Globalisation and New Collaborative Working Environments

WP3 Deliverable 3.3:

Consolidated Findings from NEW GLOBAL Survey

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1. INTRODUCTION

This document contains key findings from the NEW GLOBAL Business Survey. The business survey was to provide indicative data about experience with **globalised collaborative working environments (CWE)**, as well as elements hereof, among EU companies in sectors which are significantly affected by globalisation tendencies of high-qualified knowledge work. It also sheds light on success factors and conditions for collaborative globalisation. Finally, the business survey had the purpose of piloting indicators which are considered required for filling gaps in available statistics.

The business survey was conducted by interviewing 1015 respondents from small- and medium-sized (SME) companies in the sectors of "high-tech manufacturing" and "knowledge-intensive business services" (KIBS) and in eight EU countries: Belgium, Denmark, Finland, Germany, Portugal, the Netherlands, Sweden and U.K. Data collection took place in spring 2008.

The present document is structured as follows:

The remaining parts of chapter 1 briefly explain the background for the set-up of the data collection and the analysis as presented in this document.

Chapter 2 contains a description of the methodology employed for data collection, including information on sample design, the contents of the questionnaire, and survey preparation. The chapter also contains, in section 2.4, a brief overview of the main characteristics of the sample including distribution of cases across company size classes, sectors, and year of establishment.

Chapters 3 and 4 report the main findings from the analysis of the survey data, following a structure which is derived from the overall concept of data collection in NEW GLOBAL (see Figure 1 on page 10). Chapter 3 presents results from the bivariate analysis, while chapter 4 digs deeper into some of the main hypotheses concerning SMEs' use of CWE for global collaboration by applying multivariate analysis.

Chapter 5 summarises the results from both parts of the data analysis. It also outlines a number of implications for stakeholders, including policy-makers, which derive from the survey results (5.2). It also contains some recommendations how business collaboration could be better captured by indicators within the European Statistical System (section 5.3.

Finally, the annex in chapter 6 consists of five parts: A bibliography in section 6.1; the detailed survey results broken down by country in section 6.2; a tabular presentation of the results from the regression analysis in section 6.3; information on survey response and sample exhaustion for each of the eight countries covered in section 6.4; and the survey instrument in section 6.5.

The collection of primary survey data built upon the work undertaken in the first stage of the project. WP1 produced a theoretical framework and a state-of-the-art review synthesized from existing research and policy practices[1]. The work package had also defined key terms and concepts. A summary is available in the form of a **conceptual framework document** which is guiding all subsequent steps in the project[2].

The **main research questions** deriving from the document, as far as they are of relevance for the business survey, are the following:

- What is the motivation for (small and medium-sized) companies to engage in global collaboration, and what strategies do they apply to achieve their objectives?
- How do companies exploit collaborative working environments (CWE) to implement their globalisation strategies? How do they exploit online collaboration tools in their globalisation related activities?

1 NewGlobal consortium (2007), WP1 deliverable: D1.2 Interim Report: Conceptual Framework incl. Review of State-of-the-Art Research and Practice.

2 NewGlobal consortium (2008), New Global Research Framework, internal document for coordination.

- What are the main challenges companies face when engaging in global collaboration, and when applying CWE? How can these be addressed – Is there any evidence about the determinants of success in achieving globalisation goals?
- What are the conditions for European companies to better leverage the opportunities offered by global collaboration?

Tackling the challenges which arise from European companies' engagement in collaborative globalisation also implies a role for policy-making. There arguably is a need for policy to help create conditions which enable European companies to better leverage the opportunities provided by applications of global CWE.

In terms of research methodologies to be applied, the project uses in-depth case study research to capture information mainly from large multi-national enterprises, while the survey was to sample SMEs in order to:

- map patterns of international collaboration, and the role of ICT-based interaction for these activities, in core sectors, i.e. sectors which are central to the notion of the knowledge economy;
- explore whether there is an association between (on the one hand) the intensity of use of cross-border virtual collaboration and CWE, and (on the other hand) parameters of economic performance and innovative activity;
- obtain evidence about drivers (market conditions, regulatory frameworks, competition etc.), success factors and impacts of globalised CWE.

The survey did not cover the entire population of EU businesses, but focused on selected industries only. The reason for this is that the potential for benefits to be derived from cross-border collaboration differs substantially between economic activities/sectors/industries. Because of the project's focus on high-qualified knowledge work and because of the outstanding importance of the sector for the overall competitiveness of the EU economy, NEW GLOBAL's business survey focused on enterprises in high-tech manufacturing and knowledge-intensive services only.

In addition to providing answers to the study's main research questions, the survey was used for piloting new or revised indicators for better capturing collaborative work in statistical indicator systems. In this context, the project has developed a number of indicators following a tried-and-tested procedure for survey preparation, execution and result analysis. The results will be presented to and discussed with the study's target groups, in particular to bodies which are responsible for the collection of statistical data such as the European Statistical System.

2. NEW GLOBAL BUSINESS SURVEY: APPROACH AND METHODOLOGY

2.1 Subject of the Interviews

2.1.1 Operational Definition of Collaborative Work Environments (CWE) and Related Terms

In order to identify gaps in the coverage of available frameworks for collection of statistical data, the project looked at the well-established measures of the Information Society and Knowledge Economy which have been defined in the context of the eEurope action plans, the i2010 strategic framework, and related work by the Voorburg Group, OECD, Eurostat, national benchmarking efforts, and other sources (see D 3.1[3]). Based on the result of this review, a decision was taken to select indicators to be included in the pilot business survey that was to be carried out.

As defined in D1.2 we understand **Collaborative Working Environments** (CWE) as a combination of physical, IT-based and social or organisational infrastructures supporting people in their individual and collaborative work.

CWE are operationalised for research in WP3 as types of work organisation which rely on collaboration in project teams that cross the boundaries of individual enterprises and/or locations. For enabling such collaboration, ICTs are being used in order to give participating individuals near-ubiquitous access to information resources and to allow them to communicate effectively in spite of the (near-)absence of face-to-face interaction. Such ICTs can include e-mail, shared workspace and document management, wiki, instant messaging, application sharing, conferencing, and workflow management tools.

Typically, CWE are being deployed for high-skilled, knowledge-intensive work in which a lot of the knowledge which is being transmitted is of tacit (rather than codified) character.

Collaborative Globalisation is the use of CWE for collaboration in project teams which cross national boundaries. A narrow definition of the term includes only those CWE in which collaboration is with organisations from **non-EU countries** (in particular overseas countries).

The subject of our analysis (CWE) can be defined by using six dimensions: collaboration, spanning of boundaries, team and project organisation, ubiquitous access to resources, people focus and technology:

- Collaboration: Collaboration occurs when two or more people interact and exchange knowledge in pursuit of a shared, collective, bounded goal. Bounded goals imply a beginning and an end. Two people interacting in order to get smarter is not collaboration. However, two people interacting in order to prepare for a calculus exam is. For empirical research, this definition needs to be operationalised. We suggest that one should speak of collaboration only when an explicit (e.g. written, but not necessarily legally binding) agreement about common aims has been made.
  It is important to distinguish collaborative work contexts from other forms of coordination (see Laso Ballesteros & Salmelin, 2005). In this context it appears useful to refer to the typology of coordination modes in the context of workflow processes: These are, ranked according to increasing interdependency: pooled/additive, sequential, reciprocal and intensive interdependence arrangements. These types also relate to the extent to which co-workers carry out tasks in parallel, sequentially, or together. Depending to the extent to which tasks are designed as business processes, the two last types (reciprocal and intensive) are most likely to fit our understanding of "collaboration". However, sequential coordination can also amount to collaboration if co-workers interact and exchange knowledge in pursuit of a shared, collective, bounded goal.
- Boundary spanning: An important aspect in which virtual collaboration differs from traditional forms is the extent to which it crosses boundaries of space, time, function, culture, and

[3] NewGlobal consortium (2007), WP3 Deliverable 3.1: NEW GLOBAL Survey Design and Instruments, project document.

organisation. This stems from the initial rationale behind virtual collaboration which is to combine the skills and capabilities of a number of agents for the pursuit of a certain goal regardless of the traditional constraints of distance. Mobility – in any sense of the term – plays a key role in this regard. With regard to the geographical boundaries, CWE typically involve the transfer of work inputs and/or outputs via data telecommunications links across distance. Distance refers here to physical remoteness between collaborators. Remote work most often is being (implicitly) defined as meaning different sites/locations/addresses. NEW GLOBAL is specially interested in collaborative work relationships which cross national borders.

- Team and project organisation: We define collaboration in virtual teams as a group of individuals who (or: some of whom) are located remotely from each other and who collaborate, and in which interaction takes place exclusively or almost exclusively via telemediation. Virtual collaboration is understood to take place in teams, i.e. in groups of persons who work together for a longer stretch of time. A project is a temporary endeavour being undertaken to create a unique product or service. Projects are temporary. In recent years, cases of (virtual) collaboration between companies and their customers have attracted increasing interest (Voß & Rieder, 2005). It can be argued that this is also a case of CWE (see Stanoevska-Slabeva et al., 2005). It is not covered by this document's scope, though, as the instruments of marketing research appear to be better suited for researching the subject.
- Ubiquitous access to resources: New work environments do not only provide advanced possibilities for interacting with remote collaborators, they also offer anytime, anywhere access to resources such as access to codified information in databases and digital applications (often containing ambient intelligence) which effectively support the adaptation of the working environment (tools, etc.) to the requirements of the specific task on hand. Ubiquitous access to information resources turned from science fiction into a realistic perspective with the advent of the Internet. IP-based applications are likely to dominate CWE tools in the near future.
- People focus: Depending on the complexity and nature of the tasks involved (see further below), CWE need to provide optimal working conditions for the worker if they are to support high levels of productivity – as research on high performance work organisation and related concepts has shown. Worker focus usually implies some or all of the following characteristics: a non-hierarchical organisational structure; flexibility in working methods; corporate cultures focussing on people orientation; continuous investments in learning and training; and innovative performance measurement and reward schemes. In addition, people focus goes beyond catering for workers as it also implies that the focus of business processes should be on optimally serving the customer.
- Technology: The type of collaboration outlined above is possible only with the support of advanced tools for, for example, computer supported collaborative work (CSCW); for mobile communication and for ambient intelligence. In essence, these tools enable easy access to knowledge resources and required communication channels at any place and any time, and are fully integrated in the working environment in order to support creative work as much as possible.

In order to be able to provide robust insight with regard to the study's main research questions (see **NEW GLOBAL Research Framework**), data on a number of variables were sought, including the following:

- Background information about type of globalisation activities/strategy;
- The intensity with which companies engage in collaboration with external organisations in general, and purpose of this collaboration;
- Location of external collaboration partners, and the relative importance of cross-border and global collaboration as opposed to collaboration with domestic partners;
- The extent to which certain drivers (as discussed in the literature) are perceived as having influenced the decision to collaborate globally and to use CWE (including information about the contingencies which influence the success of cross-country virtual collaboration);
- Barriers to global collaboration, as perceived by companies;

- Uptake and patterns of use of ICT-based collaboration tools, including latest-generation "social software" applications such as Wikis and blogging;
- Relative significance of such ICT-based collaboration tools in comparison to traditional means of cooperation;
- Outcomes including growth in turnover and employment, recent innovative activity, and perceived ability to deal with an increase in global competition.

2.1.2 Questionnaire Design

The following types of variables are contained in the data collection instrument, which is annexed to this document (see section 6.5):

Size, sector, geographical structure

The size and the company sector can be expected to be important predictors of the incidence and intensity of collaborative and innovation-related activities within a company, as the data collected by the European Innovation Scoreboard, the eBusinessWatch (2007), the Innobarometer etc. clearly show (Eurostat, 2006; 2007). For this reason, they need to be collected in order to correctly interpret the data to be gathered. The data were also necessary for the sampling procedure, as a stratified sampling approach was used to ensure that the composition of the sample represents the composition of the total population in this respect.

Geographical structure here means whether the enterprise is part of a multi-site company, and if so where the other establishments of the company are located (only within the same region or also in other regions within the same country, in other EU countries, or outside of the EU). This information is important as a potential determinant of the probability of cross-country collaboration, and also as a filter question to establish whether it is possible to ask questions about intra-company but cross-country collaboration.

ICT infrastructure

Questions about uptake of Internet and type of access (speed, i.e. broadband vs narrowband/midband), the existence of an intranet or other type of LAN, and the technical possibility for employees to remotely access the company computer system from outside of its premises (remote access) are included in the survey.

Collaboration practice

In this module, respondents are asked to report about the extent to which the company is involved in collaborative projects with external companies or institutions, and in which ways these stretch across national and EU borders. The type of partner(s) for collaboration is covered as well. The final questions in this module deal with the relative importance of collaborative activities within and across borders for the company at large.

Collaboration Tools

Use and relevance of communication channels and tools, and of collaboration tools, are subjects of the first set of questions within this module. The former includes traditional methods such as face-to-face meetings and the telephone. The latter extends to the latest generation of social networking applications (e.g. blogging, wikis). The field pre-tests showed that awareness about these latest-generation tools is big enough to support valid results. The questionnaire then deals with the degree to which available online collaboration tools are sufficient for the purpose of collaboration with external parties. Possible reasons for non-usage (barriers) are also enquired.

Global collaboration

The special issues which revolve around collaboration with foreign and, in particular, non-EU companies and institutions are subject of this module. The first questions refer to the drivers or

reasons for taking up cross-country collaboration, and to the criteria which are used for selecting partners for this purpose. The instrument also deals with differences in perception about the ease of collaboration depending on the geographical/cultural situation of the collaboration partner (distinguishing mainly between EU, former USSR, Asia, North America, and Latin America). The final question in this module explores whether the respondent company has developed closer relations with foreign companies and institutions in the recent past, and how it expects the respective trends to continue in the near future.

Barriers to, and preparation for, global collaboration

An extensive item list is used to assess barriers and challenges perceived or encountered in relation to cross-border collaboration. This is a key question to be targeted at all companies, regardless of the extent to which they are currently using global CWE for co-operating with foreign companies or institutions.

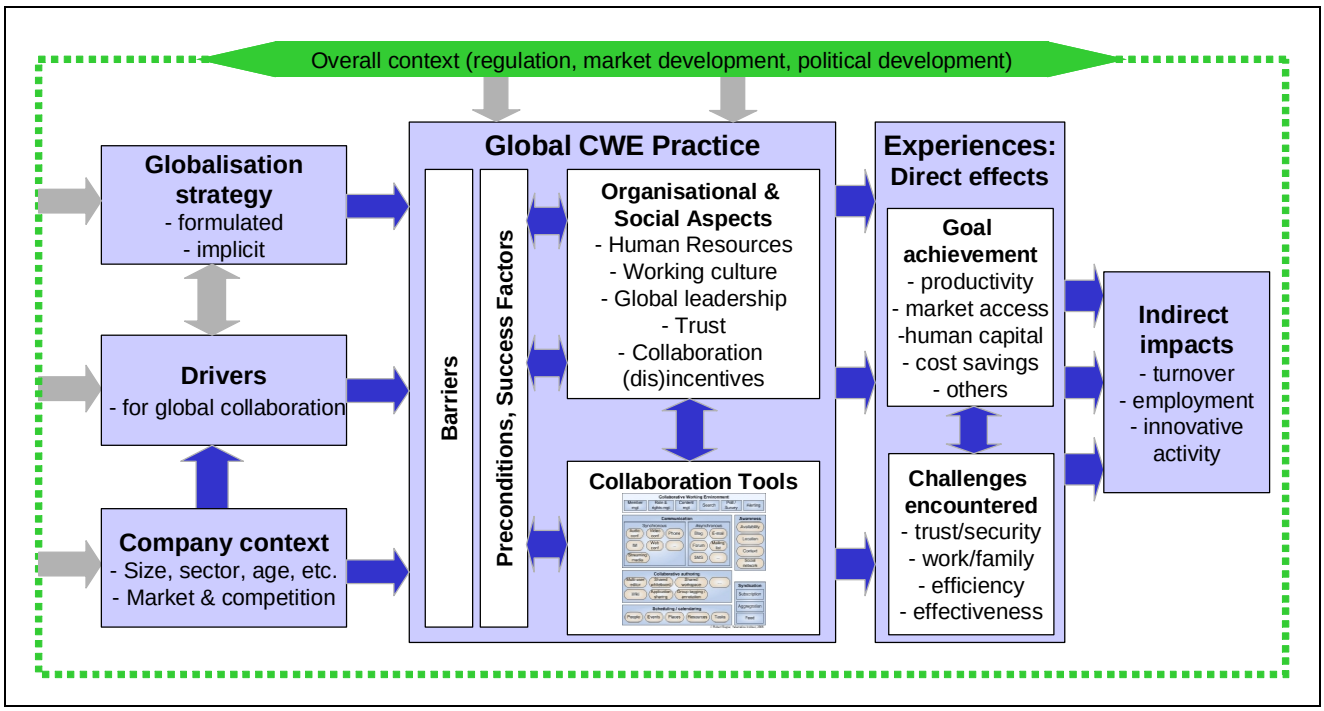
In addition, the questionnaire asked about specific measures which have been taken in order to prepare for collaboration across borders (e.g. staff training, interoperability, knowledge management).

Further context variables and performance indicators

These include trends regarding turnover, competitive position and employment. Age of the company and its main geographical markets are additional context indicators which are expected to be important explanatory factors for CWE take-up and usage patterns. Finally, a number of well-established indicators on innovative activity are used to explore the extent to which the company has introduced product, process or organisational innovations in the recent past.

Figure 1 below outlines the overall concept of data collection carried out by means of the business survey in NEW GLOBAL.

Figure 1: Overall concept of data collection via NEW GLOBAL Survey



The main results from the survey will be presented below (section 3) according to the logic of this model.

2.2 Sampling

2.2.1 Country Coverage

The following eight countries were selected for conducting the NEW GLOBAL business survey in:

- **Denmark**, **Sweden** and **Finland**, all of which are forerunners (not only in Europe but internationally) in the uptake of ICT and implementation of eBusiness. These countries also appear to have above-average rates of companies engaged in international business relationships and networking.
- **Belgium** and the **Netherlands**, which also have above-average rates of eBusiness uptake among businesses. Integration in the global economy is strong. The Netherlands, in particular, is also notable for its very high rates of take-up of innovative forms of work organisation.
- **U.K.** and **Germany**, which represent the bigger Member States that are more advanced in business take-up of ICT and eBusiness. Germany's economy (or more precisely its manufacturing sector, in which SMEs play a core role) is strongly export-oriented and, as such, dependent on developing closer collaboration with non-domestic organisations. The U.K. economy has traditionally close ties to the USA and is also the Member State which offshores most heavily to Asian countries (mainly India).
- **Portugal**, which – in spite of below average rates of ICT *uptake* – scores comparatively well in ICT *use*. It also traditionally has strong business links to non-EU offshore locations, especially Brazil.

Countries were selected according to the criterion that they contain a large share of companies that have experiences with working in globalised contexts. No data are available which would allow us to directly identify which these countries are. In their absence, a number of proxy indicators were used to identify EU Member States which fit the description. These included statistics on:

- the extent to which a country's firms engage in innovation-related collaboration with organisations from another country / from outside of the EU (data available from the Community Innovation Survey, see Eurostat, 2007);
- the share of a country's employment which is potentially affected by ICT-enabled offshoring of services (data available for most OECD countries from van Welsum & Vickery, 2005 and van Welsum & Reif, 2006). For our purpose, data which exclude clerical occupations were used, since these are less likely to be involved in knowledge-intensive collaboration as defined above;
- the adoption and use of ICTs by firms for eBusiness (data available from various sources, including a compound indicator developed by the European Commission on the basis of data from the Eurostat-coordinated ICT usage enterprise survey, see Eurostat, 2007).

