after 3 WOLIWEB-years in 9 EU-countries, was rough according to all existing standards. The resulting 311,000 data as per April 1st 2007, therefore comes as a pleasant surprise: apparently the assumptions based on the Dutch pre-WOLIWEB period and the marketing and promotion recommendations emanating from it, were pretty much to the point. The presentation of country cases and two approaches leads to the conclusion that both mass organisations, such as trade unions and mass media with national outreach, preferably online, offer proper venues for labour market research in which working individuals are willing to participate on a massive scale. At relatively little cost large audiences of individuals can be reached and served in their need to know their market value. Voluntary Internet surveys are therefore a realistic proposition.

5. THE RESPONDENTS' FEED BACK TO THE QUESTIONNAIRE

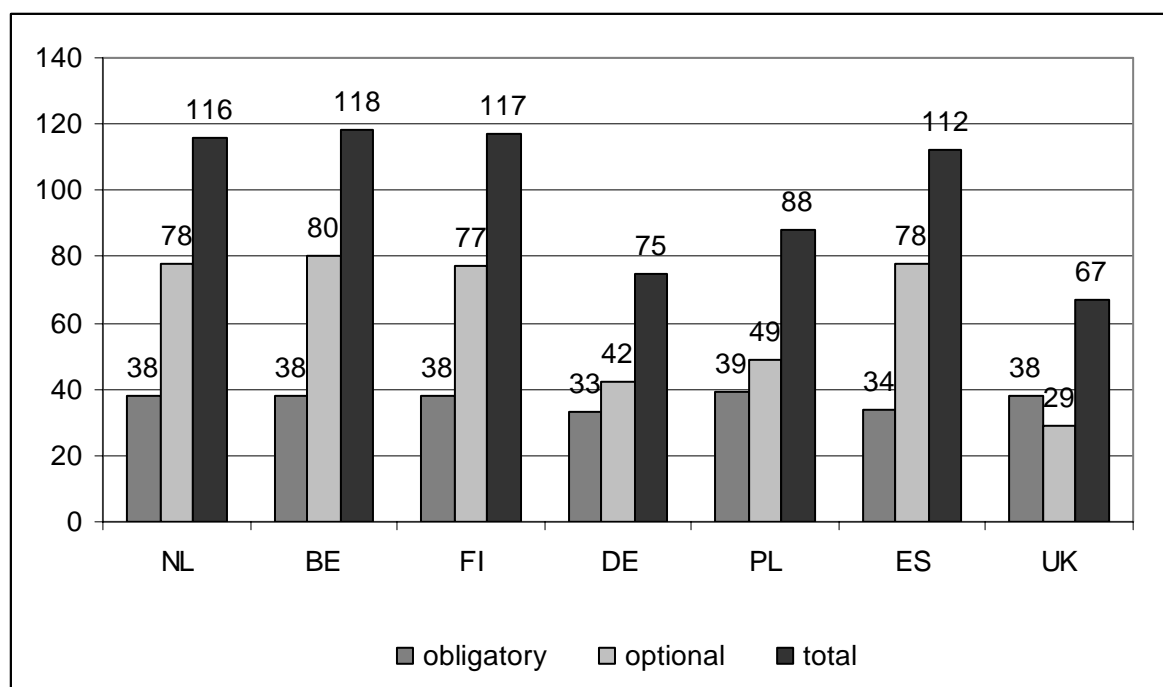
5.1 LENGTH OF THE QUESTIONNAIRE

It is difficult to estimate precisely the length of each national WageIndicator questionnaire, mainly because of routing issues. Figure 11 gives general information concerning the number of questions in each country that took part in the WOLIWEB project.

Each questionnaire consists of two types of questions: obligatory and optional questions. The number of obligatory questions is more or less the same in each questionnaire (between 30 and 40). One country got 39 obligatory questions, four countries 38 obligatory questions, one country – 34 questions, and one – 33.

The number of optional questions differed across countries. Belgium got the biggest number of these questions (80), and UK only 29 optional questions (less than obligatory questions). The total number of questions ranged from 67 (UK) to 118 (Belgium).