2.2.2 Industry Sectors

The survey was conducted in the sectors "high-tech manufacturing" and "knowledge-intensive business services" (KIBS) (according to NACE Rev. 1.1 nomenclature)", as defined by Eurostat (cf. Brinkley & Lee, 2007):

The sector is defined by Eurostat as including the following activities (at NACE 2 digit level):

High-tech manufacturing: Manufacturing of office machinery, computers, radio, television, communication equipment, medical precision and optical instruments, watches and clocks (NACE 24.4, 30, 32, 33, 35.3).

Medium-high tech manufacturing: Manufacture of chemicals, machinery and equipment n.e.c., electrical machinery and apparatus n.e.c., transport equipment (NACE 24-24.4, 29, 31, 34, 35.2, 35.4, 35.5).

Knowledge-intensive business services (KIBS): Computer and related activities (NACE 72), Research and development (NACE 73), and:

- (a) Professional business services that consist of: legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling; business and management consultancy (NACE 74.1);
- (b) Architectural and engineering activities and related technical consultancy (NACE 74.2);
- (c) Technical testing and analysis (NACE 74.3);
- (d) Advertising (NACE 74.4).[4]

Indeed, it has been shown repeatedly that companies within high-tech industries are, because of their strong reliance on R&D and latest generation technology (Eurostat, 2007), more dependent on knowledge sharing than firms in other sectors.

KIBS are usually defined, for example in EuroFound (2007), as organisations that rely heavily on professional knowledge to supply intermediate products and services that are knowledge based. The relevance of knowledge-sharing and collaboration across organisational boundaries is one of the core features of KIBS.

A comparison of the sectors which are included in the Eurostat definition of "high-tech manufacturing and knowledge-intensive business services" with the sectors with highest share of employment "potentially affected by ICT-enabled offshoring of services", as calculated by the OECD (van Welsum & Vickery, 2005) shows a high degree of consistence, with the exception of those sectors which can be expected to be dominated by clerical employment, such as insurance, finance and real estate.

2.2.3 Unit of Observation

The survey was targeted at enterprises rather than establishments. Only enterprises of a certain size were to be sampled, which here means firms with at least five staff or more employees. Smaller and micro-enterprises were excluded since any attempt to cover them would be likely to lead to distorted findings as a result from uneven coverage of micro enterprises in list sources. According to previous experience, this problem could seriously affect the validity of the data from most European countries.

In order to select only establishments which already have gained experience with collective globalisation, a filter question was deployed after contact with the unit of response was established. This looks as follows:

(A) Has your company activities, e.g. a branch, subsidiary, sister or parent company, or any sort of business cooperation in countries outside of the EU?

[INT: ADD, IF REQUIRED: "business cooperation" means collaboration between independent companies which is explicitly agreed upon and intended for the medium or long term]

(B1) [IF (A) = NO] In the last 24 months, has your company had business relationships with companies or organisations located outside of the EU?

(B2) [IF (B1) = YES] In the course of these business relationships, has any of your staff collaborated closely with a company or organisation located outside of the EU, for example, in a project team or in another form which required a high degree of coordination and information exchange?

(C) [IF (A) = NO & (B1) = NO] In the last 24 months, has any of your staff – as part of their job – participated in project teams which also included staff from companies or organisations outside of the EU? For example, by this we mean cooperation in a project team or in another form which required a high degree of coordination and information exchange.

[4] Note: The Eurostat definition of KIBS includes 74.81 (Photographic activities) and 74.83 (Secretarial and translation activities) as well, but these should be excluded from the sample because of the high relative share of clerical and low-skilled jobs in both sectors.

*[IF (B2) = NO or (c) = 0 **Ü** terminate interview.]*

This means that only companies that have experiences with collaboration in cross-border projects were included in the survey.

2.2.4 Unit of Response

The unit of response are persons in enterprises who are key decision-makers on issues related to "collaboration with companies or organisations outside of Europe". Respondents should be the heads of R&D or senior managers with R&D responsibility (in manufacturing firms) and equivalent function holders in service firms.

The screening procedure for interviews was as follows:

<u>At reception/switchboard</u>:

Good morning/good afternoon. My name is ... and I am calling from... [name of institute].

We are currently conducting a survey in several countries of the European Union. The survey is about collaboration with companies or organisations outside of Europe.

Please may I talk to somebody who is responsible for decisions in this area in your company, for instance the head of research and innovation, a manager in charge of product or service development, a marketing or sales manager, or a manager in charge of your company's foreign activities.

[INT.: NOTE: This person should be head of (or a senior person in) one of these departments. In smaller companies it can also be the managing director, the general manager or the owner.)

<u>At target person</u>:

Good morning/good afternoon. My name is ... and I am calling from... [name of institute].

We are currently conducting a survey in several countries of the European Union. The survey is about collaboration with companies or organisations outside of Europe, for example in connection with product/service development, with research and innovation activities, or with marketing & distribution.

We are talking to people who are responsible for or take part in decisions in these areas, for example as head of research and innovation, manager in charge of product or service development, marketing or sales manager, or as manager in charge of your company's foreign activities.

Can I just check: Would you be the right person to talk to in your company? [...]

What is your position in your company? Which of the following is the most appropriate?

- *Owner / Proprietor*
- *Managing Director / Board Member*
- *Head of research and innovation*
- *Head of product and service development*
- *Head of marketing & sales*
- *Head of global operations*
- *Other senior member of department in charge of research, innovation or marketing & sales .....*

2.2.5 Field Sampling

From the universe a random sample of companies, stratified by sector and, where possible, size (number of employees in the company), was selected per country for each of the pre-defined quota cells (in total: three size groups X three sectors).

Per country 150 interviews (Finland n=100) were to be achieved.

Quotas on country-sector size groups were set under consideration of the countries universe and address availability (address potential) individually for each country.

Initially the following strata by company sizes and sector was intended across all countries (see Table 1).

Table 1: Targeted distribution of responses across sectors and size classes

	Company size (no. of employees)				
Sector No.[5]	**SE** (5-9)	**ME 1** (10-49)	**ME 2** (50-250)	**TOTAL**	***Target in %***
01	*7*	*7*	*9*	**23**	***15%***
02	*11*	*11*	*15*	**37**	***25%***
03	*27*	*27*	*36*	**90**	***60%***
	45	**45**	**60**	**150**	
in %	***30%***	***30%***	***40%***		***100%***

The sampling was done decentrally by each of the partner institutes of Ipsos. The following list sources were used:

- Belgium: Infobel
- Denmark: KOB/Experian
- Finland: Fonecta ProFinder B2B
- Germany: Heins and Partner Business Pool (SABIS-Germany)
- Netherlands: Infobel
- Portugal: Coface (formerly MOPE, a subsidiary of the French group Coface)
- Sweden: PAR Sweden
- United Kingdom: Dun & Bradstreet

A detailed overview of the final number of interviews and the quota achievement is included in the annex (section 6.4).

2.3 Survey Methodology

2.3.1 Fieldwork

For survey execution, Computer Aided Telephone Interviewing (CATI) was chosen. Telephone interviews offer the advantage of quick and reliable data collection from a central telephone unit. CATI also offers best field control, automated sample administration, simultaneous data entry and permits a complex branching of the interview flow depending on filter questions and thus allows to apply questions tailored e.g. to the respondent firm's equipment status etc.

Fieldwork coordination was subcontracted to a specialised survey organisation, the Ipsos GmbH[6], Mölln. Fieldwork execution was conducted in cooperation with local partner institutes of Ipsos:

- For Belgium: Ipsos Belgium, 100 Brussels
- For Denmark: Synovate Denmark, 1360 Copenhagen K

5 01 = High-Tech Manufacturing; 02 = Medium High-Tech Manufacturing; 03 = Knowledge-Intensive Business Services

6 Ipsos is a globally operating independent market research company, conducting research and consultancy in more than 50 countries. Being established in Paris in 1975, with more than 6,000 employees worldwide Ipsos is currently ranked third on revenue. Since 1999 it is listed on the Paris Stock Exchange. Ipsos is member of the European Society for Opinion and Marketing Research (ESOMAR) and as such is bound by the ESOMAR 'codes of ethical practice' and professional standards.

- For Finland: Taloustutkimus Oy, 00510 Helsinki
- For the Netherlands: Ipsos Belgium, 1000 Brussels
- For Portugal: Ipsos Portugal, 1070-150 Lisbon
- For Sweden: GfK Sverige AB, 22100 Lund
- For the UK: CONTINENTAL Research, London EC1V 7DY

2.3.2 Pre-Testing

Field pre-tests were carried out to check the proper functioning of the interview procedure. They were also used to identify any remaining problems and issues with the instrument and the interview procedure – such as those resulting from inclusion of questions in multi-contractor (omnibus) surveys. Field pre-testing made use of a number of techniques including interviewer de-briefing, respondent de-briefing, behaviour coding, and analysis of response distributions.

2.3.3 Duration and Timing

Fieldwork was carried out between 18th April and 5th June, 2008. The country specific fieldwork periods and further details are shown in Table 2.

During fieldwork the client was provided with a weekly progress field report (Quota Achievement).

In some of the countries it turned out to be impossible to realize the size quotas as targeted and/or the planned number of total interviews (Belgium, Sweden and The Netherlands) due to the limited universe and the fact that the list sources were exhausted; this results from the low incidence rate of companies that are involved in collaboration with companies outside of the EU.

In total, 1015 interviews were conducted across all 8 countries covered by this project.

Table 2: Fieldwork execution details per country

Country	Duration of Fieldwork	# of Inter-viewers	Average duration (in min)	Min # of contact attempts	Controls	# of cpl interviews
Belgium	07-05 to 23-05, 2008	8	21:17	10	10%	113
Denmark	07-05 to 20-05, 2008	9	13:21	5	10%	155
Finland	07-05 to 14-05, 2008	14	17:03	10	10%	105
Germany	18-04 to 08-05, 2008	22	15:45	12	10%	152
Netherlands	07-05 to 23-05, 2008	8	21:00	10	10%	73
Portugal	08-05 to 05-06, 2008	10	19:44	5	25%	150
Sweden	08-05 to 27-05, 2008	11	17:24	7	10%	116
UK	28-04 to 09-05, 2008	13	14:33	5	10.5%	150

2.3.4 Data Delivery and Processing

Once the data had been collected, it was processed, quality-checked and then analysed using SPSS and Excel software packages. In this way it was possible to assess coherence/completeness, validity of measurement, comparability across cultures (i.e. countries, language areas), statistical relevance (explanatory power) and also get insights about cost efficiency. The findings from this evaluation will inform the subsequent recommendations to be made with regard to inclusion of indicators and survey items into established business surveys in Europe.

In the remaining parts of this document, results will be presented in tabular format and discussed.

The survey findings and the raw dataset are of high potential value to the European Commission, as they both can be re-used and exploited for answering particular research questions even after the end of the project duration. The statistics produced also provide important quantitative evidence and illustration for possible use in subsequent Commission publications.

2.4 Sample characteristics

2.4.1 Sector, Size, Age

The sample consists of high-tech manufacturing companies (14%), medium high-tech manufacturing companies (29%) and firms in the knowledge-intensive business services sector (57%). The share of companies that actually qualified for the survey, i.e. that were involved in collaboration-type activities with organisations from outside of the EU, was significant; in some countries almost one in two companies contacted confirmed that they were 'globally active'. This confirmed our initial assumption that global collaboration is of strong relevance for knowledge-intensive and high-tech manufacturing sectors.

Table 3: Sample distribution across size classes and sectors

Sector by size-class	*Count*	*in %*
High-Tech Manufacturing - 5-9	32	3.2
High-Tech Manufacturing - 10-49	64	6.3
High-Tech Manufacturing - 50-250	47	4.6
Medium-high tech manufacturing - 5-9	63	6.2
Medium-high tech manufacturing - 10-49	120	11.8
Medium-high tech manufacturing - 50-250	113	11.1
KIBService companies - 5-9	140	13.8
KIBService companies - 10-49	258	25.4
KIBService companies - 50-250	178	17.5
Total	*1015*	*100.0*

Base: Total sample (n=1015)

With regard to company size, 23% of respondents represent businesses with 5 to 9 employees, 43.5% business with 10 to 49 employees and the remaining 33% businesses with 50 to 250 employees. The sample, therefore, represents – predominantly small – SMEs in knowledge-intensive sectors and with experience in global collaboration.

Only a small share of the companies included in the sample are younger than 10 years. 21% were founded after 1998, while 44% were founded between 1982 and 1997 and 34% were already existing in 1981. Results broken down by country are presented in the annex, section 6.2.1. Finland and Denmark are exceptional in that they have a significantly larger share of young companies within the sample (27% and 31% younger than 10 years, respectively). The sample, therefore, does not represent a predominantly young group of globally minded SMEs, but rather is dominated by companies which are firmly established within their national economy.

2.4.2 Turnover and employment

70% of responding companies report that their turnover has increased in the 12 months prior to the survey (see Table 4). 26% report turnover has stayed flat or even decreased, while 3% did not know or refused to answer the question. With regard to employment, a smaller share reports increases (48%), while 41% state that no net change has occurred. In 10% of cases, employment has gone down.

A number of other independent variables potentially provide important explanatory factors for differences in uptake and perceived benefits derived from ICT-supported global collaboration. They are described below in chapter 3.1.

Table 4: Development of turnover and employment in 12 months prior to the survey

		Count	*in %*
Turnover of company has...	Increased	713	70.2
	Decreased	62	6.1
	Stayed about the same	205	20.2
	DK	35	3.4
Total		*1015*	*100.0*
Number of employees has ...	Increased	487	48.0
	Decreased	102	10.0
	Stayed about the same	420	41.4
	DK	6	0.6
Total		*1015*	*100.0*

Base: Total sample (n=1015)

3. SURVEY RESULTS: GLOBAL AND ONLINE COLLABORATION

3.1 Company Context and Globalisation Strategy

The uptake of ICT-supported global collaboration needs to be analysed within the context of an SME's overall competitive environment and its strategy for innovation and globalisation.

Following the example set by DG Enterprise's eBusinessWatch (2007), the questionnaire included a number of items and asked to what extent these were considered important for competition in respondent companies' main markets (see Table 5).

Table 5: Relative importance of competition factors

	very important (1) or important (2)		*Mean on scale from 1 to 5*
	Count	*in %*	
Price of products	674	66.4	2.07
Product quality	967	95.3	1.28
Product variety	593	58.4	2.35
Image and design of the products or company	795	78.3	1.89
Customer service	953	93.9	1.38
Technological lead	806	79.4	1.84
The size of a company	330	32.5	3.03

Base: Total sample (n=1015)

On average, the factors perceived as most important are product quality (Ø1.3 on scale from 1 = very important to 5= not important at all) and customer service (Ø1.4), followed by technological lead (Ø1.8), image and design of the products (Ø1.9) and product price (Ø2.1). Product variety and size of the company are considered – on average – as less relevant.

The level of innovative activity among the SMEs in the sample is significant (Table 6). Three in four companies in the sample have either launched a new product or service in the 12 months prior to the survey, or at least introduced a significantly improved product on the market. Process innovation is confirmed by 62% of all SMEs, and 17% have requested or been granted at least one new patent.

Table 6: Innovative activity in the 12 months prior to the survey (multiple response)

	Count	*in %*
Launched new products or services	686	67.6
Launched substantially improved products or services	646	63.6
Launched a new or substantially improved product or service	*792*	*78.0*
Introduced new or substantially improved processes	630	62.1
Registered or been granted a patent	169	16.7

Base: Total sample (n=1015)

Table 7 gives information on the general internationalisation strategy of SMEs in the sample. As the data show, a large share of the businesses in the sample had, in the 5 years prior to the survey, experienced a form of restructuring which included foreign companies or units. One in four SMEs in the sample set up a unit or subsidiary abroad. 8% took over a foreign company, while a similar number – 7% was taken over by a foreign enterprise, and 4% merged with a foreign company. Taken together, nearly one in three SMEs in the sample (32%) has undergone a restructuring involving foreign companies or the set-up of a new unit/subsidiary abroad.

Table 7: Globalisation related activities in the five years prior to the survey (multiple response)

	Count	*in %*
Set-up of a unit or subsidiary abroad	253	24.9
Take-over of a foreign company	83	8.2
Being taken over by a foreign company	71	7.0
Merger with a foreign company	44	4.3
Any type of restructuring involving foreign companies	*324*	*31.9*
Joint venture, alliance or any other type of formal cooperation	357	35.2
Cooperation with foreign companies which are member of the same supply chain	375	36.9

Base: Total sample (n=1015)

35% of businesses in the sample have entered into a joint venture, alliance or any other types of formal cooperation with a foreign organisation. And slightly more – 37% – have collaborated with foreign companies which are member of the same supply chain(s). This figure is above average in Sweden and – to a lesser extent – also in the U.K. and Belgium. It is significantly below average in Portugal.

We will later try to explore whether there are differences in the way SMEs use virtual collaboration with global business partners, according to the internationalisation strategy which they have followed in the recent past (see section 4).

Note that while Table 7 is based on a question which refered to all international activities, in the remaining discussion global collaboration refers to contacts **to non-EU organisations only**.

3.2 Goals and Drivers for Global Collaboration

The main reason for SMEs in knowledge-intensive sectors to "go global", i.e. to engage in collaboration with organisations located outside the EU, is the pursuit of access to new markets (Table 8). Three in four SMEs in the sample (75%) report that this reason was a "very important" or "important" factor in their decision (Ø1.9 on scale from 1 = very important to 5 = not important at all).

Table 8: Reasons for engaging in global collaboration

	very important (1) or important (2)		*Mean on scale from 1 to 5*
	Count	*in %*	
[a] Get access to a foreign market	759	74.8	1.94
[b] Increase the speed of development	523	51.5	2.61
[c] Realise direct cost savings	485	47.8	2.80
[d] Get access to new technology	438	43.2	2.95
[e] Get access to low wage labour	161	15.9	3.96
[f] Get access to highly-skilled labour and expertise	412	40.6	3.05
[g] Be able to observe international developments in industry	594	58.5	2.42
[h] Avoid regulatory barriers in own country	203	20.0	3.81
[i] Participate in or manage a global supply chain	399	39.3	3.05
[k] Follow important customers or clients into a foreign market	647	63.7	2.32
Any reason related to improving access to knowledge[7]	*814*	*80.2*	*1.83*
Any reason related to customer/client relationships[8]	*746*	*73.5*	*2.03*

Base: Total sample (n=1015)

7 Responses "1" or "2" to any of the following question items: [b],[d],[f],[g]

8 Responses "1" or "2" to any of the following question items: [i],[k]

Other reasons of major importance include: to follow customers or clients into a foreign market (64% very important or important, Ø2.3); to be able to observe international developments in their industry (59%, Ø2.4); to increase the speed of development (52%, Ø2.6) and to realise direct cost savings (48%, Ø2.8). Getting access to new technology (43%, Ø3.0) as well as to highly-skilled labour and expertise (41%, Ø3.1), and being able to participate in or manage a global supply chain (39%, Ø3.1) are additional reasons for a significant share of the SMEs in the sample to opt for global collaboration. Less important are motives having to do with avoidance of regulatory barriers in the home country (20%, Ø3.8) and with access to low-wage labour (16%, Ø4.0).