Figure 11. Number of questions in each national WageIndicator questionnaire



Source: WOLIWEB

The questionnaire offered in most countries was long. Respondents skipped a lot of non-obligatory questions, and at the end commented that it took too much time to fill in all questions. Wishing to encourage more people to fill in the questionnaire it was decided to prepare a shorter version of the master questionnaire and give respondents a choice between short or long. The table below shows the number of short and long questionnaires collected in 2005 and 2006. Notwithstanding the complaints about the long version, in most countries it however appeared to be more popular (all in all the long version generated 96% of all questionnaires gathered in 2005 and 2006). The exception was Denmark, where the short version was good for 90% of all collected questionnaires.

Table 8. Number of long and short questionnaires collected in 2005 and 2006

| country | 2005 | | 2006 | | total | |
|---------|--------|-------|--------|-------|--------|-------|
| | long | short | Long | short | long | short |
| NL | 55532 | 0 | 36813 | 5495 | 92345 | 5495 |
| BE | 12329 | 0 | 6453 | 0 | 18782 | 444 |
| DK | 130 | 22 | 111 | 2066 | 241 | 2088 |
| FI | 4706 | 0 | 14336 | 0 | 19042 | 0 |
| DE | 36899 | 0 | 42384 | 0 | 79283 | 0 |
| PL | 4603 | 85 | 2892 | 107 | 7495 | 762 |
| ES | 9223 | 0 | 5868 | 799 | 15091 | 799 |
| UK | 9489 | 0 | 18865 | 0 | 28354 | 0 |
| Total | 132911 | 107 | 127722 | 8467 | 260633 | 9588 |

Source: WOLIWEB

It may be observed that the introduction of the short version had no strong impact on the number of collected questionnaires (except in Denmark). Finland, Germany and UK didn't adopt the short version. In two of them (i.e. Germany and UK) the master questionnaire had already been quite short. In Finland, despite its relatively long questionnaire, the intake of data in 2006 increased dramatically.

5.2 THE COMPLETION TIME

Since January 2005, thus from release 2 onwards, the starting and the ending time of the questionnaire were (and are) automatically registered and stored in the dataset. By the end of 2004, it had become clear from the respondent's feed back to the questionnaire, both by the text boxes at the end of the questionnaire and by the email, that the questionnaire was too long. In December 2004 and January 2005 almost all countries switched off a number of questions. From release 2 to release 8, completion time dropped from on average from 28 minute to 21 minutes. The table

shows that the decline was seen in all countries. It shows the completion time for the submitted questionnaires. Incomplete questionnaires are not taken into account.

Table 9. Duration and reduction of completion time

| RELEASE | 56 BE | 208 DK | 246 FI | 276 DE | 528 NL | 616 PL | 724 ES | 826 GB |
|----------------|-------|--------|--------|--------|--------|--------|--------|--------|
| 2 2005/1 | 33,5 | | | 22,2 | 28,2 | 24,7 | 36,9 | 19,8 |
| 3 2005/2 | 32,5 | 28,1 | 35,1 | 19,5 | 28,1 | 24,5 | 36,3 | 19,7 |
| 4 2005/3 | 32,2 | 31,9 | 33,4 | 20,2 | 28,8 | 24,7 | 35,0 | 18,3 |
| 5 2005/4 | 32,8 | 26,3 | 17,5 | 18,5 | 25,2 | 16,1 | 31,7 | 18,4 |
| 6 2006/1 | 31,6 | 12,6 | 16,7 | 18,8 | 24,6 | 14,9 | 31,2 | 17,8 |
| 7 2006/2 | 31,0 | 11,1 | 16,7 | 17,8 | 25,1 | 14,7 | 31,4 | 17,8 |
| 8 2006/3 | 25,2 | 11,3 | 15,5 | 17,3 | 26,0 | 15,0 | 24,2 | 17,1 |
| 9 2006/4 | 25,4 | 23,1 | 16,6 | 17,9 | | 13,8 | 28,0 | 17,6 |
| Reduction in % | 24,2% | 17,8% | 52,7% | 19,4% | 7,8% | 44,1% | 24,1% | 11,1% |

Source: WOLIWEB (GB=UK, the countries are assigned their UN-numbers)

Completion time varies substantially across countries. The completion time is assumed to be dependent upon the length of the questionnaire, which is reflected by release, employment status and by children, because both employees and individuals with children get more questions, whereas the later releases had fewer questions and a higher speed through the questionnaire. Second, it is assumed to be dependent on country, as countries differ with regard to the speed of the Internet connections. Finally, we have assumed that it may be dependent on gender. In order to grasp the effect of each determinant, we have conducted multivariate analyses. The results of the analyses in the table below show that indeed release has a significant effect on completion time, the more recent the release, the shorter the completion time, related to the length of the questionnaire and the technical improvements. Moreover, as expected, employees need much more time to complete the questionnaire than non-employees do, such as self-employed, unemployed, or students with a job on the side. This is due to the questionnaire length, because most questions address the employee. In contrast to expected, the presence of children does not influence completion time, regardless of the fact that people with children have four extra questions. As for personal characteristics, women indeed need slightly more time for completing the survey compared to men. Note that the questionnaire is of equal length for both genders, taken other variables constant. As for the country differences, the table shows that particularly in Spain, Belgium and the Netherlands, completion time is longer than in other countries.

Table 10. Regression on survey time, i.e. the minutes needed to complete survey

| | B | Sig. |
|---------------------------|-------|------|
| (Constant) | 13,90 | *** |
| Employee (1=yes, 0=No) | 4,77 | *** |
| Gender (1=female, 0=male) | 0,37 | *** |
| Children (1=yes, 0=no) | 0,00 | ns |
| Release 1-9 | -0,76 | *** |
| BE | 16,64 | *** |
| DE | 4,62 | *** |
| FI | 6,33 | *** |
| DK | 0,09 | ns |
| NL | 12,40 | *** |
| UK | 4,21 | *** |
| ES | 17,67 | *** |
| PL | 4,50 | *** |

Source: *WageIndicator data Release 1-9, Sept 2004-Dec2006*
R=0.383, df (12), F=3870,12, Sign .000, N= 270,647.

5.3 THE RESPONDENTS' EMAIL FEED BACK

As demonstrated in the previous paragraph, due to visitors' comments during the WOLIWEB-project the length of the questionnaire was reduced in all countries, with significant shortening of completion time. But interaction with members of the target audience, the working population at large, taught us much more.

The declared most general aim of the *WageIndicator* is to foster labour market transparency. This presupposes a situation in which such transparency is lacking and a (latent) demand for wage and wage related information. Interacting with visitors and respondents should make clear that this assumption is a reality, rooted in everyday working life. This has been done by inviting visitors to send emails and leaving a box for comment at the end of the questionnaire. The fact that the visiting public picked up this opportunity is in itself a signal of the acceptance of Internet surveying. Moreover this interaction resulted in some relevant new insights into the nature of Internet surveying.

WOLIWEB has kept track of this feedback in a systematic way since 2005. Here we present a selection of the remarks commenting on the questionnaire, its strong and weak points. Such remarks have led to improvements in the questionnaires, implemented already during the WOLIWEB-period, and will go into a systematic effort to decrease the bias inherent in voluntary Internet surveying. First some strong points:

'Good questions. They make you ponder the obvious.'

'Long and very elaborate.'

'Good thing that you can tell about your work and how to improve it.'

'It helps me to make up my mind.'

'Questions that make you think.'

And some weak points (apart from the honoured complaints about the length of the questionnaires):

'Extremely long with irrelevant questions.'

'Impertinent questions'.

'How strange this repeated asking about where your parents came from.'

The 252 comments left by Polish respondents in 2005 and 2006 at the end of the questionnaire, could be analysed in greater detail. They were divided into the following clusters:

Instructive comments – indicate what might be improved in the questionnaire.

Main subjects indicated:

- occupation – difficulties with finding proper occupation in occupation chooser
- working hours – difficulties with defining working hours (mainly teachers) e.g. *"I work 18 hours at school, but I have to work many hours at home preparing the lectures and checking the exams",*
- caring for children e.g. *"I indicated that I don't care for family members, nevertheless I have children. How to classify the time spent on caring for own children?" "Questions about children concerned MY children. What about the children of my partner, who lives with us?"*
- earnings – *"I get salary in CHF, I couldn't mark it in the questionnaire", "There were no questions about the delay in paying the salary. In my organization there are 3 months delay", "My salary is higher than the amount stated in the contract. Some part of my salary I get 'black'. Which amount should I indicate?"* (this comment appeared quite often), *"I have to choose one of the two options, that I get the salary in cash or transferred to my account. What if part of my salary is paid in cash and part transferred? There was no possibility to tick both answers."*
- other technical problems, e.g. *"It was very slow.", "Sometimes I couldn't open the next page", "I couldn't come back to previous questions."*
- spelling mistakes.