3.3 Collaboration Practice

The survey explored collaboration practice using a number of questions, the first one of which focused on the type of collaboration partner. Note that the question items were formulated in a way which gives insight about the **business functions** which are the subject of the collaboration as well. For example, collaboration with production facilities at non-EU locations implies that (part of) the collaborative activity concerns co-operation related to the manufacturing process, while SMEs that collaborate with research facilities can be expected to engage in collaborative R&D.

Among types of global collaboration partners, clients/customers as well as suppliers of goods play a dominant role, with 78% and 58%, respectively, of respondents mentioning these groups (Table 9). Global collaboration within the units of a multi-national SME (either with the company headquarters located abroad, or with branch, subsidiary or sister companies outside of the EU) takes place in one out of three companies (33%) in the sample. 29% of the companies in the sample collaborate with production facilities outside of the EU.

Collaboration with service providers located outside of the EU, including logistics or distribution partners, consultancies and other service providers, takes place in 53% of all companies.

One in four SMEs in the sample (26%) collaborated with research organisations located outside of the EU – 18% with private research and 16% with public research organisations including universities.

Also one in four SMEs (24%) collaborated with public sector organisations located outside of the EU, including (but not limited to) universities and other higher education institutes.

When comparing high-tech and medium high-tech manufacturing companies with knowledge-intensive service companies, the latter are significantly more likely to collaborate with research organisations located outside the EU: 32% do so, in comparison to 19% among manufacturing businesses.

Table 9: Type of global collaboration partners (multiple response)

	Count	*in %*
Collaborated with branch, subsidiary or sister company	290	28.6
Collaborated with company headquarters	145	14.3
Collaborated with part of same multi-national enterprise	*338*	*33.3*
Collaborated with clients or customers	787	77.5
Collaborated with production facilities	290	28.6
Collaborated with suppliers of goods	584	57.5
Collaborated with logistics or distribution partners	313	30.8
Collaborated with other service providers	320	31.5
Collaborated with research organisations / consultancies	178	17.5
Collaborated with universities etc.	166	16.4
Collaborated with any type of research organisation	*266*	*26.2*
Collaborated with other public sector organisations	166	16.4

Base: Total sample (n=1015)

By means of factor analysis[9], we tried to explore whether the ten items listed in the questionnaire could be reduced to a smaller set. This would be possible if it shows that there are strong interdependencies between some of the items. Indeed, the analysis (see Table 10) showed that there are four factors which underlay response patterns to the question:

- **Research and public sector**: This includes research organisations and consultancies, universities and other higher education institutes, and other public sector organisations;
- **Suppliers of goods, production facilities and distribution partners**: This includes: production facilities, suppliers of goods and logistics or distribution partners;
- **Other parts of the same multinational enterprise**: This includes company headquarters and branch, subsidiary or sister companies;
- **Clients, customers, service providers**: This includes clients or customers, and "other service providers".

We will use the factor loadings as independent variables in the multivariate analysis, see section 4.

Table 10: Type of global collaboration partners (factor analysis)

Rotated Component Matrix(a)

		Component			
		1	2	3	4
		1.00	2.00	3.00	4.00
B1_10	Collaborated with other public sector organisations	**0.78**	0.03	0.03	0.02
B1_09	Collaborated with universities etc.	**0.78**	0.04	0.00	-0.05
B1_08	Collaborated with research organisations / consultancies	**0.67**	0.08	0.10	0.18
B1_05	Collaborated with suppliers of goods	-0.06	**0.79**	-0.01	-0.12
B1_04	Collaborated with production facilities	0.13	**0.73**	0.20	0.03
B1_06	Collaborated with logistics or distribution partners	0.11	**0.68**	0.04	0.27
B1_02	Collaborated with company headquarters	0.03	0.04	**0.83**	-0.08
B1_01	Collaborated with branch, subsidiary or sisten company	0.08	0.13	**0.79**	0.09
B1_03	Collaborated with clients or customers	-0.04	0.04	-0.05	**0.88**
B1_07	Collaborated with other service providers	**0.43**	0.08	0.09	**0.52**

Extraction Method: Principal Component Analysis. □ Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 5 iterations.

Global collaboration by EU SMEs in knowledge-intensive sectors involves partners from all parts of the world (see Table 11). European countries which are not members of the EU, including Switzerland, Norway, the countries formerly belonging to Yugoslavia, are among those that are mentioned by the largest number of respondents (57%). This applies, in particular, to respondents from countries bordering on non-EU Europe (Germany, Sweden) and to Denmark, which has close economic relations to Norway (see tables in the annex, section 0). Proximity also may explain the high incidence of collaborative relationships between Portugal and Africa, and between Finland and the former Soviet Union (mainly Russia).

Overseas regions which act as host to a large number of collaboration activities include North America including the USA (57%), but also Asia: 56% of all SMEs in the sample have collaborative relationships with organisations located in Asia. The figure rises to 66% for Sweden and the Netherlands. Only in Portugal, fewer than one in two globally active SMEs collaborate with partners from Asia.

The differences between Member States point towards the persistence of long-established relationships between countries, whether they are rooted in colonial history or in a common language (Portuguese SMEs are more likely than not to collaborate with organisations from Latin America, and British businesses have very high rates of collaboration with North America).

[9] Factor analysis is a statistical method which is used to explain variability among observed variables in terms of fewer unobserved variables called factors. The observed variables are modeled as linear combinations of the factors, plus "error" terms. The information gained about the interdependencies can be used later to reduce the set of variables in a dataset.

Table 11: Location(s) of global collaboration partners (multiple response)

	Count	*in %*
Africa	296	29.2
Asia	568	56.0
Middle East	298	29.4
North-America	579	57.0
Latin America	281	27.7
Australia, New Zealand or other Oceania	276	27.2
A non-EU country formerly belonging to the Soviet Union	348	34.3
Switzerland, Norway or other European country not in the EU	575	56.7

Base: Total sample (n=1015)

3.4 Tools Used for Global Collaboration

Whereas practically every SME in the sample uses e-mail for global collaboration, more advanced online collaboration tools have naturally not achieved the same level of diffusion (Table 12). 49% use groupware applications such as Lotus Notes, Microsoft Exchange or BSCW; 43% use Skype or other voice over IP services; 39% use websites which are specially designed so as to support collaboration (e.g. by means of protected areas or an extranet); 28% use industry-specific online collaboration tools; and 23% use video conferencing. Less popular are whiteboard applications such as Net-Meeting or Groupboard (19%), social networking services such as LinkedIn, Xing or Facebook (18%) and finally Wikis or knowledge blogs (13%).

Table 12: Uptake of online collaboration tools for global collaboration (multiple response)

	Count	*in %*
Using E-mail	1011	99.6
Using Lotus Notes or other groupware	496	48.9
Using Special websites for collaboration in a team or project	395	38.9
Using Video conferencing	237	23.3
Using Skype or other voice over IP applications	436	43.0
Using Net-Meeting, Groupboard or other Whiteboard	194	19.1
Using Wikis or knowledge blogs	131	12.9
Using LinkedIn, Xing or other social networking services	183	18.0
Using Industry-specific online collaboration tools	280	27.6
Using any virtual collaboration tool (excluding e-mail)	845	83.3

Base: Total sample (n=1015)

83% of all SMEs in the sample use at least one of the online collaboration tools (excluding e-mail) listed. This indicates that online collaboration, beyond the use of e-mail, has established itself within globally active SMEs in knowledge-intensive sectors in Europe. SMEs from the Netherlands are most likely to use online collaboration tools (92%), while uptake is lowest – against expectations – among businesses from Finland and Sweden.

The number of different types of online collaboration tools (excluding e-mail) being used by an SME may be a good indicator for the level of experience in online collaboration, since no single application is adequate for every collaboration purpose. Indeed, the research literature (Wigand et al., 1997; Hertel et al., 2005) suggests that the greater the variety of applications in use, the higher is the probability that an adequate tool is available for any communication or collaboration purpose. The average number of online collaboration tools being used is 2.3 across the entire sample. For manufacturing and service SMEs, the means are 1.7 and 2.8, respectively, which shows that globally active SMEs within the knowledge-intensive services sector are significantly more likely to use a larger number of different CWE tools when compared to SMEs within the high-tech and medium high-tech manufacturing sectors.

17% of the SMEs in the sample use only e-mail but none of the listed, more advanced online applications. At the other end of the scale, nearly one in four respondents report that their company makes use of four or even more types of advanced online applications for global collaboration. As is the case with all applications of ICTs in companies, the likelihood of uptake increases with firm size. 32% of medium-sized companies (50 to 250 employees) in the sample make use of four or more online collaboration tools, as opposed to 17% in the case of micro enterprises (5 to 9 employees).

Table 13: Importance of traditional and online communication tools/channels for global collaboration

	very important (1) or important (2)		*Mean on scale from 1 to 5*
	Count	*in %*	
Scheduled face-to-face meetings	695	85.3	1.56
Informal face-to-face conversations	490	70.3	2.00
Telephone calls	850	85.3	1.61
Telephone conferences	465	73.8	1.95
E-mail	981	97.0	1.14
Lotus Notes or other groupware	373	75.2	1.86
Special websites for collaboration in a team or project	270	68.4	2.12
Video conferencing	126	53.2	2.38
Skype or other voice over IP applications	254	58.3	2.33
Net-Meeting, Groupboard or other Whiteboard	116	59.8	2.27
Wikis or knowledge blogs	58	44.3	2.55
LinkedIn, Xing or other social networking services	72	39.3	2.79
Industry-specific online collaboration tools	202	72.1	1.98

Base: All companies that use the tool in question

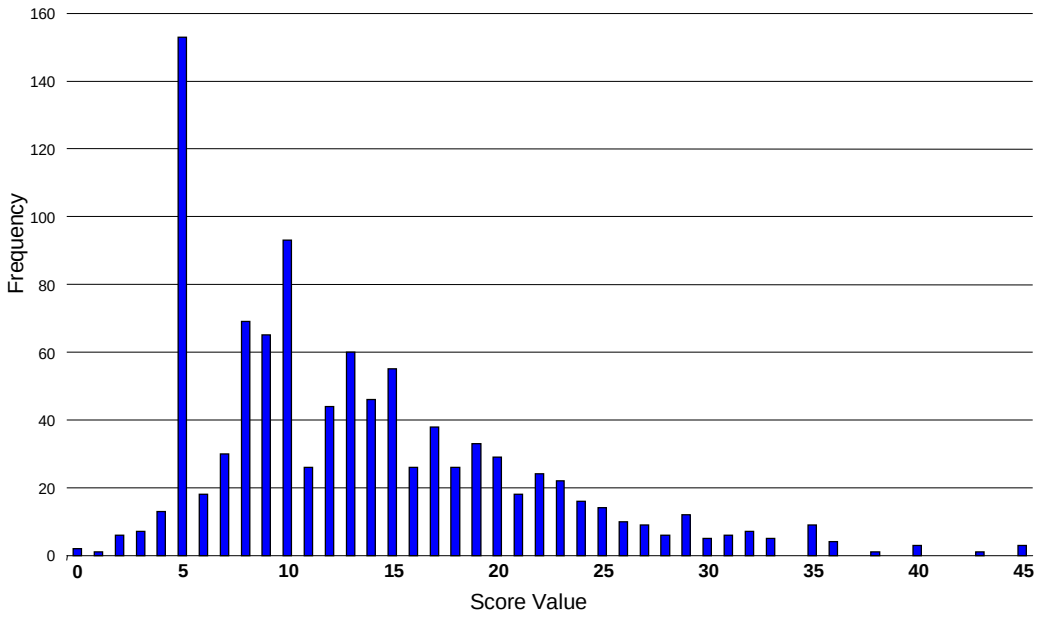
Among communication channels and tools used (Table 13), on average e-mail is clearly considered most important for collaboration with foreign companies and organisations (Ø1.1 on scale from 1 = very important to 5 = not important at all), followed by scheduled face-to-face meetings and phone calls (both Ø1.6). Interestingly, groupware applications are also among those tools rated, on average, as quite important by users (Ø1.9). Note, however, that only about half of all SMEs in the sample use groupware for global collaboration, as opposed to 100% using e-mail and 80% using scheduled face-to-face meetings. Telephone conferences, informal face-to-face meeting and also industry-specific online collaboration tools are also considered, by users, as of high importance for global collaboration (all Ø2.0). The three ICT applications considered least important are video-conferencing (Ø2.4), wikis and knowledge blogs (Ø2.6) and social networking services (Ø2.8). Voice-over-IP services such as Skype have being taken up very widely – especially when considering the short time they have been available – but are not being perceived as particularly important by users (Ø2.3).

The “online collaboration tool use score” (Figure 2) is calculated as the sum of all online collaboration tools used multiplied with the importance these are being given for collaboration with foreign organisations (very important = 5, not important at all = 1). The minimum value is 0 (no online collaboration tools used), the maximum is 45 (all nine listed types of collaboration tools used, each considered to be very important for collaboration with foreign organisations). Again, we find that score values are higher the bigger an SME is.

Figure 2 shows how the sample is distributed across the different score values. By far the largest share of SMEs in the sample have a score of less than 15. Companies with a score of 20 or more can be considered intensive users of online tools for global collaboration.

The index will be used within the multivariate analysis, see section 4.

Figure 2: Online Collaboration Tool Use Score



Base: Total sample (n=1015)

3.5 ICT Support for Global Collaboration

The research literature contains an extensive discussion about the extent to which ICT-mediated communication is inferior to, or different, to traditional modes of communication such as face-to-face meetings and the telephone. There is an understanding that virtual collaboration does pose a number of challenges, not all of which appear to be well addressed by currently available technology and by current working practice in companies.

Our survey data provides information about the perceived strengths and weaknesses of online collaboration tools (Table 14). Note that replies only refer to the online tools which are currently being used by the responding SMEs.

Table 14: ICT support for global collaboration

Online collaboration tools...	*agree (replies 1,2)*		*disagree (replies 4,5)*		*Mean on scale from 1 to 5*
	Count	*in %*	*Count*	*in %*	
... create trust within the team	486	47.9	150	14.8	2.54
... bridge cultural differences	438	43.2	271	26.7	2.80
... enable negotiations without meeting face-to-face	587	57.8	203	20.0	2.37
... support learning and knowledge sharing	701	69.1	66	6.5	2.05
... support coordination of tasks within the team	740	72.9	55	5.4	1.98
... support exchange of opinions & joint decision making	627	61.8	104	10.2	2.23
... support the generation of ideas	531	52.3	147	14.5	2.46

Base: Total sample (n=1015)

On average, online collaboration tools are found to be most adequate for supporting the coordination of tasks within a team (Ø2.0 on scale from 1 = fully agree to 5 = do not agree at all), supporting learning and knowledge-sharing (Ø2.1), and supporting exchange of opinions and joint decision-making (Ø2.2). Respondents, on average, clearly tended to agree that these are tasks which online collaboration tools support well. Ranked by decreasing perceived adequateness, the other characteristics of such tools are: enabling negotiations without meeting face-to-face (Ø2.4);

supporting generation of ideas and create trust within the team (both Ø2.5) and, finally, helping bridge cultural differences (Ø2.8).

It appears useful to look not only at averages, but at the share of negative replies ("4" and "5") for each of the items listed. More than one in four respondents (27%) found virtual collaboration not to help bridge cultural differences; 20% report that online collaboration does not enable negotiations without meeting face-to-face; 15% made the experience that these tools are not good for creating trust within a team; and 15%, again, found that online interaction is not good for supporting the generation of ideas.

While it is worth noting that overall respondents report positively about their experience with online tools, the data clearly point towards shortcomings of collaboration which makes extensive, or even exclusive, use of online communication: ICT-mediated communication finds it difficult to support understanding and trust-building, in particular, across groups of people with a different cultural background. Culture, here, does not have to be limited to the notion of national culture, but also comprises aspects of sectoral and corporate culture, as Hofstede & Hofstede (2005) have shown.

There is a large degree of disagreement among respondents about the extent to which online collaboration tools enable negotiations without the need for face-to-face meetings. Respondents are polarised between those who tend to agree to this statement, and those who reject it completely.

3.6 Organisational Support for Global Collaboration

Given the considerable challenges involved in global collaboration, SMEs may need established organisational procedures for dealing with the main tasks involved. In order to explore the extend to which such practice have been established already, our survey asked about procedures for identification of collaboration partners, special training for employees involved in global collaboration, and the extent to which the ICT infrastructure was adapted to the needs and against the risks of collaboration with foreign organisations (Table 15).

Again, responses to this survey question should not be interpreted too literally, as responses are likely to be influenced by a "social desirability effect": the interviewees are likely to be at least partly responsible for managing globalisation, and as such will tend towards claiming that global collaboration activities have been properly prepared. Any response that acknowledges less-from optimal organisational support is therefore worth noting.

On average, the level of preparation is best with regard to tried-and-tested procedures for identifying suitable partners for global collaboration: 45% of all SMEs in the sample report that success procedures are in place (values 1 and 2 on scale from 1 = applies fully to 5 = does not apply at all). About one in four respondents 28% admits that such procedures do not or hardly exist (values 4 and 5). Although this is a minority, it still appears to point towards shortcomings, as other research found that partner-finding is a particular challenge for many SMEs intending to "go global" (cf. Hovlin, 2006; OECD, 2008a) .

Table 15: Organisational support for global collaboration

	applies (1 or 2)		*Mean on scale from 1 to 5*
	Count	*in %*	
Procedures for identifying suitable partners	457	45.0	2.79
Special training of employees involved in collaboration	354	34.9	3.24
ICT infrastructure was adapted for global collaboration	384	37.8	2.99
ICT infrastructure was adapted against risk to security	426	42.0	2.89

Base: Total sample (n=1015)

Only little more than one in three companies (35%) states that employees involved in global collaboration are supplied with special training. 45% report that such training does not or hardly take place.

As far as ICT infrastructure is concerned, 38% of SMEs in the sample say that ICT systems have been specifically adapted to support efficient global collaboration (34% report that no or hardly any such steps have been taken), while 42% say that effort has been invested for protecting ICT systems against security risks resulting from engagement in global collaboration (31% say that this was not or hardly the case). The large spread of replies across the scale for response suggests that globally active SMEs differ considerably with regard to the level of organisational support they provide to global collaborative activities.

3.7 Problems Experienced

It is of obvious great interest to gain insight into the problems and challenges which SMEs face when engaging in collaboration with non-EU organisations (Table 16). Note that responses to the survey question about problems encountered need to be interpreted keeping in mind that responses are likely to be influenced by a "social desirability effect" (Brancato, 2006; Fabling et al., 2008) – as the interviewees are likely to be at least partly responsible for managing globalisation, they can be expected to tend towards denying, or at least not emphasising, any problems they have encountered. Any response that is at least not denying problems is therefore worth noting. Moreover, rather than interpreting results literally, we need to explore relative differences in the response to individual items.

Table 16: Problems experienced when engaging in global collaboration

	often (1 or 2)		*often or sometimes (1,2 or 3)*		*Mean on scale from 1 to 5*
	Count	*in %*	*Count*	*in %*	
Problems regarding data privacy	89	8.8	216	21.3	4.20
Problems regarding data security	81	8.0	229	22.6	4.19
Problems regarding protection of intellectual property	134	13.2	280	27.6	4.04
Lack of interoperability of processes and ICT systems	112	11.0	359	35.4	3.87
Difficulty of building trust between collaboration partners	142	14.0	421	41.5	3.72
Difficulty of meeting face-to-face when necessary	207	20.4	444	43.7	3.64
Problems caused by language or other cultural barriers	207	20.4	476	46.9	3.56
Problems in organising work across time zones	154	15.2	369	36.4	3.84
Difficulty of making employees adapt their working times to the demands of global collaboration	111	10.9	286	28.2	4.04
Increasing stress among employees	130	12.8	365	36.0	3.84
Problems due to regulatory barriers in cooperation partners countries	203	20.0	431	42.5	3.66

Base: Total sample (n=1015)

The problems reported by the largest share of respondents are:

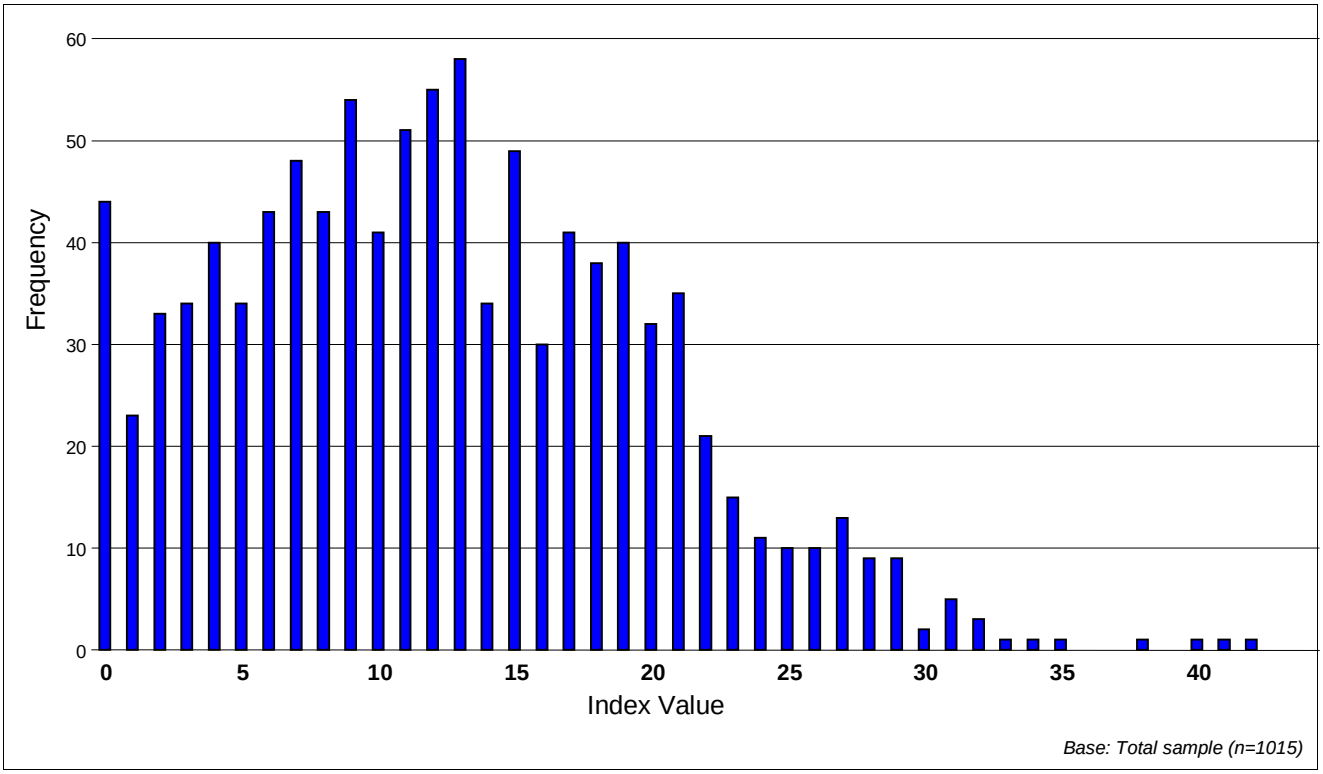
- Problems caused by language or other cultural barriers: 20% "very often" (1) or "often" (2), plus 27% "sometimes" (3), Ø3.6;
- Difficulty of meeting face-to-face when necessary: 20% "very often" or "often", plus 23% "sometimes", Ø3.6;
- Problems due to regulatory barriers in host countries: 20% "very often" or "often", plus 23% "sometimes", Ø3.7;
- Difficulty of building trust between collaboration partners: 14% "very often" or "often", plus 28% "sometimes" Ø3.7;
- Problems in organising work across time zones: 15% "very often" or "often", plus 21% "sometimes" Ø3.8;
- Increasing stress among employees: 13% "very often" or "often", plus 23% "sometimes" Ø3.8.

Problems less often mentioned include data security and privacy problems; difficulties in making staff adopt their working times to the needs of global collaboration; lack of interoperability; and problems concerning protection of intellectual property.

When comparing values across size classes, there is a modest but significant tendency of larger SMEs to report more problems than smaller ones. Multivariate analysis will need to show whether this difference is caused by third factors, or whether size itself is associated with the likelihood of experiencing problems when collaborating internationally (see section 6.2).

The "global collaboration problem index" (Figure 3) is calculated as the sum of all problems experienced according to frequency (reverse scale with very often = 4, never = 0). The minimum value is 0 (none of the problems listed has been experienced in last 24 months), the maximum is 44 (all 11 listed possible problems were experienced very often). Figure 3 shows how the sample is distributed across the different index values.

Figure 3: Global Collaboration Problem Score



This index is used as dependent variable is some of the multi-variate analysis described in section 4.

3.8 Goal Achievement

Have the goals which drove SMEs to enter into global collaboration (see section 3.2) been achieved? It is a well-known fact that business internationalisation is a lengthy and complex process, with success and a positive return to investment unlikely to be realised in the short term. The survey questionnaire, therefore, asked to what extent the objectives for collaborating globally have already met with success, with the reference period given as the 24 months prior to the survey (Table 17). The bases for the percentages are those respondents who ascribed at least medium importance (values 1 to 3 on 5-point scale) to the item in question.

As before (see above), results need to be interpreted keeping in mind that the responses are likely to be influenced by a "social desirability effect" – as the interviewees are likely to be at least partly responsible for achieving the company's goals with regard to globalisation, they can be expected to tend towards giving positive answers. Any response that is not positive is therefore worth noting.

Moreover, rather than interpreting results literally, we need to explore relative differences in the response to individual items.

A look at the average values suggests that gaining access to foreign markets, the objective most often mentioned as reason for collaborating globally, is also the objective that has been achieved most often (68% “fully” or “often” on scale from 1 = fully achieved to 5 = not achieved at all; Ø2.1). This is a pattern that can be observed throughout.

Table 17: Achievement of goals of global collaboration

	achieved (replies 1,2)		*not achieved (replies 4,5)*		*Mean on scale from 1 to 5*
	Count	*in %*	*Count*	*in %*	
Get access to a foreign market	596	68.3	66	7.6	2.07
Increase the speed of development	373	49.1	97	12.8	2.50
Realise direct cost savings	321	48.3	113	17.0	2.56
Get access to new technology	327	52.3	78	12.5	2.46
Get access to low wage labour	115	37.1	75	24.2	2.84
Get access to highly-skilled labour and expertise	298	49.3	96	15.9	2.56
Be able to observe international developments in industry	477	58.9	73	9.0	2.32
Avoid regulatory barriers in own country	119	32.9	86	23.8	2.92
Participate in or manage a global supply chain	282	48.0	114	19.4	2.61
Follow important customers or clients into a foreign market	487	62.6	81	10.4	2.24

Base: All respondents who consider the goal in question of at least moderate importance (“3” on 5-point scale)

The following items are ranked according to the share of respondents who say that the objective has rather **not been achieved** yet:

- Getting access to low wage labour: 24% not achieved (plus 33% “neither nor”);
- Avoiding regulatory barriers in home country: 24% not achieved (plus 38% “neither nor”);
- Participate in or manage a global supply chain: 19% not achieved (plus 30% “neither nor”);
- Realising direct cost savings: 17% not achieved (plus 30% “neither nor”);
- Getting access to highly-skilled labour and expertise: 16% not achieved (plus 32% “neither nor”);
- Increasing the speed of development: 13% not achieved (plus 35% “neither nor”);
- Getting access to new technology: 13% not achieved (plus 30% “neither nor”).

We can assume that goal achievement, as well as non-achievement, is all the more relevant for company performance if the respective goal is considered to be of high importance. For this reason, a set of synthetic indicators was calculated by multiplying, for each of the ten strategic goals included in the questionnaire, importance (reverse scale with 0 = not important at all, and 4 = very important) with the level of non-achievement (0 = fully achieved to 4 = not achieved at all). Results are presented in Table 18, which includes the average score (mean) and the numer of cases – companies which gave a low importance (“4” or “5”) to the goal in questions are excluded. The non-achievement scores can take a value from 0 (fully achieved) to 16 (very important, not achieved at all). The highest rating was given to “Avoid regulatory barriers in own country” and to “Get access to low wage labour”.

Table 18: Non-achievement score

	Base (Count)	*Non-achievement score (mean)*
Get access to a foreign market	855	3.47
Increase the speed of development	734	4.25
Realise direct cost savings	635	4.55
Get access to new technology	594	4.15
Get access to low wage labour	291	4.63
Get access to highly-skilled labour and expertise	585	4.39
Be able to observe international developments in industry	795	3.80
Avoid regulatory barriers in own country	342	5.12
Participate in or manage a global supply chain	574	4.49
Follow important customers or clients into a foreign market	763	3.83

Base: All respondents who consider the goal in question of at least moderate importance ("3" on 5-point scale)

4. MULTIVARIATE ANALYSIS

4.1 Methodology

In order to gain insight into the factors which can explain differences in collaboration-related performance and perceptions, we applied a multivariate statistical procedure, namely OLS Regression.

4.2 What explains whether an SME uses online collaboration tools?

We wanted to know the predictors for the probability that an SME makes use of online collaboration tools, and that these tools are considered of significant importance for engaging in collaboration with partner organisations located outside of the EU. Note that the sample only contains SMEs that collaborate at a global level, i.e. the analysis does not take into account differences in the likelihood of different types of SMEs to collaborate at all.

For **dependent variable**, we use the "online collaboration tool use score" described earlier. This is calculated as the sum of all types of online collaboration tools used (from a list 9 such types) multiplied with the importance it is being given for collaboration with foreign organisations (very important = 5, not important at all = 1). The minimum value is 0 (no online collaboration tools used), the maximum is 45 (all nine listed types of collaboration tools used, each considered to be very important for collaboration with foreign organisations).

As independent variables, the following were included in the model:

- country;
- business sector (high-tech manufacturing, medium-high-tech manufacturing, knowledge-intensive business services);
- size class;
- year in which the company was founded (classified);
- globalisation-related strategy as manifested in 5 years prior to the survey (e.g. restructuring involving foreign organisations);
- competition factors of major perceived importance;
- product innovation in 12 months prior to the survey;
- process innovation in 12 months prior to the survey;
- type of collaboration partners in 24 months prior to the survey.

The results (see Table 53 on page 84) indicate that the following groups are significantly more likely to embrace online collaboration tools (ranked by decreasing strength of association):

- knowledge-intensive service companies, when compared to high-tech and medium high tech manufacturing companies;
- globally active SMEs from the Netherlands and Portugal, when compared to the reference country (Germany);
- SMEs which in the last five years have set up a unit or a subsidiary abroad (but not those which have taken over by, or being taken over by, or merged with a foreign company);
- companies which have launched a substantially improved or new product or service in the last year (but not those which have introduced a process innovation);
- SMEs for which technological lead is an important competition factor; other competition factors show no association with the dependent variable;
- companies that collaborate with headquarters located outside of the EU, or with service providers other than logistics and distribution partners.

4.3 What explains to what extent an SME experiences problems when engaging in global collaboration?

We wanted to explore the predictors for the probability that an SME reports problems experienced while attempting to engage in collaboration with partners located outside the EU.

4.3.1 Overall level of problems experienced

In a first stage, we calculated an aggregate index for problems experienced by simply adding up the reverse values for each of the items listed in question D3, which included a set of 11 potential problems and asked respondents to use a five-point scale in order to indicate the extent that they have experienced this type of problem in the 24 months prior to the survey. We use this index as **dependent variable**. The minimum value is 0 (none of the problems listed has been experienced in last 24 months), the maximum is 44 (all 11 listed possible problems were experienced very often).

As independent variables, the following were included in the model:

- country;
- business sector (high-tech manufacturing, medium-high-tech manufacturing, knowledge-intensive business services);
- size class;
- year in which the company was founded (classes);
- globalisation-related strategy as manifested in 5 years prior to the survey (e.g. restructuring involving foreign organisations);
- type of collaboration partners in 24 months prior to the survey (four factors[10]);
- location of collaboration partners;
- intensity of online collaboration tool use (see above);
- goals behind global collaboration activities;
- organisational support for global collaboration.

The results (see Table 54 on page 85) indicate that the following groups are significantly **more likely to experience problems** when engaging in online collaboration (ranked by decreasing strength of association):

- SMEs which in the last five years have been taken over by a foreign company;
- companies collaborating with partner organisations in Africa or in a country formerly belonging to the Soviet Union[11];
- SMEs for which a major reason for “going global” was the attempt to avoid regulatory barriers in their home country, or gaining access to sources of low wage labour.

The following groups are significantly **less likely to experience problems** when engaging in online collaboration (ranked by decreasing strength of association):

- globally active SMEs from the Portugal, the Netherlands and Belgium, when compared to the reference country (Germany).

4.3.2 Individual problems experienced

In a second step, each of the 11 types of potential problems listed were set, in turns, as **dependent variable**. As independent variables, the same variables as in the previous section

[10] See Table 10 on page 21.

[11] SMEs collaborating with Asia also tend to be more likely to experience problems, although this finding is not statistically significant at the 99%-level.

were included in the model. In the following we list only associations which differed from the overall picture as presented above:

- Difficulty of building trust between collaboration partners was found to be negatively associated with company age (Table 55); this that means that the younger a globally active SME, the more likely it is to find it difficult to build trust relationships with global collaboration partners.
- Importantly, difficulty of building trust between collaboration partners is also associated with the intensity of using online collaboration tools (Table 55).
- Experience of problems in organising work across time zones is associated with engagement in collaboration activities with partners located in North America (Table 56).
- Experience of problems concerning regulatory barriers in cooperation partners' countries (including what is often subsumed under the term "red tape") is associated with collaboration with an organisation located in a country formerly belonging to the Soviet Union or in Latin America, while SMEs collaborating with North America are significantly less likely to encounter regulatory barriers. There is also a positive correlation with the goal of gaining access to a foreign market; and with the goal of avoiding regulatory barriers in the home country (Table 57).
- Moreover, experience of problems concerning regulatory barriers in cooperation partners' countries is positively associated with offering special training to employees involved in international collaboration (Table 57).

4.4 What explains to what extent an SME achieves its objectives for "going global"?

Can we find in the survey data any evidence about the factors which distinguish companies which successfully engage in global collaboration from those that fail to achieve their collaboration-related goals?

For **dependent variable**, we use the degree to which individual goals behind engagement in global collaboration have been achieved, as reported by respondents. Goals listed were: (a) get access to a foreign market; (b) increase the speed of development; (c) realise direct cost savings; (d) get access to new technology; (e) get access to low wage labour; (f) get access to highly-skilled labour and expertise; (g) be able to observe international developments in your industry; (h) avoid regulatory barriers in home country; (i) participate in or manage a global supply chain; (j) follow important customers or clients into a foreign market. For each of these, a separate OLS regression was run. Note that only respondents who reported that a listed objective was at least somewhat important as a reason for engaging in global collaboration (1,2,3 on 5-point scale with 1 = very important and 5 = not important at all) were asked about goal achievement, and were included in the analyses below.

As independent variables, the following were included in the model:

- country;
- business sector (high-tech manufacturing, medium-high-tech manufacturing, knowledge-intensive business services);
- size class;
- year in which the company was founded (classified);
- globalisation-related strategy as manifested in 5 years prior to the survey (e.g. restructuring involving foreign organisations);
- type of collaboration partners in 24 months prior to the survey (four factors);
- location of collaboration partners;
- intensity of online collaboration tool use (see above);
- organisational support for global collaboration.

The following statistically significant associations were found:

- SMEs which make extensive use of online collaboration tools are significantly more likely to achieve increases in the speed of development from engaging in global collaboration (Table 58).
- SMEs which make extensive use of online tools are also significantly more likely to achieve direct cost savings as a result of engaging in global collaboration (Table 59).
- The following groups are significantly **less** likely to experience direct cost savings from engaging in global collaboration: SMEs of which global collaborators are mainly clients, customers and service providers; or mainly other organisations/sites belonging to the same multi-national enterprise (headquarters, branch, subsidiary or sister companies); and globally active SMEs from Portugal (Table 59).
- SMEs which have specifically adapted their ICT infrastructure to support efficient global collaboration are significantly more likely to experience better access to highly-skilled labour and expertise from engaging in global collaboration (Table 60).

5. SUMMARY AND CONCLUSIONS

By means of a questionnaire survey of small- and medium-sized enterprises (SMEs) in Europe, NEW GLOBAL collected data on experience with globalised collaborative working environments (CWE), as well as elements hereof including virtual collaboration tools, global business relationships, organisational support for collaborative work stretching across borders, and others. Data were also selected about objectives behind global collaboration, levels of goal achievement, conditions for success, as well as problems encountered. Finally, the business survey had the purpose of piloting indicators which are to be suggested to the European Statistical System for filling gaps in available statistics.

There are a number of reasons for the decision not to draw a sample which is representative of the entirety of European SMEs, but to put the spotlight on a specific segment of the business landscape. In short, we intend to demonstrate the possibilities and challenges facing European companies in an increasingly globalised business environment by focusing on those enterprises which most heavily rely on human capital and innovation for surviving in a situation of strong, worldwide competition. It is here were, we argue, collaboration across boundaries – of firms, sectors, nations, continents, etc – can produce the highest added value. And because of the key role of high-tech manufacturing and knowledge-intensive services within the entire EU economy (Malecki & Moriset, 2008), providing conditions which effectively support "collaborative globalisation" by European companies should be a key priority for policy-makers.

Therefore, rather than attempting a representative sample of all small- and medium-sized businesses in Europe, we focused on EU companies in sectors and in countries which are particularly affected by globalisation tendencies of high-qualified knowledge work. A stratified random sample was drawn with the universe being SMEs in the sectors "high-tech manufacturing" "medium-high-tech manufacturing" and "knowledge-intensive business services" (KIBS) in eight EU countries: Belgium, Denmark, Finland, Germany, Portugal, the Netherlands, Sweden and U.K.

The survey comprised 1015 successful interviews with key decision-makers. Data collection took place in spring 2008.

In this chapter we will first summarise the results from the survey data analysis, before discussing some key policy implications arising from the empirical evidence collected, including some propositions concerning how to address the lack of statistical indicators on CWE in Europe.

5.1 Survey Findings

5.1.1 Goals and Drivers for Global Collaboration

There is a widespread assumption that SME involvement in globalisation mostly takes the form of export of products or services. However, as emphasised in a recent report from the OECD (2008a) "SMEs appear to be far more internationalised than commonly thought" (p. 16), with many of them also involved in import activity, international collaboration, global value chains and outward foreign direct investment.