Feelings connected with the questionnaire – there were two kinds of such comments:

- positive, e.g. *“Very interesting questionnaire. Thank you.”*, *“It was very interesting. I filled in the questionnaire with pleasure, and I am willing to fill it in again in the future”*, *“It was a very good questionnaire. Thank you for a nice time.”* , *“Very interesting. It forced me to think more deeply about my life and work”*, *“I’ve filled in the questionnaire quite quickly. Thanx.”*
- negative, e.g. *“Too many questionnes.”*, *“Too long!!!”*

Topical comments – concerning working conditions, work and life satisfaction. There were two kinds of such comments:

- positive, e.g. *“My work and family make me happy”*, *“I’ve found a new job, and I like it very much. I am satisfied with my work. It gives me opportunity to improve my qualifications.”*, *“I like my work, even though the salary is very low”*.
- negative, sometimes very private, concerning family situation, health, mobbing at work, problems with getting pregnant, complaints about direct superior, stressfull work, low salary, frustration, e.g. *“I work in a big company, and most of my free time I spend on working. I work very hard, but nobody appreciates it, besides my salary is very low, and doesn’t secure normal life. It is frustrating.”*, *“There are a lot of delays in paying the salary, even 6 months. It influenced negatively my satisfaction from work”*, *“I worked too hard and now I have problems with health. I will not come back to this position”*, *“I am still looking for better work, pay and possibility of improving my qualifications. The satisfaction with life would increase if I win the trip to Africa.”*

The first two types of comment are helpful for improving the questionnaire. Sometimes respondents indicate very precisely where the problem is, or what could be changed to make the questionnaire more user friendly.

The third kind of comment results from the need to share feelings, to talk to somebody, to complain about injustice. These comments are mostly very long and very private. They do not improve the questionnaire, but they may improve the respondent’s feeling. In this sense, offering this outlet may be of therapeutic value and certainly does not harm the goodwill of the survey.

The other way to interact was through email. Over these 2 years the daily number of emails received, increased dramatically. All those leaving their email addresses

behind thereby also indicate their willingness to participate in a panel, for recurrent participation in the same survey.

Analysis of the answers in greater detail is envisaged in the follow up of the WOLIWEB-project. This study may shed light on the motives of participants in the research. Furthermore it may lead to the selection of research topics.

5.4 CONCLUSION

Overall the conclusion may be drawn that Internet surveying is viable and that there is much room for improvement. Through careful questioning and respectful treatment of all individuals who contribute to the research on a voluntary basis, much stands to be gained still.

The conclusion just formulated is supported by evidence from the interaction with respondents that has been built in and was conducted throughout the WOLIWEB-project. Given special care in phrasing questions in the survey, given also swift and respectful handling of email, endurance with complaints individuals may voice about their work/life predicaments, permanent Internet surveys – at least in independent labor market research – definitely have great potential, both in improving sensibility to micro-situations and in creating goodwill for themselves.

6. THE SKEWNESS OF THE DATASET

6.1 FOCUS ON GENDER, AGE AND EDUCATION

Analysing the development of demographic and social structure of the respondents gives important information about who really are so interested that they answer the questionnaire. This way of looking at the respondent structures gives also information about the representativeness of the data. The following presentation is limited to full-time working respondents. This is a bit problematic, especially regarding young and female respondents. Part-time work is quite probably more common among youngsters and women than among the work force in general.

6.2 GENDER

The division of respondents according to sex is skew. Amongst Finnish respondents f.e. there are more women (55 %) than men (45 %), whereas in 2005 the sex division of the Finnish employees was 51 % of women and 49 % of men. Also the composition of the Dutch respondents' group shows overrepresentation of women, as they make up only approx. 40% of the working population.