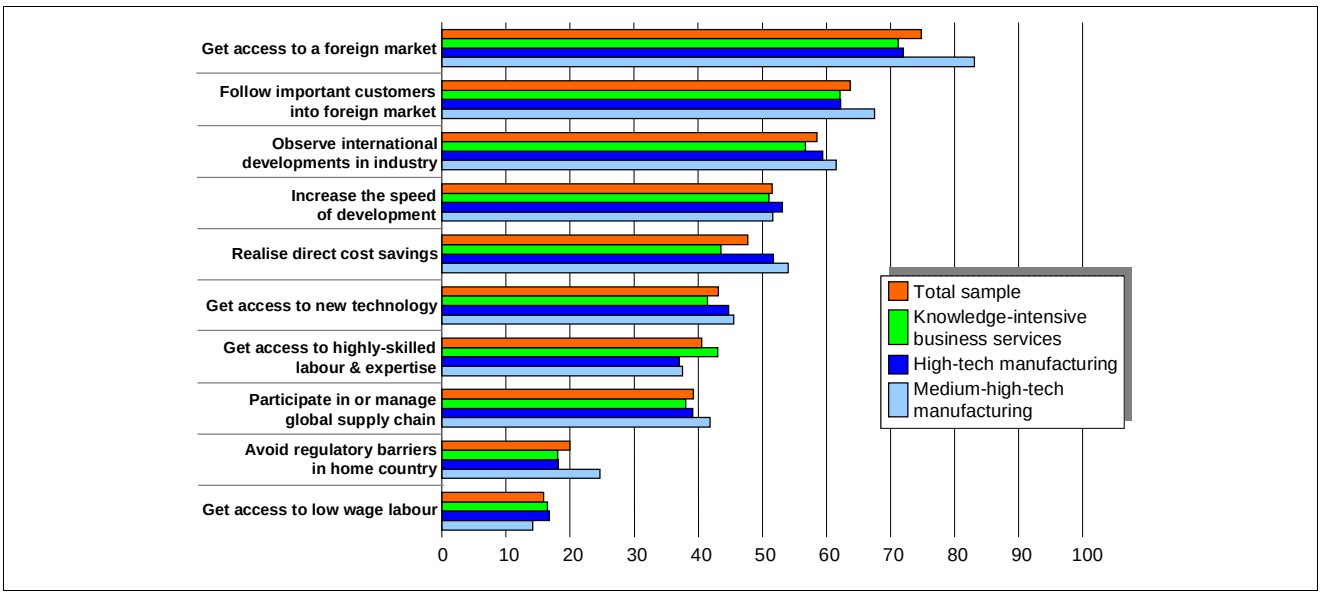
Data from the NEW GLOBAL survey, which is based on a sample which exclusively contains SMEs with global business activities (of whatever type), suggests that traditional reasons for SME internationalisation have certainly not disappeared (see Figure 4): For three out of four SMEs in knowledge-intensive sectors, getting access to new foreign markets has been an important reason for entering into collaboration with organisations located outside the EU. This is, on average, the most widely reported reason for "going global". In comparison, cost savings play a smaller role, with one in two SMEs in the sample considering cost-related factors important reasons for global collaboration.

There are, however, other goals which SMEs consider of major importance, and which are not normally given much attention when motives for SME internationalisation are discussed. What is particularly striking is the importance ascribed to factors that have to do with gaining competitive

advantage by *improving access to knowledge* and by *decreasing time to market*. 80% of all respondents consider at least one of these aspects a very important or important reason for collaborating at global level.

A particular challenge affecting many SMEs is their dependence on larger companies. In their role as key clients, these large companies often force change on their suppliers, which more often than not are smaller companies. Today, this often takes the form of SMEs being involved in supply chains which are managed by large multi-national companies. As large players increasingly manage their production and supply chains on a global scale, SMEs are forced to globalise as well if they want to stay in business. Indeed, our data confirm that client-driven globalisation is a core factor explaining why SMEs enter into collaboration with organisations located outside of the EU. Nearly two in three SMEs in the sample report that following customers or clients into a foreign market was a reason for them to "go global". If participation in a global supply chain is added, the share increases to three out of four (74%).

Figure 4: Goals of global collaboration (% very important and important)



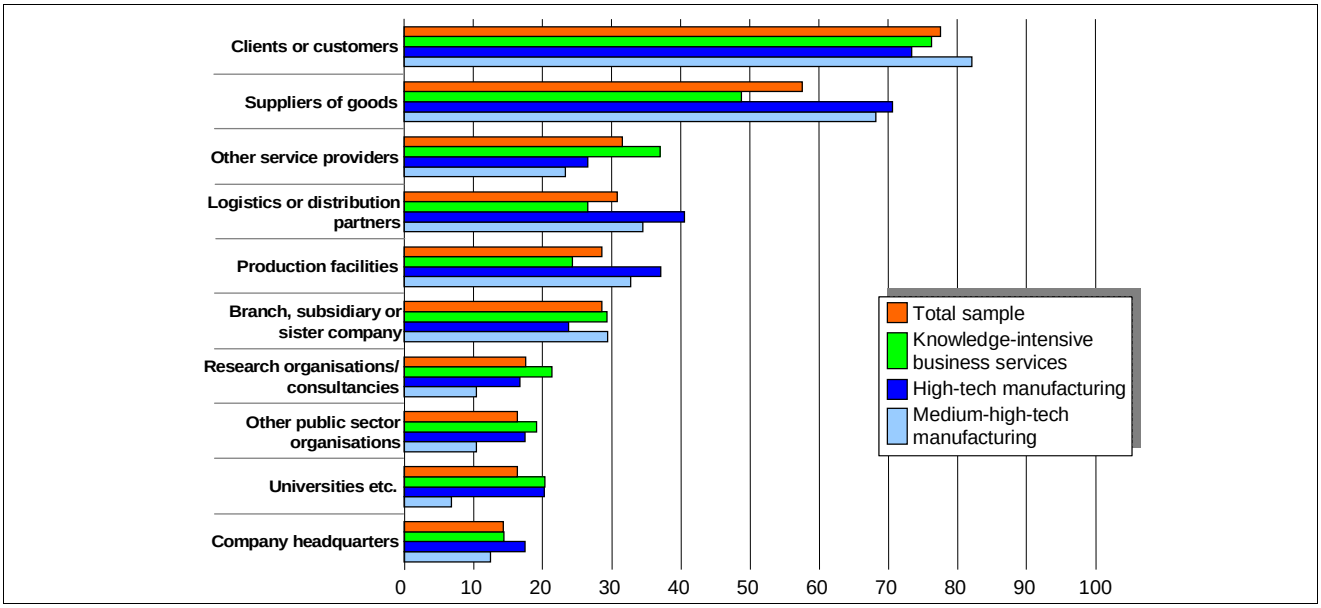
Base: Total sample (n=1015)

5.1.2 Global Collaboration Practice

Type of Global Collaboration Partners

The survey data concerning the type of collaboration partners in countries outside of the EU confirms that global collaboration most often takes place in the context of activities related to export and import of goods and services: In the large majority of all globally active SMEs in knowledge-intensive sectors, clients and customers from outside of the EU make up collaboration partners (Figure 5).

Figure 5: Global collaboration: Type of collaboration partners



Base: Total sample (n=1015)

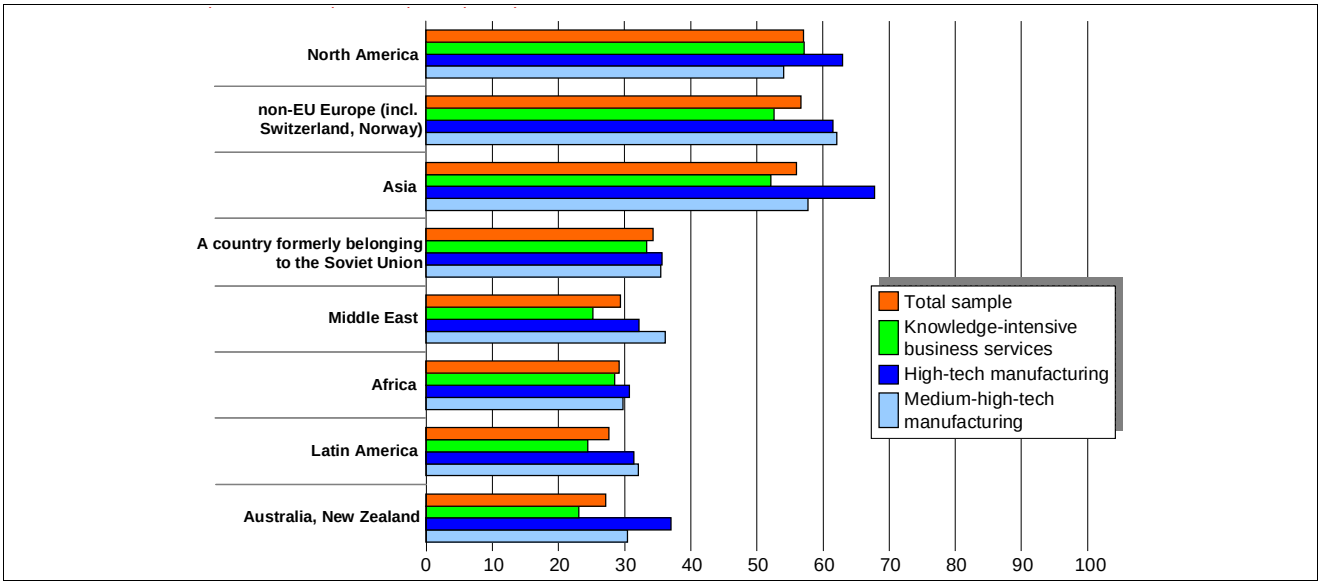
However, other types of global collaboration partners are of significant relevance, as well. About one in four (!) globally active SMEs collaborates with research organisations located outside of the EU. And about the same share (24%) are engaged in collaboration with public sector organisations located outside of the EU. These figures indicate that – contrary to popular belief (OECD, 2008a) – a sizeable share of European SMEs in knowledge-intensive sectors are engaged in global collaboration which goes beyond activities which are directly associated with the export of products and services, or with procurement. Research involving SMEs has started to become distributed at a global level as well (Hirshfeld & Schmid, 2005; Karlsson, 2007).

One out of three globally active SMEs is involved in collaboration that takes place within a globally distributed company – for example cross-border collaboration between headquarters and subsidiaries/branches/units, or between the latter. The considerable share in the sample of companies that have been involved in cross-border restructuring in the five years before the survey (see Table 7 on page 19) – nearly one third – indicates that the importance of global collaboration taking place internally in multi-national enterprises is bound to increase further in the future. Depending on the form of restructuring that takes place, this can have positive or negative impacts on the EU economy, as dependence on decisions taken at headquarter level is continuously growing (see Yamin & Sinkovics, 2007).

Geographical Location of Global Collaboration Partners

There is no part of the globe to which collaborative activities by EU SMEs in knowledge-intensive sectors does not reach. In addition to more well-established host countries to collaborative activities such as the USA and non-EU Europe, Asia appears as of major importance for collaboration by globally active SMEs from Europe (Figure 6): 56% of all respondents report that they are collaborating with organisations from Asia.

Figure 6: Global collaboration: Locations of collaboration partners



Base: Total sample (n=1015)

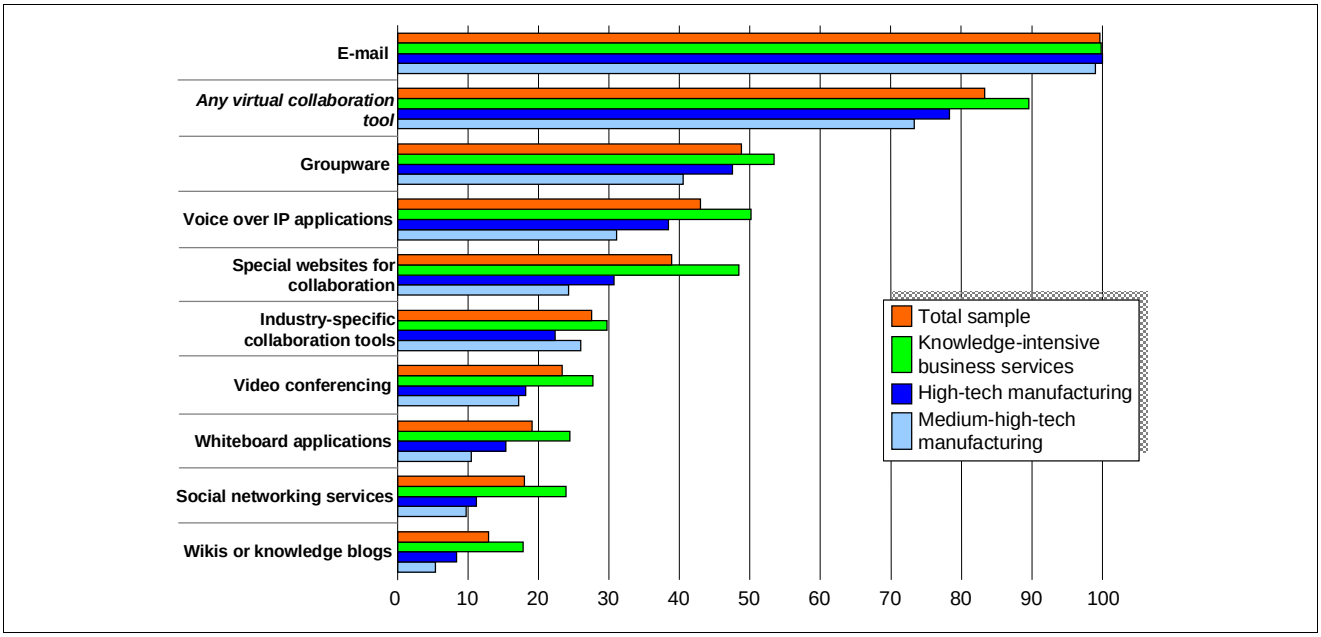
Persistence of long-established cultural and economic relationships between countries seems to play a strong role in explaining patterns of collaboration by European SMEs. Cultural proximity, in particular when it come to language, is an important enabler of global collaboration. Examples include the relationship betweem U.K and North America, and between Portugal and Latin America. Geographical proximity is a good explanator for patterns of collaboration, too, for example with regard to the high share of Finnish SMEs which collaborate with Russia.

5.1.3 Tools Used for Collaboration

Communication Channels and ICT Tools Used for Global Collaboration

A large majority of SMEs in knowledge-intensive sectors already makes extensive use of online collaboration tools (Figure 7). Of course, e-mail has become the most widely used communication tool for this purpose, but it is now complemented by a large number of other applications. 83% of all globally active SMEs in knowledge-intensive sectors use at least one type of advanced online collaboration tool – most likely a groupware system (49%), Skype and another voice over IP application (43%), a special website for group support (39%), or an industry-specific online collaboration tool (28%). Those online applications which have been most talked about in recent years (subsumed under the term Web 2.0), namely online social media, for example Wikis and knowledge blogs, are currently still being used by a small minority of SMEs only (by 17% and 13% of all firms in the sample, respectively).

Figure 7: Use of communication tools for global collaboration



Base: Total sample (n=1015)

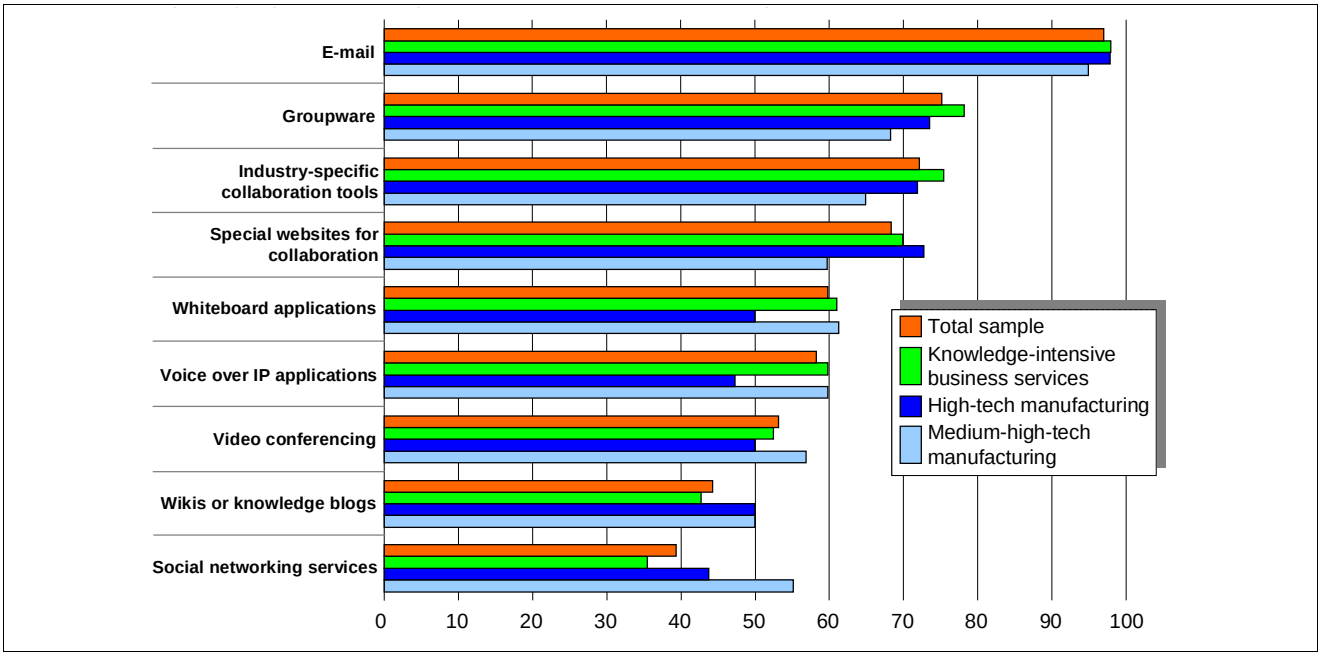
Users of online collaboration tools differ according to the number of different types of tool they use. While 17% of SMEs in the sample use only e-mail, 60% use at least two different types of online collaboration tools, and one in four (25%) use four or more of such applications.

Importance of Online Tools for Global Collaboration

Uptake and use of online collaboration tools alone may give a wrong impression of the relevance that ICTs have for supporting real-life collaborative activities. We therefore have to ask about the importance which SMEs attach to individual tools for the purpose of collaborating with contacts abroad, and compare this with the importance ascribed to traditional communication channels such as face-to-face meetings. As expected, e-mail is universally considered essential for any collaboration with remote organisations. The large majority also ascribe essential importance to scheduled face-to-face meetings. Tools which are rated, on average, as quite important by users include groupware, telephone conferences and industry-specific online collaboration tools.

Web 2.0 applications such as Wikis and knowledge blogs and (other) social networking services are not only less often used, but also considered by those who use them as less important for online collaboration in comparison to the more established online collaboration tools. Overall, the survey confirms that online collaboration tools have become important means to enable SMEs to collaborate at a global scale. There is no single type of application which dominates usage; rather, it appears that different online tools are used according to the specific requirements of the collaboration purpose, and – possibly – also according to personal and cultural inclinations.

Figure 8: Importance of online tools for global collaboration (% "very important" and "important")



Base: All SMEs that use the tool in question

What Types of SMEs Use Online Collaboration Tools?