Table 11. Employee gender structure in WageIndicator at the end of 2006

| Gender | FI | NL | BE | DE | ES | UK | PL | DK |
|---------|-------|--------|-------|-------|-------|-------|------|------|
| Women % | 55 | 49 | 41 | 34 | 39 | 49 | 56 | 28 |
| Men % | 45 | 51 | 59 | 66 | 61 | 51 | 44 | 72 |
| N | 19042 | 102057 | 20044 | 80064 | 14993 | 24518 | 7493 | 2161 |

There are clear differences between countries. It is necessary to examine the factors behind these biases. One explanation may be the work/life gender difference, but it is not credible as the only factor for Germany, Poland and Denmark. Deeper analysis is necessary for all countries.

6.3 AGE

Age structure is also skew. In the next table one can notice that overall respondents are younger than the whole working population. The difference between the age groups seems to be quite stable with the increasing number of observations, especially in the age groups below and over 50 years.

Table 12. Employee age structure in WageIndicator December 2006

| Age group | FI | NL | BE | DE | ES | UK | PL | DK |
|-----------|------|------|------|------|------|------|------|------|
| 15-29 | 27,9 | 37 | 27,6 | 24,8 | 32 | 33,4 | 55,6 | 10,9 |
| 30-39 | 36,1 | 33,6 | 34,8 | 41,3 | 43,6 | 34 | 30,8 | 22,6 |
| 40-49 | 22,5 | 20,3 | 26,2 | 24 | 18,4 | 20,3 | 9,5 | 32,8 |
| 50-64 | 13,4 | 9,1 | 11,5 | 9,8 | 6 | 12,3 | 4,1 | 33,7 |

With the exception of Denmark the age structure is biased, so that older respondents are underrepresented. There are quite big differences between countries, which may cause wrong interpretations in analysis if all respondents were to be lumped together and also in comparisons between countries.

6.4 EDUCATION

The third dimension of the skewness is educational levels. In this first report this aspect is touched upon lightly, as the EU has not yet achieved a common level of definitions and mutually recognized educational standards and certificates. Awaiting the outcome of Eurooccupations (a WOLIWEB-related project also funded by the EU) in this report we limit ourselves to the Finnish case, just to point out the relevance of the educational criterium for the skewness of the dataset.

As one might expect the educational levels of those who have answered the Palkkalaskuri questionnaire are not representative for the distribution of educational levels amongst all Finnish employees.

Table 13. Employee educational structure in 2003 (Statistical Yearbook 2005) and in Palkkalaskuri data 2005-2007, for full-time employees

| Educational structure | Statistics Finland, 2003 | Dataset October - 05 | Dataset December -05 | Dataset June -06 | Dataset December -06 | Dataset March -07 |
|------------------------------|--------------------------------|----------------------------|----------------------------|---------------------|----------------------------|----------------------|
| Only basic education | 22,2 | 5,2 | 5,0 | 4,6 | 4,8 | |
| Upper secondary education | 44,6 | 38,9 | 37,6 | 31,8 | 34,7 | |
| Tertiary education | 33,2 | 55,9 | 57,3 | 63,6 | 60,5 | |

The skewness slightly deteriorated as the number of respondents increased from October to March 2007. This will quite probably be an enduring feature of the Finnish dataset. Statistical analysis has to be made using weightings or analysing the dataset broken up according to different educational levels.

6.5 CONCLUSION

Not surprisingly in a voluntary survey the populations participating in research are biased from the beginning. This is reflected in the skewness of the dataset. Gender and age groups are over- and underrepresented. And as might be expected it is the well educated who surf the web more intensively, they are the early adapters of new technologies, are bent on making career, improving their lot, or just because they may be better connected, paid and/or have more leisure time. All these pretty reasonable expectations have been borne out by the analysis of the national respondent groups. Their biased composition vis-à-vis representative samples differ between national labor markets. These specific national profiles direct the future marketing and promotion effort of the national survey-teams to new target audiences to be reached for inclusion in the research so that finally the whole labour market is covered by the resulting dataset. That target group marketing can be done successfully and compatibility of the dataset with benchmarking datasets can be reached, has been proven already in the Netherlands over the past 6 years. Therefore, all in all, WOLIWEB has proven that Internet based labor market surveys are a realistic proposition indeed.

7. CONCLUSIONS

7.1 INTERNET ACCESS AND USE

The exhaustive presentation of actual Internet presence, availability and use by the working populations in the WOLIWEB-countries leaves no room for doubt. If saturation points have not yet been reached, they will be in the foreseeable future. This projection does not take into account new technological developments. Only in Poland and Spain increasing Internet penetration of society still may make a significant difference for the potential of Internet based labor market research. But also in these 2 countries, the working population by and large finds its way on the Internet from their work places. These findings are completely in line with estimations made in the early stages of the WOLIWEB-project (Amsterdam Conference June 2005).

7.2 WOLIWEB RESULTS OVERALL

At the time the WOLIWEB project proposal was written, autumn 2003, the only concrete evidence of its viability available were the visits to and the intake levels of data on the Dutch *WageIndicator* websites. At the time they stood at roughly 250,000 visits per month and cumulative data of 60,000 from the beginning of the online data intake in autumn 2000. Therefore the calculated guess of 350,000 data, to be gathered after 3 WOLIWEB-years in 9 EU-countries, was rough according to all existing standards. The resulting 323,000 data as per April 1st 2007, therefore comes as a pleasant surprise: apparently the assumptions based on the Dutch pre-WOLIWEB period and the marketing and promotion recommendations emanating from it, were pretty much to the point. The presentation of country cases and two approaches leads to the conclusion that both mass organisations, such as trade unions and mass media with national outreach, preferably online, offer proper venues for labour market research in which working individuals are willing to participate on a massive scale. At relatively little cost large audiences of individuals can be reached and served in their need to know their market value. Voluntary Internet surveys are therefore a realistic proposition.

7.3 QUESTIONNAIRE RESPONSE INDEX

The conclusion just formulated is supported by evidence from the interaction with respondents that has been built in and was conducted throughout the WOLIWEB-

project. Given special care in phrasing questions in the survey, given also swift and respectful handling of email, endurance with complaints individuals may voice about their work/life predicaments, permanent Internet surveys – at least in independent labor market research – definitely have great potential, both in improving sensibility to micro-situations and in creating goodwill for themselves.

7.4 SKEWNESS OF THE DATASET

Not surprisingly in a voluntary survey the populations participating in research are biased from the beginning. This is reflected in the skewness of the dataset. Gender and age groups are over- and underrepresented. And as might be expected it is the well educated who surf the web more intensively, they are the early adapters of new technologies, are bent on making career, improving their lot, or just because they may be better connected, paid and/or have more leisure time. All these pretty reasonable expectations have been borne out by the analysis of the national respondent groups. Their biased composition vis-à-vis representative samples differ between national labor markets. These specific national profiles direct the future marketing and promotion effort of the national survey-teams to new target audiences to be reached for inclusion in the research so that finally the whole labour market is covered by the resulting dataset. That target group marketing can be done successfully and compatibility of the dataset with benchmarking datasets can be reached, has been proven already in the Netherlands over the past 6 years. Therefore, all in all, WOLIWEB has proven that Internet based labor market surveys are a realistic proposition indeed.

REFERENCES

Eurostat statistics, <http://epp.eurostat.ec.eu.int>

Internet i komputery: wyposażenie gospodarstw domowych, korzystanie, perspektywy rozwoju, Centrum Badania Opinii Społecznej, Warszawa, April 2005, <http://www.cobos.pl>

Internet statistics, www.InternetWorldStats.com

Ottens M., Internet usage by individuals and enterprises 2004, Statistics in focus Industry, trade and services Population and social conditions - Science and technology 18/2005, Eurostat 2005