SMEs that make extensive use of online collaboration tools, and which ascribe high importance to them, are likely to have a number of key characteristics:

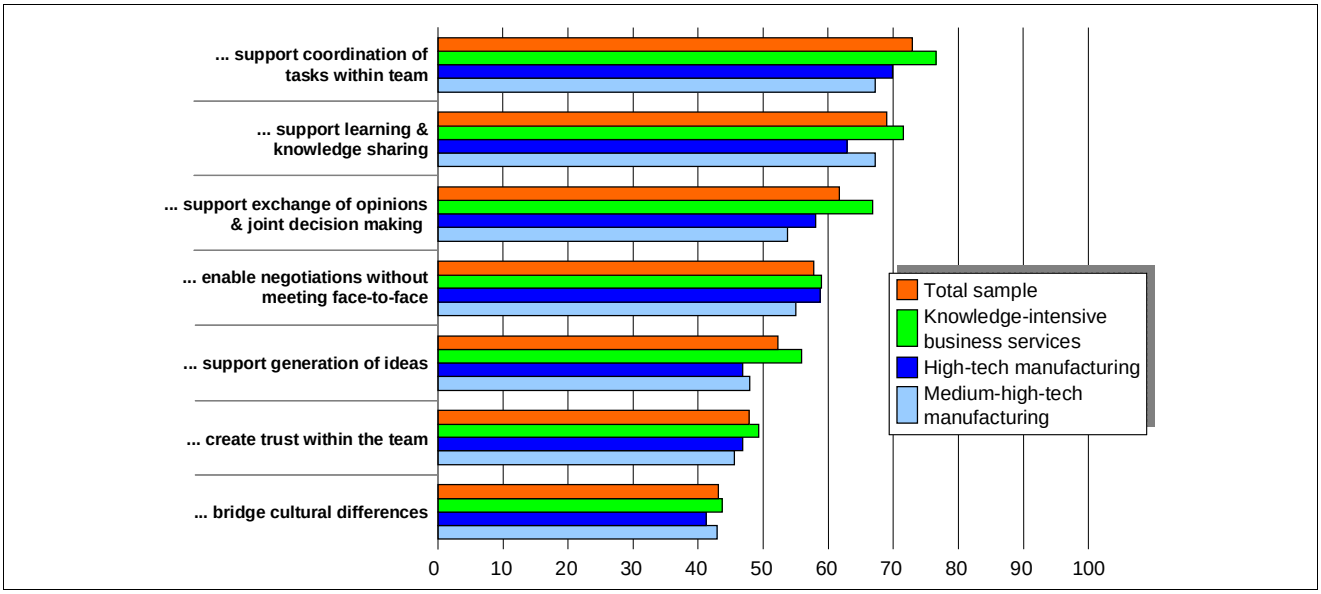
- Most are from the **knowledge-intensive services sector** rather than from high-tech and medium high tech manufacturing sector. The growing digitisation of services and the key role of digitally transferable information in the production processes of the knowledge-intensive services sector imply that they are at the very forefront of using CWE tools. Small and medium-sized manufacturing companies seem to find it harder to embrace online collaboration full-heartedly. There may be a need for concerted support activities to enable more manufacturing SMEs to take part in ICT-enabled global collaboration.
- SMEs which have **recently set up a unit or subsidiary abroad** are particularly likely to make extensive use of online collaboration tools, as opposed to companies which have taken over by, or being taken over by, or merged with a foreign company. The considerable organisational effort which is required to enter into a new geographical market by means of establishing a self-owned company or subsidiary appears to foster take-up of innovative communication tools.
- Among the most extensive users of online collaboration tools are SMEs which collaborate with **headquarters located outside of the EU**, or with **service providers** other than logistics and distribution partners. In the former case, use of latest-generation online tools is likely to be driven by the requirements of the centre (= the headquarters) rather than the decentralised SME (compare Yamin & Sinkovics, 2007).
- There is a statistically significant association between **innovative activity**, as indicated by the launch of a substantially improved or new product or service in the last year, and uptake of online collaboration tools (Note that there is no such association with process innovation). While we do not have any evidence that online collaboration is directly or indirectly causing innovative activity, the survey data strongly supports the claim that product innovation, global collaboration, and use of innovative collaboration tools go hand-in-hand. Political initiatives for boosting the competitiveness of European SMEs should aim to promote the use of online collaboration tools within a strategy for strengthening innovation and global collaborative activity.
- Moreover, SMEs for which **technological lead** is an important **competition factor** are more likely than not to apply online collaboration tools. The capability to make best use of innovative ICT tools is, for many SMEs, at the core of their self-image and the image they want to promote

of themselves to potential customers and business partners. SMEs for which technological lead is of less importance are less likely to have an intrinsic interest in new technology, and as such may need more assistance to identify and implement online tools which would help them in their global collaborative activities.

5.1.4 ICT Support for Global Collaboration

The majority of globally active SMEs that use online applications for international collaboration report of positive experiences with using these tools (Figure 9). In particular, online collaboration tools are found to be good in coordination of tasks within a team (73% agreement), supporting learning and knowledge-sharing (69%), and supporting exchange of opinions and joint decision-making (62%). Compared to earlier generations of applications for computer-supported collaborative work, it appears that the online tools currently in use have become better in supporting the more demanding aspects of communication and coordination in geographically spread teams of collaborators.

Figure 9: ICT support for global collaboration: Online collaboration tools... (% "fully agree" and "rather agree")



Base: Total sample (n=1015)

On the negative side, large shares of respondents found virtual collaboration tools of little help, or even counterproductive, for bridging cultural differences; for enabling negotiations without meeting face-to-face; for supporting the generation of ideas; and for creating trust within a team. Indeed, multivariate analysis of the survey data established evidence that SMEs who make extensive use of online collaboration tools are more likely than others to encounters problems in establishing trust relationships in international collaboration.

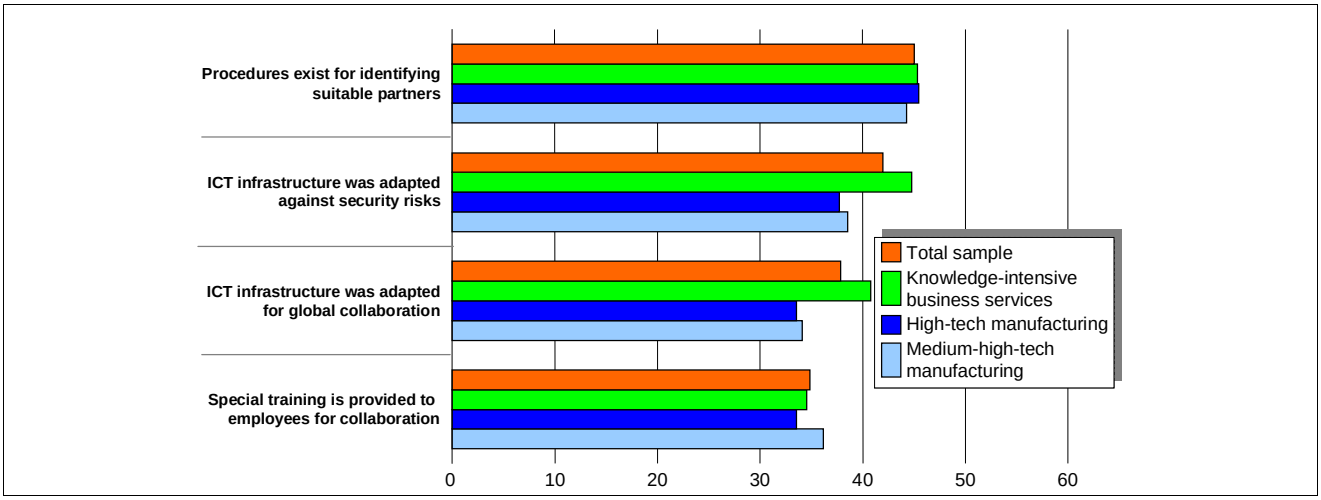
5.1.5 Organisational Support for Collaboration

The level of organisational support which SMEs have established in order to ensure success of global collaboration is very mixed, as far identification of collaboration partners, special training for employees involved in collaboration, and adaptation of ICT infrastructure are concerned (Figure 10).

The selection of foreign partners with which to collaborate is a challenge often mentioned by decision-makers when asked about internationalisation (OECD, 2008a). Therefore, the existence of tried-and-tested procedures for identifying suitable partners for particular collaboration purposes can be interpreted as an indicator of experience and of commitment to effective globalisation. 45% of all globally active SMEs in knowledge-intensive sectors report that tried-and-tested procedures

for identifying suitable partners for global collaboration are in place, while 28% admit that this is not the case. While some over-reporting is likely (see Fabling et al., 2008), the survey data still suggest that the level of organisational support for global collaboration is good in this field in most SMEs in the sectors covered.

Figure 10: Organisational support for global collaboration



Base: Total sample (n=1015)

The situation is less positive when it comes to providing employees with the special skills required for successful collaboration with foreign partner organisations. Only little more than one in three companies (35%) states that employees involved in global collaboration are provided with special training. 45% report that such training does not exist or does hardly take place.

In a similar way, there is a great variety of responses concerning the extent to which ICT infrastructure has been adapted to the demands of effective global collaboration, including the need to protect the company's ICT systems against risks resulting from such collaboration. 38% of SMEs in the sample say that ICT systems have been adapted to support efficient global collaboration (34% report that no or hardly any such steps have been taken), while 42% say that effort has been invested for protecting ICT systems against security risks resulting from engagement in global collaboration (31% say that this was not or hardly the case).

The survey data suggest that SMEs which have specifically adapted their ICT infrastructure to support global activities find it easier to gain access to highly-skilled labour and expertise as a result from engaging in global collaboration.

5.1.6 Problems Encountered When Engaging in Global Collaboration

Problems Encountered

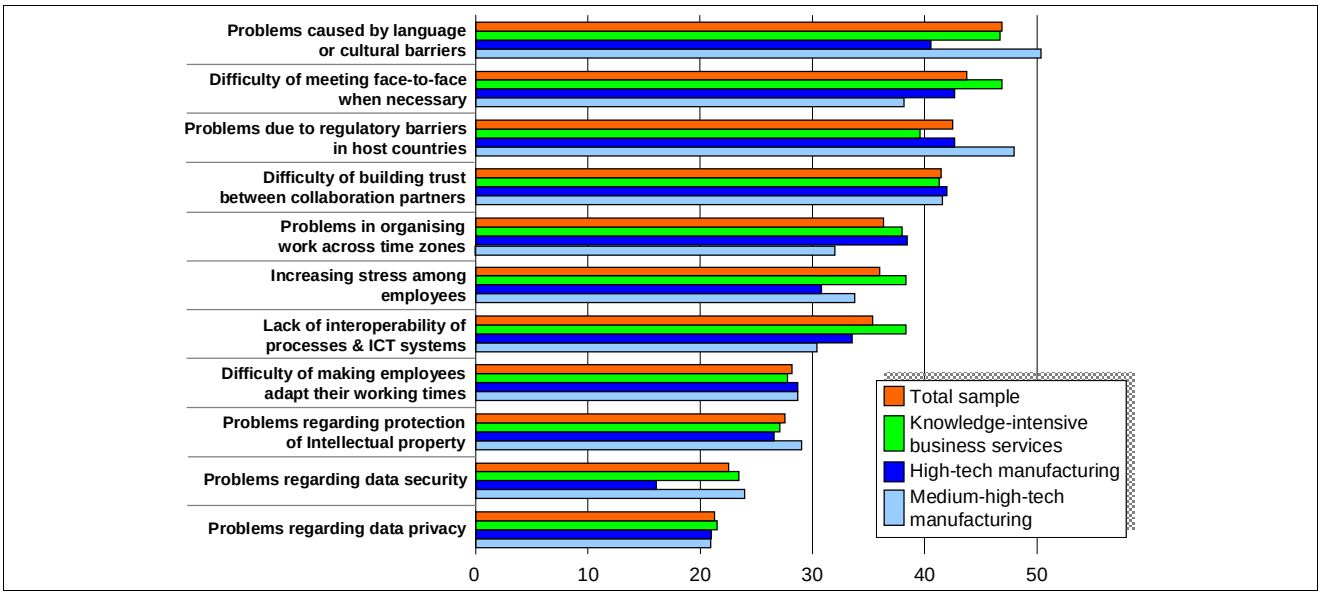
From a list of potential difficulties related to global collaboration (Figure 11), the largest numbers of respondents confirmed that they have encountered the following problems, sometimes or often: problems caused by language or other cultural barriers (47%); difficulties of meeting face-to-face when necessary (44%); problems due to regulatory barriers in host countries (43%); and difficulties of building trust between collaboration partners (42%).

Trust and confidence-building, especially across cultural and language barriers, again emerge as major challenges in global collaboration. The problem is aggravated by the fact that face-to-face meetings, which are generally believed to be most appropriate for building trust and understanding, are much harder to arrange and much more costly if collaboration partners are located in different countries or even on different continents.

However, a large share of respondents report they found that online collaboration helps them have negotiations without face-to-face meetings, which suggests that quite a number of SMEs have implemented CWE in ways which allow them to reduce their dependence physical meetings.

There are many reports of European SMEs that, when attempting to cooperate with overseas organisations for example in the context of outsourcing activities, were surprised by the amount of red tape and bureaucratic hurdles in the host countries (cf. Hovlin, 2006). Our data confirm that such problems exist, even if they are only experienced "very often" or "rather often" by one in five SMEs in the sample.

Figure 11: Problems encountered (% "very often", "often" or "sometimes")



Base: Total sample (n=1015)

The fact that global collaboration also may have considerable impact on employees working on cross-country projects is not often acknowledged. Our data, however, suggest that increasing stress among employees as a consequence from involvement in global collaboration is not uncommon. 13% of respondents report that they have observed this "very often or "often" and more than one in three (36%) report that this has occurred at least sometimes in the 24 months prior to the survey. Against these findings, it appears necessary to devote more attention to the specific challenges which working in work teams which stretch across the globe poses to employee well-being. Such challenges can include the necessity to adapt individual working times to the demands of collaboration across different time zones.

Problems concerning data privacy and data security are among the problems least often mentioned by globally active SMEs. 21% and 23%, respectively, report that they have encountered – at least "sometimes" – problems having to do with data privacy and data security. An equally small share (28%) has been affected by difficulties in protecting intellectual property. Comparatively low numbers of SMEs that report suffering from these problems should not, however, make us underestimate the impact which IPR and security related problems can have in individual cases. Anecdotal evidence suggests that such problems have already lead some SMEs to withdraw from global collaboration (Hovlin, 2006).

Predictors of Problems in Global Collaboration

Certain types of globally active SMEs are more likely than others to experience problems when engaging in global collaboration. Since the extent to which problems are encountered is bound to be influenced by the importance ascribed to, and the level of, collaborative activities, these factors need to be statistically controlled in order to allow valid statements. By means of multivariate

analysis we found that the following characteristics make SMEs more likely (ceteris paribus) to encounter problems:

- SMEs which recently have been taken over by a foreign company – This findings confirms other evidence which suggests that loss of control as a result of merger & acquisition processes can easily lead to communication deficits and problems in effective collaboration.
- SMEs which collaborate with partner organisations in Africa or in a non-EU-country formerly belonging to the Soviet Union – Other parts of our analysis confirm that collaboration in these regions tends to be made difficult by challenges of various kinds, including regulatory barriers and red tape, and cultural barriers.
- SMEs for which a reason for "going global" was or is an attempt to avoid regulatory barriers in their home country, or gaining access to sources of low wage labour – It appears that, all other things being equal, global collaboration activities which aim to evade regulatory barriers or high wage levels at home are often fraught with lack of success.

Problems in building trust between collaboration partners were found to be negatively associated with company age: young, globally active SMEs find it more difficult to build trust relationships with global collaboration partners. This confirms what the research literature suggests with regard to the time it takes to build trust relationships from scratch, and the experience needed to maintain and systematically reproduce such relationships (Hertel et al., 2005).

There is also an indication in the survey data that difficulty of building trust between collaboration partners is associated with the intensity of using online collaboration tools. In combination with other results from the survey, it appears that online collaboration tools, or rather the ways they are used in practice, need to better meet the requirements of collaboration partners with regard to building trust and social cohesion.

Problems in organising work across time zones are associated, in particular, with engagement in collaboration activities with partners located in North America.

Experience of problems concerning regulatory barriers in cooperation partners' countries is significantly associated, amongst others, with the goal of gaining access to a foreign market.

Finally, and curiously, experience of problems concerning regulatory barriers in cooperation partners' countries is also positively associated with offering special training to employees involved in international collaboration – while there is no such association between language and other cultural problems and provision of globalisation related training to staff. It seems that the globalisation related training which SMEs in our sample offer to their staff is mainly concerned with ways how to avoid regulatory barriers and circumvent red tape, rather than with overcoming cultural and language barriers.

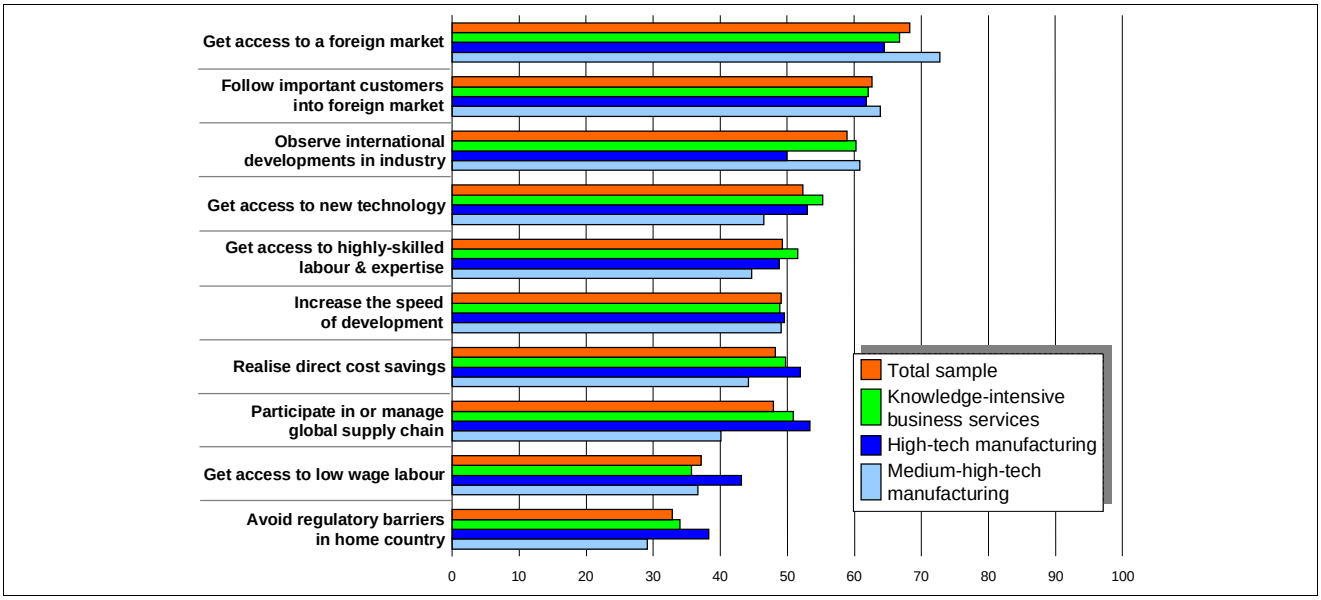
5.1.7 Achievement of Globalisation Goals

The extent to which SMEs have achieved the goals which were among their reasons for entering into global collaboration is mixed (Figure 12). A large share (70%) of all companies in the sample report that they have successfully gained access to a foreign market (insofar as this was one of their objectives).

Moreover, reported rates of success in following customers into a foreign market and observing international developments in the industry are high (64% and 60%, respectively). One in two SMEs which was seeking to exploit cost advantages had already realised direct savings in the 24 months prior to the survey (51%).

There are other objectives, though, for which only a minority report that they have been met. This applies to avoidance of regulatory barriers at home (35%) and to the objective of getting access to low wage labour (40%). Many SMEs which strive to participate in global supply chains also appear to meet difficulties, as 20% of them report lack of success and further 31% report mixed results.

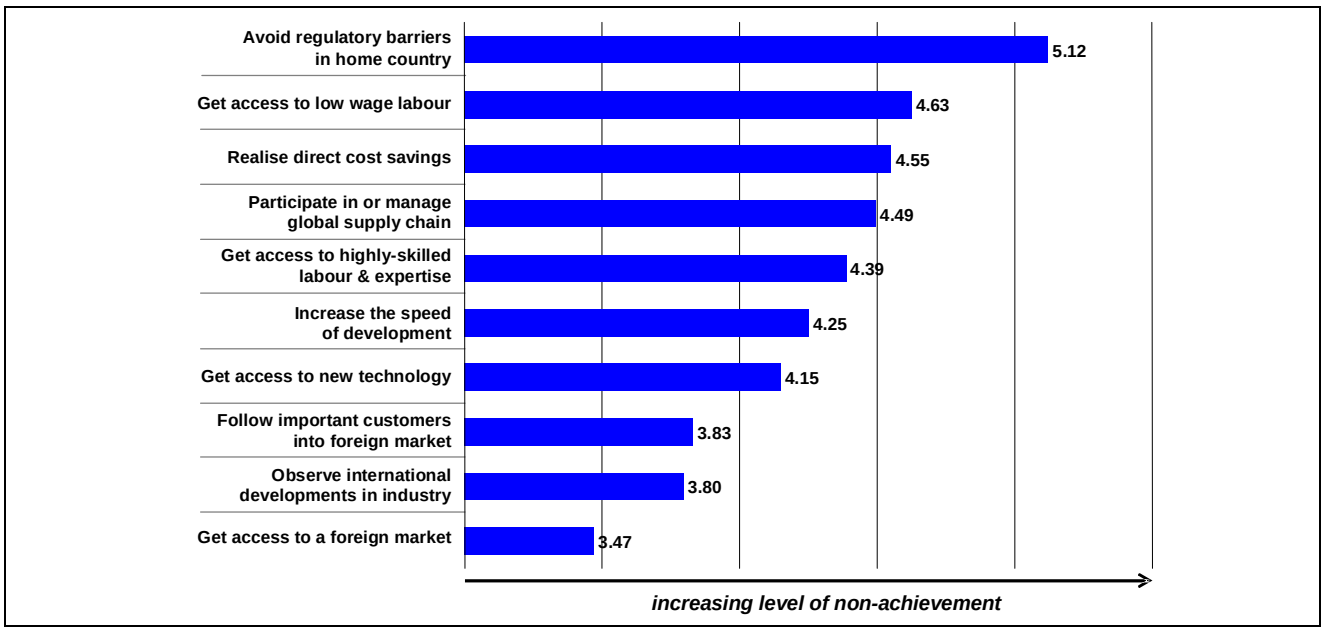
Figure 12: Goal achievement (% "fully achieved" and "largely achieved")



Base: All SMEs that stated the goal in question (answers 1,2,3 on 5-point scale)

We can assume that goal achievement, as well as non-achievement, is all the more relevant for company performance if the respective goal is considered to be of high importance. For this reason, a set of synthetic indicators was calculated by multiplying, for each of the ten strategic goals included in the questionnaire, importance with the level of non-achievement. The resulting non-achievement scores are shown in Figure 13.

Figure 13: Non-achievement scores (means)



Base: All SMEs that stated the goal in question

The differences indicate that while SMEs find it comparatively easy to get access to a foreign market, to easier observe international developments in their industry, and to follow important customers into one or several foreign markets, other goals appear to be harder to meet:

- avoiding regulatory barriers in the home country;
- realising direct cost savings, including via access to lower cost sources of labour;
- participation in global supply chains.

It appears that the latter of these, participation in global supply chains, is the most critical for the longer-term success of European SMEs in knowledge-intensive service and manufacturing sectors (OECD, 2007a).

By means of multivariate analysis, we identified a number of predictors for goal achievement. Both the successes in increasing the speed of development and in achieving direct cost savings are positively associated with the extent of online collaboration tool use for global collaboration. The survey data suggest, therefore, that committed use of online collaboration tools is a way to help companies save costs and speed up product and process development.

On the other hand, there are two groups or SMEs which find it harder than others to achieve direct cost savings: firstly companies which collaborate with clients, customers and service providers located outside of the EU; and secondly SMEs which collaborate mainly with other organisations or sites belonging to the same multi-national enterprise (headquarters, branch, subsidiary or sister companies).

5.2 Implications for Stakeholders and Policy-Making

It is clear that European companies have to develop their collaboration practices, including use of virtual collaboration, if they want to maintain their economic competitiveness, and if current standards of wealth, social stability and equality in Europe are to be upheld. This applies, in particular, to businesses in knowledge-intensive sectors of the economy, since these can be considered of vital importance as catalysts of the more general shift towards the global knowledge-based economy and society (Malecki & Moriset, 2008).

It is also clear that CWE, especially if stretching across the globe, pose significant challenges, in particular, to SMEs. This may necessitate countries that want to foster uptake of CWE to undertake concerted efforts to support SMEs in their struggle to adapt to the changing business environment. Enabling and convincing more SMEs to take up CWE, to get involved in global collaboration networks, and to make the most of it in terms of innovation capacity, growth and employment should increasingly become subject of policy action.

The NEW GLOBAL survey focused exclusively on globally active SMEs in high-tech and medium-high-tech manufacturing sectors plus the knowledge-intensive business services sector. We argue that policy action targeted especially at these sectors is justified, as SMEs in these sectors could benefit most from collaborative globalisation, thereby contributing considerably to overall competitiveness of the EU economy:

> *Policy initiatives seeking to encourage internationalization from the onset may, in general, be more effective if they focused on SMEs that offer products that are tradable, in particular innovative high-technology products. Given the relatively shorter life cycle of high-technology based products, SMEs may be able to maximize their revenues by delivering their products in multiple international markets. (Wright et al., 2007: 1024)*

The claim that businesses in knowledge-intensive industries rely more heavily than others on continuous innovation is reflected in the fact that among competition factors, product quality and customer service are on average rated much more important by survey respondents than the price of products (see Table 5 on page 18).

5.2.1 Helping SMEs to Exploit the Potential of Global CWE and Collaborative Globalisation

Research in NEW GLOBAL established evidence which suggests that uptake and strategic use of online collaboration tools is associated with product innovation. This finding confirms that **there is indeed a policy case for fostering uptake and effective use of CWE**. Such initiatives should not treat collaborative globalisation separately, but rather support for CWE needs to be **integrated into overall strategies to boost innovation among SMEs**.

A major way in which Member States can foster ICT-related innovation among European businesses is through **policy initiatives for supporting SMEs**. As a recent report from the OECD states when discussing SMEs, “there is often an underlying assumption that exporting and internationalisation for all practical purposes mean one and the same thing. In reality, the situation is far more complex and exporting is only one type of international activity undertaken by the international SME” (OECD, 2008a: 15). The authors of the report regret that due to lack of empirical data, globalisation related activities which are not related to exports are underrepresented in the policy discussion, as their analysis of OECD member state policies on public support provided to SMEs indeed shows (OECD, 2008a, pp. 35-41).

The survey data confirm that global collaboration by SMEs is **by no means confined to activities which are directly related to exports**. Within knowledge-intensive service and manufacturing sectors, one quarter of globally active SMEs collaborate with research organisations located outside of the EU. And about the same share (24%) are engaged in collaboration with public sector organisations from non-EU countries. This implies that global **collaboration often concerns design and planning activities of high knowledge content**.

It follows that national policy initiatives for supporting SMEs should be **better adapted to wide range of globalisation goals and contexts**, as also suggested by Wright et al. (2007). Indeed, it is arguably more important for SMEs in the knowledge economy to dip into international pools and networks of knowledge and innovation than to simply consider the "rest of the world" as a pool of potential customers waiting to be served. Moreover, one-size-fits-all approaches are insufficient as SMEs can only be expected to react positively to public support schemes if these relate, at least to some degree, to their specific context and situation.

It is also very important that policy-makers and the wider public understand that **SME globalisation is often not an option but a necessity**. In many cases, SMEs are asked to follow suit by their clients, which themselves are multi-national enterprises and which want subcontractors to be present in newly penetrated overseas markets. Public support schemes need to adapt to this reality, for example by extending their focus from "enabling SMEs to go global" to empowering them to make the most of their "forced" global presence. The latter typically concerns the need of SMEs to escape dependence on a small number of dominant clients and to participate in numerous global value chains (or value networks, see Stabell & Fjeldstad, 1998). There is evidence that SMEs face considerable barriers to reach this goal, as large multi-national enterprises "leverage regional resources to advance their sustainable competitive advantage" (Christopherson & Clark, 2007, p. 1223).

There are many reports of European SMEs that, when attempting to cooperate with overseas organisations for example in the context of outsourcing activities, were surprised by the amount of red tape and bureaucratic hurdles in the host countries (EIM, 2005). The resulting feeling of disappointment or shock can easily lead to retreat or downsizing of globalisation-related activities in SMEs (OECD, 2008a). Our data confirm that such problems exist, as they are experienced "very often" or "often" by one in five SMEs in the sample. There is no short-term panacea to such barriers – it will require continuous lobbying to convince host countries of the need to abolish bureaucratic hurdles and to improve the business friendliness of their regulatory framework. European SMEs would benefit, however, from **better access to information about collaboration conditions in non-EU countries**. Information provision needs to be tailored to the limited learning capacity which is typical for SMEs. Initiatives to raise awareness about globalisation's potential benefits for SMEs need to put emphasis not only on good practice cases and success stories, but also **enable learning from failure**.

Our survey also shows that as many as one out of three SMEs in knowledge-intensive sectors are involved in collaboration that takes place within a globally distributed company – for example cross-border collaboration between headquarters and subsidiaries, branches and units, or between the latter. This brings up issues of control within multi-national enterprises, as discussed by Yamin & Sinkovics (2007). **More research** is required to explore how closer collaboration of this type, supported by ICT, impacts on the ability of European SMEs to increase their productivity, for example through innovative activity (cf. Christopherson & Clark, 2007).

5.2.2 Developing More Effective Online Collaboration Tools and Practices

Companies which are engaged in collaboration across borders face the challenge of developing and maintaining trust relationships with foreign partners. It appears that even within the context of collaboration with organisations from outside of Europe, geographical proximity has often been used as a check on the risks of collaboration, as it allows spontaneous face-to-face meetings in case the need arises. As the increasing incidence of SME collaboration with Asian organisations shows, it will become increasingly difficult in the future to rely on geographical proximity. Clearly, there is the **need to develop more effective ways of fully virtual collaboration**, and to **make them more attractive also to SMEs**.

Our research suggests that successful global collaboration requires effective use of online collaboration tools. The large majority of users of such ICT tools confirm that these are improving the quality of collaboration rather than endangering team productivity and effectiveness. This means that effective ICT support must be considered as a key ingredient of any SME's

globalisation strategy. **Raising awareness about applications of ICT** and **providing hands-on advice to SMEs** has become more important because of the rapid development and the increasing range of available online tools of potential use for global collaboration. SMEs typically suffer from a lack of resources (mainly time and know-how) to properly assess whether and how new technologies could improve their performance. More often than not, SMEs are urged by big companies with which they have business relationships to adopt new technologies, rather than taking the decision independently (eBusinessWatch, 2007). While responding to customers' request can help them stay compatible and can increase efficiency along entire value chains, it can entail risks for SMEs such as lock-in and overt dependence on lead customers. Against this background, **structures and initiatives for technology transfer**, targeted at SMEs with limited capacities to explore new ICTs, are of prime importance.

There seems to be a size-related divide with regard to the ability to benefit from ICT tools. The likelihood of uptake increases with firm size. 32% of medium-sized companies (50 to 250 employees) in the sample make use of four or more online collaboration tools, as opposed to 17% in the case of micro enterprises (5 to 9 employees). This confirms the need to provide support, in particular, to small companies, for example by providing well-targeted information about available ICT infrastructures, tools and services, and by offering training in using them.

The survey shows that the usefulness of ICT for collaboration is still limited as more than one in four respondents found virtual collaboration not to help bridge cultural differences; one fifth report that online collaboration does not enable negotiations without meeting face-to-face; 15% experienced that these tools are not good for creating trust within a team; and 15%, again, found that online interaction is not good for supporting the generation of ideas. These findings emphasise the need to:

- develop and implement **affordable, high quality telepresence and videoconferencing systems**;
- **increase the capacity**, especially among micro companies, to utilise such systems effectively; and
- **increase awareness** about the potential benefits derived from latest-generation online collaboration tools, and about good practices in how to exploit these potentials in cost-effective ways.

Collaboration with Asian partners has become the norm for European companies in knowledge-intensive sectors of the economy, even among SMEs. This implies the need for developers of collaboration tools to put special effort into **designing collaboration tools which are fully applicable across diverse cultural settings**, rather than being based on assumptions about social practice in North American and European societies (Ham & Bell, 2004).

While more progress is needed to provide optimal ICT support for collaboration in distributed, global team, our research also indicates that **technology alone is not sufficient** for enabling SMEs to collaborate globally. Intensive use of ICTs for collaboration can even exacerbate potential problems, as our analysis indicates: SMEs which are making extensive use of online tools for global collaboration are more likely than others to experience problems concerning the establishment of trust relationships with remote work partners. This implies that there is a strong need for collaborative globalisation to be supported by **appropriate organisational practices and structures**. For example, SMEs which want to collaborate successfully with Asian organisations need to be equipped with the means to deal with challenges arising from cultural differences.

Organisation support also relates to the provision of **special training** to staff which is involved in global collaboration. Our research found that the majority of companies which are collaborating globally do not provide any such training to their staff. It appears that there is limited awareness about the specific skill & training needs which arise from engagement in global collaborative work. This is unfortunate.

Our findings also indicate that European SMEs need to **develop appropriate human resource policies** and **workplace strategies** which take full account of the increasing requirements of globalisation and distributed work.

5.2.3 Making European Workers Benefit from Global CWE and Collaborative Globalisation

The survey data suggest that the staff of a significant minority of SMEs involved in collaborative globalisation indeed face risks to quality of work and to balance between work and private life. Working in global teams can be associated with increasing stress and with the need to adapt ways of working to the demands of collaboration. The survey did not collect data on employee (dis)advantages from being involved in global collaboration, since this would have required a different survey approach. We know from other research, however, that such jobs are often associated with high job satisfaction, but also high job demands (e.g. Richter et al. 2006).

These findings indicate that more attention should be paid to the "human impact" of collaborative work in global settings. **Workers must be prepared** – which may take the form of enabling them to prepare themselves – for ways of working which require a larger degree of collaboration, work in temporary teams, use of ICT-mediated communication rather than face-to-face interaction, and self-responsibility. Of course, only some of these requirements are directly related to collaborative globalisation, while most of them are related to more general shifts in employment patterns and work organisation. We suggest that global collaborative work should be understood as another aspect of **work intensification** (Boisard et al., 2002), an area which will require more policy initiative in the future. Possible policy implications following from these general shifts are at the centre of much heated debate across Europe; they will not be repeated here[12].

We focus here on preparation for the specific activity of working in collaborative settings involving people at locations outside of Europe. This usually implies collaboration across language and other cultural barriers as well as working in teams which stretch across different time zones. It also increasingly involves, as the survey data shows, extensive use of a whole range of ICT tools for communication and coordination purposes.

We found that only little more than one in three companies (35%) provides employees involved in global collaboration with special training. 45% report that such training does not at all or does hardly take place. It is evident that those companies aiming at globalising their activities need to **develop their "soft" competences**, that is to increase **contextual and cultural understanding and language skills** of their employees.

5.2.4 Conclusion

The findings of our and other available research suggest that only through improvements in the set-up and management of collaborative work processes will it be possible to achieve self-sustaining increases in the competitiveness of the EU economy, namely its large base of SMEs. Unless work processes and value chains that cross national borders are well managed, the risk is high that losses will occur. Indeed, as opposed to the common perception that globalisation of production is a logical result of the pursuit of easy profits by companies, the most successful global companies are the ones that consider global production systems mainly as a means to increase their ability to innovate and to respond to market changes (Malecki & Moriset, 2008). Global, ICT-supported collaboration opens up totally new possibilities in this respect. What is more, this type of globalisation may actually benefit source countries by creating new, high-quality employment rather than destroying jobs. This will not happen, though, without policy-making taking an active role in fostering innovation and in supporting Europeans to adapt to the changing global marketplace while preserving the achievements of the European Social System.

[12] See, for example, recent editions of the European Commission's annual analytical reports on "Employment in Europe"

5.3 Towards Better Indicators on Business Collaboration and CWE

A statistical framework for capturing global collaborative relationships and the use of ICTs within this context does not yet exist. NEW GLOBAL has argued that policy-makers and other stakeholders need better data on these phenomena in order to take well-informed decisions in a wide range of policy areas. This includes the need for policy support being provided to European SMEs, where the OECD notices that for "discussing the role of the 'international SME' within the global economy it must be acknowledged that the empirical base for the analysis [...] is poor" (OECD, 2008a: 15).

As part of NEW GLOBAL, we have taken stock of existing indicators which would be able to shed light on work globalisation, collaborative work, and CWE (reported on in an earlier Deliverable[13]). We found that there are a number of gaps in indicator availability which should be closed within the foreseeable future:

- **Inter-company collaboration**: There is very little comparative data on extend and types of collaboration, apart from the data from the Community Innovation Survey (Eurostat, 2007) which focuses on collaboration in the context of formal innovation activities. The geographical spread of collaboration, and the reasons for the emergence of geographical patterns of collaboration, require more attention.
- From the viewpoint of policy directed at SME competitiveness, data are needed which would allow to identify the **preconditions** for, and **characteristics** of, **types of collaboration which produce benefits** to the companies in question as well as the European economy and labour market at large. The key question whether, and under which conditions, global collaborative activities are associated with stronger performance has still not been answered satisfactorily.
- **Collaboration between companies and public/civic sector institutions**: The key role of the state and the educational and civic sector in influencing collaborative activities of firms has been confirmed by research (Cooke, 2002; MacKinnon et al., 2002). Data on the extent to which SMEs collaborate with public and civic sector institutions have been collected rarely, though, and only in the context of one-off studies. The need for stronger interaction between firms and the education sector (e.g. universities) appears to be of particular importance, and should be reflected in statistical indicators. In the context of the ongoing trend towards globalisation of R&D (Hirshfeld & Schmid, 2005; OECD, 2007a), which – as the NEW GLOBAL survey data show – also affects European SMEs, indicators on this phenomenon should also capture cross-border collaboration.
- **Tools for collaboration**: There are hardly any indicators available at all on the ICTs which are used to enable or support collaborative activities, apart from (proprietory) industry data which are of limited use for statistical analysis. In recent years, the European Commission's eBusinessWatch (2007) has made some progress in covering the topic. Further progress in this direction is necessary, for example by capturing experience with types of ICTs for collaboration. The NEW GLOBAL survey data suggest that while online tools provide strong support to collaborative globalisation, they have difficulty to support trust-building. SMEs, in particular, require a high level of trust if they are to engage full-heartedly in global collaboration (OECD, 2008a).
- **Specific issues of collaboration at global level**: Existing indicators in this area tend to focus on export activities on the one hand, and on offshoring and other forms of job relocation on the other hand. The latter have been discussed extensively in the public debate in recent years, with the result that globalisation is often perceived by the public as a threat and as the cause for personal hardships (EOS Gallup, 2003). This is against evidence that the EU has so far benefited more than its competitors from globalisation-related developments, and is likely to continue doing so in the near future (Havic & McMorrow, 2006). It follows that more indicators should be provided on types of global collaboration which are not based on service contracts, as it is the case in off-shoring activities.