Woliweb statistics

Visits per month per website in 2006

| Country | 2006 | | | | | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| The Netherlands | 303883 | 280622 | 277755 | 474972 | 427132 | 588324 | 427963 | 348434 | 339519 | 334041 | 454655 | 478935 |
| www.mannenloonwijzer.nl | 21 777 | 18 996 | 17 624 | 17 359 | 16 374 | 13 706 | 12 334 | 20 864 | 20 077 | 23 334 | 24 081 | 26 137 |
| www.vrouwenloonwijzer.nl | 22 168 | 18 107 | 18 546 | 18 901 | 18 807 | 17 398 | 14 656 | 20 820 | 19 706 | 21 759 | 21 541 | 20 144 |
| www.jeugdloonwijzer.nl | 11 182 | 11 055 | 12 687 | 15 712 | 19 012 | 19 967 | 16 886 | 14 300 | 11 465 | 12 446 | 13 151 | 12 170 |
| www.40plusloonwijzer.nl | 13 286 | 11 688 | 10 972 | 9 375 | 8 805 | 7 527 | 6 785 | 9 059 | 7 922 | 9 564 | 9 228 | 8 051 |
| www.tijdwijzer.nl | 7 670 | 6 620 | 7 076 | 7 010 | 6 208 | 3 577 | 4 272 | 3 714 | 2 649 | 3 350 | 2 882 | 2 500 |
| www.zorgloonwijzer.nl | 7 177 | 5 345 | 5 253 | 5 109 | 5 077 | 4 556 | 4 041 | 4 610 | 3 903 | 4 630 | 4 570 | 3 825 |
| www.eigenbaaswijzer.nl | 7 005 | 6 453 | 6 750 | 6 746 | 6 242 | 3 938 | 5 085 | 6 195 | 5 030 | 6 482 | 5 922 | 5 297 |
| www.loonwijzer.nl | 213 618 | 202 358 | 198 847 | 394 760 | 346 607 | 517 655 | 363 904 | 268 872 | 268 767 | 252 476 | 373 280 | 400 811 |
| Belgium | 27 330 | 20 910 | 24 581 | 18 266 | 22 629 | 19 009 | 24 728 | 30 906 | 28 511 | 39 459 | 33 940 | 30 352 |
| loon | 21 293 | 15 272 | 17 126 | 13 916 | 17 323 | 14 123 | 17 229 | 22 646 | 20 739 | 29 014 | 23 491 | 21 070 |
| salaire | 6 037 | 5 638 | 7 455 | 4 350 | 5 306 | 4 886 | 7 499 | 8 260 | 7 772 | 10 445 | 10 449 | 9 282 |
| mijn | 2 550 | 2 531 | 3 462 | 5 548 | 5 053 | 4 885 | 4 313 | 6 135 | 9 423 | 11 361 | 10 420 | 9 398 |
| mon | 768 | 698 | 1 743 | 3 886 | 3 048 | 1 298 | 1 018 | 1 543 | 2 609 | 2 808 | 2 748 | 2 676 |
| vrouwen | | | 3 094 | 2 225 | 2 657 | 1 792 | 1 725 | 15 908 | 4 954 | 5 712 | 5 038 | 4 105 |
| Denmark | | | | | | | | | | | | |
| www.lontjek.dk | 2 555 | 2 037 | 2 170 | 2 657 | 2 842 | 3 132 | 2 003 | 2 910 | 2 719 | 3 625 | 4 611 | 2 706 |
| Finland | | | | | | | | | | | | |
| www.palkkalaskuri.com | 2 867 | 2 900 | 3 103 | 3 806 | 42 405 | 16 803 | 14 878 | 9 705 | 9 301 | 14 151 | 17 305 | 10 583 |
| Germany | 94110 | 70166 | 72577 | 90206 | 87405 | 78415 | 131907 | 94229 | 93577 | 101489 | 105895 | 85381 |
| www.lohnspiegel.de | 94 110 | 70 166 | 72 577 | 90 206 | 87 405 | 78 415 | 131 907 | 94 229 | 77 866 | 89 859 | 91 322 | 73 734 |
| www.frauenlohnspiegel.de | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15711 | 11630 | 14573 | 11647 |
| Poland | | | | | | | | | | | | |
| www.twojezarobki.com | 7 613 | 6 625 | 7 204 | 7 183 | 7 339 | 6 916 | 8 388 | 7 261 | 6 888 | 9 479 | 9 127 | 7 266 |
| Spain | | | | | | | | | | | | |
| www.tusalaro.com | 19 740 | 20 493 | 21 508 | 26 730 | 34 398 | 30 952 | 28 421 | 28 031 | 33 784 | 43 745 | 50 053 | 37 154 |
| UK | 38 054 | 20 375 | 28 992 | 26 073 | 25 335 | 19 006 | 16 721 | 18 867 | 15 747 | 18 376 | 28 499 | 19 232 |
| www.paywizard.org | 37 440 | 19 831 | 27 893 | 25 155 | 23 988 | 18 282 | 15 722 | 17 828 | 14 680 | 18 376 | 27 275 | 18 271 |
| london | 614 | 544 | 1 099 | 918 | 1 347 | 724 | 999 | 1 039 | 1 067 | 0 | 1 224 | 961 |