[13] NewGlobal consortium (2007), WP1 deliverable: D1.2 Interim Report: Conceptual Framework incl. Review of State-of-the-Art Research and Practice.

- **Individual-level collaboration**: Whereas arms-length interaction between companies tends to be formalised and to follow established procedures, true collaboration in the sense of co-work towards common goals and continuous exchange of knowledge cannot be fully codified and pre-structured. Arguably, such collaboration takes place *between people* more than it takes place *between organisations*. This also means that indicators would need to consider individual-level collaborative activities as well as organisation's engagement in collaboration. It is the individual who needs to obtain the skills and gather the experience necessary for successful collaboration within global project teams. It is also at this level that the social impacts make themselves felt, such as increases in work intensity but possibly also job satisfaction, etc. For these reasons, existing indicators on working conditions and work organisation should be complemented by measures on involvement in collaborative team work, and its consequences.
- **Distributed innovation**: The public debate about latest-generation "social software" or Web 2.0 applications suggests that innovative activity in companies increasingly takes place at the level of the individual employee, who may be engaged in a number of communities of practice and other types of social networks. Rather than just a short-lived phenomenon, the hype around social software and Web 2.0 applications may indeed reflect a paradigmatic change to the nature of innovation, which is becoming increasingly decentralised and based on collaboration across traditional boundaries – of organisation, space, time, culture, etc. (see Benkler, 2006; Tapscott & Williams, 2006). While it is too early to judge about such propositions, indicators on the use of social network and the "participative web" (OECD, 2007b) need to be implemented in the European Statistical System soon (see also OECD, 2008b).
- **Skills for global collaboration**: Finally, demand and supply of those skills and competences which are unique to work in global collaborative settings is ill-researched. As the European Union has made tangible progress in recent years on agreeing on a core set of core competencies which all Europeans should be equipped with, the specific skill requirements for international collaboration need to be taken into account as well. The new European Adult Education Survey (Eurostat, 2005), the first wave of which was implemented across the EU in 2005-2007, would be the best place to feature variables on collaboration-related skills.

Severe lack of data on collaborative activities of companies means that there is still only limited insight into the conditions which determine whether companies benefit or lose out from global collaboration (Günther, 2004). Lack of indicators also means that policy action – for example concerning trade policy, outsourcing, financial aid to SMEs – is at the risk of being blind to the significance of collaborative globalisation as an engine for growth, innovation and sustained competitiveness.

Europe needs a better statistical basis for decision-making on issues concerning collaborative globalisation. NEW GLOBAL calls for collaboration between companies, including collaboration across country borders, to be better captured within official statistics. There are a number of ways to make progress towards this goal. The emphasis should be on finding ways through which new phenomena (here: collaborative globalisation and CWE) can be integrated, in a cost-efficient and practical way, in existing data collection systems. This implies the need to look for existing data collection instruments that are well placed to carry the suggested new or modified variables.

There are three areas for concrete suggestions to be made:

Improving data availability on companies' engagement in (global) collaboration

The **Community Innovation Survey** (CIS) is the main vehicle in Europe for collecting country-by-country data on innovation related issues at the level of the enterprise (cf. Arundel & Hollanders, 2006). It also includes collaboration with companies and with other types of organisations in so far as these are taking place in the context of innovation activities. Effects and barriers to innovative activity in general are covered as well.

We suggest that the module on innovation-related collaboration should be extended to include questions on the effects of collaboration on innovative activity, and on barriers which hinder

attempts to exploit collaborative interaction for innovation purposes. These are issues of major interest for policy making, and as such deserve better representation in statistics.

In addition, it should be explored whether to include questions on the use of ICTs within innovation-related collaboration. Evidence from the NEW GLOBAL survey suggests that the use of online collaboration tools is associated with innovative activity (product innovation), and also with success in achieving direct cost savings and speed of development. For this reason it appears possible that use of ICT may be an important explanatory factor within the CIS dataset as well.

In the case that modifications to the CIS are not possible in the short or medium term, the European Commission may want to use an issue of its **Innobarometer** (e.g. EOS Gallup, 2004) to collect the data on a one-off basis.

The use of ICTs for collaboration, beyond purposes related to innovation activities, could best be covered within the Eurostat-coordinated surveys on ICT use, namely the **Community Survey on ICT Usage and E-Commerce in Enterprises**.

Improving data availability on workers' engagement in (global) collaboration

In order to improve data availability on collaboration-related issues affecting **workers**, we see a case for developing the **European Survey on Working Conditions (ESWC)** into a fully-fledged element of the European Statistical System. Comparable, timely data on working conditions and CWE related issues must be a top priority in order to tailor the European Employment Strategy to the individual situation in each Member State.

The survey is currently under the responsibility of the European Foundation for the Improvement of Living and Working Conditions (EuroFound), and has been conducted every five years since 1990. While the quality of the conceptual underpinning and the data collection itself are very high, the survey is not yet integrated in any way with the more established instruments of Eurostat and the National Statistical Institutes (such as the Community Labour Force Survey and the European Adult Education Survey). At the same time, the work on the ESWC is partly duplicated at national level through similar surveys which are being carried out by many of Europe's National Statistical Institutes (NSIs).

We suggest to put the ESWC on a more formal footing by giving Eurostat and the NSIs overall responsibility for survey execution, whereas conceptual preparation and coordination of the survey analysis would remain with EuroFound. The medium-term goal would be the replacement of the existing national surveys on work organisation by a joint Community Survey on Working Conditions (following the example of similar frameworks such as the Community Surveys on ICT Usage in households and enterprises). This would also provide the basis to conduct the survey more frequently, such as once every two or three years. The upgraded survey should then fully cover issues related to collaboration through ICTs and traditional means.

It is important to note that the function of the Community Survey on Working Conditions would be less to "rank" countries by their success in implementing "modern" forms of work organisation, but rather to supply EU and national policy making with the required comparative data to gauge the room for common policy making as well as to identify the necessity for policies which are specifically tailored to the situation in a given country.

Improving data availability on availability of skills and competences for (global) collaboration

Europe lacks a data source for assessing the extent to which workers are equipped with the necessary generic (as well as specialist) skills and competences for working in the knowledge economy. There is plentiful of evidence which suggests that to be successful in working in an CWE-based job – or, more generally, in what has been termed the pro-active workplace – workers need to have advanced levels of communication, collaboration, team working and self-management skills and cultural competences, as well as up-to-date digital literacy. Because of the important role of the public sector – and EU funding – in providing further training and education opportunities to EU citizens, a data source for comparable indicators on generic skills and competences should be developed. It appears that the **European Adult Education Survey** which

has been launched in 2005 would provide a good vehicle for this purpose. It should be ensured that the decisions about which variables to include in the second round of the survey will include not only education policy circles, but also by experts engaged in fostering the adoption and further diffusion of CWE in Europe.

6. ANNEX

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6.2 Survey Results – Data Tables

6.2.1 The Sample

Table 19: Distribution of total sample over size classes and sectors

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Sector by size-class	1 High-Tech Manufacturing - 5-9	2	1.8%	6	3.9%	5	3.2%	4	3.8%	1	1.4%	5	3.3%	2	1.7%	7	4.6%	32	3.2%
	2 High-Tech Manufacturing - 10-49	7	6.2%	9	5.9%	9	5.8%	7	6.7%	6	8.2%	9	6.0%	10	8.6%	7	4.6%	64	6.3%
	3 High-Tech Manufacturing - 50-250	4	3.5%	9	5.9%	4	2.6%	2	1.9%	8	11.0%	3	2.0%	8	6.9%	9	6.0%	47	4.6%
	4 Medium-high tech manufacturing - 5-9			14	9.2%	12	7.7%	8	7.6%	1	1.4%	9	6.0%	8	6.9%	11	7.3%	63	6.2%
	5 Medium-high tech manufacturing - 10-49	16	14.2%	12	7.9%	21	13.5%	10	9.5%	7	9.6%	37	24.7%	6	5.2%	11	7.3%	120	11.8%
	6 Medium-high tech manufacturing - 50-250	10	8.8%	15	9.9%	13	8.4%	9	8.6%	20	27.4%	9	6.0%	22	19.0%	15	9.9%	113	11.1%
	7 Service companies - 5-9	10	8.8%	19	12.5%	27	17.4%	20	19.0%	3	4.1%	27	18.0%	7	6.0%	27	17.9%	140	13.8%
	8 Service companies - 10-49	46	40.7%	32	21.1%	48	31.0%	34	32.4%	12	16.4%	39	26.0%	20	17.2%	27	17.9%	258	25.4%
	9 Service companies - 50-250	18	15.9%	36	23.7%	16	10.3%	11	10.5%	15	20.5%	12	8.0%	33	28.4%	37	24.5%	178	17.5%
Total		113	100%	152	100%	155	100%	105	100%	73	100%	150	100%	116	100%	151	100%	1015	100%

Table 20: Total sample by company age

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Company founded in	1 Before 1982	41	36.3%	56	36.8%	54	34.8%	20	19.0%	36	49.3%	28	18.7%	61	52.6%	49	32.5%	345	34.0%
	2 Between 1982 and 1997	52	46.0%	67	44.1%	53	34.2%	56	53.3%	23	31.5%	86	57.3%	35	30.2%	75	49.7%	447	44.0%
	3 Between 1998 and 2003	17	15.0%	19	12.5%	35	22.6%	16	15.2%	6	8.2%	31	20.7%	18	15.5%	22	14.6%	164	16.2%
	4 Between 2004 and 2008	1	.9%	10	6.6%	13	8.4%	12	11.4%	2	2.7%	4	2.7%	1	.9%	2	1.3%	45	4.4%
	5 Do not know / no answer	2	1.8%					1	1.0%	6	8.2%	1	.7%	1	.9%	3	2.0%	14	1.4%

6.2.2 Company Context and Strategy

Table 21: Globalisation related activities in the five years prior to the survey

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Set-up of a unit or subsidiary abroad)	1 Yes	30	26.5%	34	22.4%	46	29.7%	23	21.9%	14	19.2%	19	12.7%	42	36.2%	45	29.8%	253	24.9%
	2 No	82	72.6%	118	77.6%	108	69.7%	82	78.1%	59	80.8%	129	86.0%	72	62.1%	103	68.2%	753	74.2%
	3 DK	1	.9%			1	.6%					2	1.3%	2	1.7%	3	2.0%	9	.9%
Total		113	100.0%	152	100.0%	155	100.0%	105	100%	73	100.0%	150	100%	116	100%	151	100.0%	1015	100.0%
Take-over of a foreign company	1 Yes	13	11.5%	7	4.6%	11	7.1%	7	6.7%	7	9.6%	6	4.0%	23	19.8%	9	6.0%	83	8.2%
	2 No	100	88.5%	144	94.7%	143	92.3%	98	93.3%	65	89.0%	144	96.0%	89	76.7%	142	94.0%	925	91.1%
	3 DK			1	.7%	1	.6%			1	1.4%			4	3.4%			7	.7%
Total		113	100.0%	152	100.0%	155	100.0%	105	100%	73	100.0%	150	100%	116	100%	151	100.0%	1015	100.0%
Being taken over by a foreign company	1 Yes	8	7.1%	6	3.9%	11	7.1%	9	8.6%	6	8.2%	4	2.7%	16	13.8%	11	7.3%	71	7.0%
	2 No	105	92.9%	146	96.1%	144	92.9%	96	91.4%	67	91.8%	146	97.3%	99	85.3%	138	91.4%	941	92.7%
	3 DK													1	.9%	2	1.3%	3	.3%
Total		113	100.0%	152	100.0%	155	100.0%	105	100%	73	100.0%	150	100%	116	100%	151	100.0%	1015	100.0%
Merger with a foreign company	1 Yes	7	6.2%	10	6.6%	3	1.9%	4	3.8%	1	1.4%	4	2.7%	8	6.9%	7	4.6%	44	4.3%
	2 No	106	93.8%	141	92.8%	152	98.1%	100	95.2%	72	98.6%	146	97.3%	107	92.2%	143	94.7%	967	95.3%
	3 DK			1	.7%			1	1.0%					1	.9%	1	.7%	4	.4%
Total		113	100.0%	152	100.0%	155	100.0%	105	100%	73	100.0%	150	100%	116	100%	151	100.0%	1015	100.0%
Joint venture, alliance or any other type of formal cooperation	1 Yes	43	38.1%	40	26.3%	59	38.1%	33	31.4%	32	43.8%	47	31.3%	39	33.6%	64	42.4%	357	35.2%
	2 No	70	61.9%	109	71.7%	96	61.9%	72	68.6%	41	56.2%	102	68.0%	77	66.4%	84	55.6%	651	64.1%
	3 DK			3	2.0%							1	.7%			3	2.0%	7	.7%
Total		113	100.0%	152	100.0%	155	100.0%	105	100%	73	100.0%	150	100%	116	100%	151	100.0%	1015	100.0%
Cooperation with foreign companies which are member of the same supply chain)	1 Yes	51	45.1%	41	27.0%	38	24.5%	52	49.5%	25	34.2%	49	32.7%	52	44.8%	67	44.4%	375	36.9%
	2 No	61	54.0%	108	71.1%	109	70.3%	51	48.6%	48	65.8%	98	65.3%	55	47.4%	80	53.0%	610	60.1%
	3 DK	1	.9%	3	2.0%	8	5.2%	2	1.9%			3	2.0%	9	7.8%	4	2.6%	30	3.0%
Total		113	100.0%	152	100.0%	155	100.0%	105	100%	73	100.0%	150	100%	116	100%	151	100.0%	1015	100.0%

Table 22: Globalisation related activities in the five years prior to the survey (any type of restructuring involving foreign companies)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Any type of restructuring involving foreign companies	1 yes	39	34.5%	45	29.6%	51	32.9%	31	29.5%	24	32.9%	26	17.3%	53	45.7%	55	36.4%	324	31.9%
	2 no	74	65.5%	107	70.4%	104	67.1%	74	70.5%	49	67.1%	124	82.7%	63	54.3%	96	63.6%	691	68.1%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%

Table 23: Development of turnover and employment in 12 months prior to the survey

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Turnover of company in last 12 months has	1 Increased	78	69.0%	108	71.1%	119	76.8%	72	68.6%	55	75.3%	98	65.3%	82	70.7%	101	66.9%	713	70.2%
	2 Decreased	6	5.3%	7	4.6%	12	7.7%	10	9.5%	1	1.4%	16	10.7%	4	3.4%	6	4.0%	62	6.1%
	3 Stayed roughly the same	20	17.7%	33	21.7%	21	13.5%	23	21.9%	14	19.2%	30	20.0%	24	20.7%	40	26.5%	205	20.2%
	4 Do not know / no answer	9	8.0%	4	2.6%	3	1.9%			3	4.1%	6	4.0%	6	5.2%	4	2.6%	35	3.4%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100.0%
Number of employees in the last 12 months has	1 Increased	67	59.3%	71	46.7%	83	53.5%	43	41.0%	42	57.5%	59	39.3%	61	52.6%	61	40.4%	487	48.0%
	2 Decreased	10	8.8%	15	9.9%	18	11.6%	14	13.3%	4	5.5%	17	11.3%	12	10.3%	12	7.9%	102	10.0%
	3 Stayed roughly the same	36	31.9%	65	42.8%	53	34.2%	48	45.7%	27	37.0%	74	49.3%	41	35.3%	76	50.3%	420	41.4%
	4 Do not know / no answer			1	.7%	1	.6%							2	1.7%	2	1.3%	6	.6%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100.0%

Table 24: Relative importance of competition factors (A)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Competition factor price of products	1 Very important	45	39.8%	51	33.6%	50	32.3%	29	27.6%	36	49.3%	62	41.3%	19	16.4%	62	41.1%	354	34.9%
	2	27	23.9%	45	29.6%	51	32.9%	31	29.5%	22	30.1%	56	37.3%	47	40.5%	41	27.2%	320	31.5%
	3	23	20.4%	43	28.3%	40	25.8%	32	30.5%	10	13.7%	25	16.7%	34	29.3%	32	21.2%	239	23.5%
	4	10	8.8%	7	4.6%	9	5.8%	11	10.5%	1	1.4%	4	2.7%	10	8.6%	4	2.6%	56	5.5%
	5 Not important at all			4	2.6%	5	3.2%	2	1.9%	2	2.7%	2	1.3%	2	1.7%	7	4.6%	24	2.4%
	6 DK	8	7.1%	2	1.3%					2	2.7%	1	.7%	4	3.4%	5	3.3%	22	2.2%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%
Competition factor Product quality	1 Very important	88	77.9%	129	84.9%	118	76.1%	79	75.2%	49	67.1%	111	74.0%	84	72.4%	113	74.8%	771	76.0%
	2	17	15.0%	22	14.5%	29	18.7%	22	21.0%	16	21.9%	36	24.0%	25	21.6%	29	19.2%	196	19.3%
	3	2	1.8%			5	3.2%	2	1.9%	6	8.2%	3	2.0%	2	1.7%	3	2.0%	23	2.3%
	4			1	.7%			2	1.9%					1	.9%			4	.4%
	5 Not important at all					1	.6%			1	1.4%			1	.9%	3	2.0%	6	.6%
	6 DK	6	5.3%			2	1.3%			1	1.4%			3	2.6%	3	2.0%	15	1.5%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%
Competition factor Product variety	1 Very important	28	24.8%	37	24.3%	49	31.6%	21	20.0%	7	9.6%	50	33.3%	21	18.1%	39	25.8%	252	24.8%
	2	34	30.1%	42	27.6%	69	44.5%	35	33.3%	28	38.4%	61	40.7%	35	30.2%	37	24.5%	341	33.6%
	3	28	24.8%	40	26.3%	23	14.8%	29	27.6%	19	26.0%	28	18.7%	39	33.6%	41	27.2%	247	24.3%
	4	8	7.1%	19	12.5%	8	5.2%	16	15.2%	8	11.0%	8	5.3%	9	7.8%	16	10.6%	92	9.1%
	5 Not important at all	6	5.3%	14	9.2%	5	3.2%	3	2.9%	7	9.6%	2	1.3%	8	6.9%	12	7.9%	57	5.6%
	6 DK	9	8.0%			1	.6%	1	1.0%	4	5.5%	1	.7%	4	3.4%	6	4.0%	26	2.6%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%
Competition factor Image and design of the products or company	1 Very important	58	51.3%	59	38.8%	72	46.5%	44	41.9%	31	42.5%	56	37.3%	35	30.2%	62	41.1%	417	41.1%
	2	37	32.7%	57	37.5%	55	35.5%	38	36.2%	28	38.4%	62	41.3%	53	45.7%	48	31.8%	378	37.2%
	3	12	10.6%	29	19.1%	20	12.9%	14	13.3%	8	11.0%	22	14.7%	16	13.8%	21	13.9%	142	14.0%
	4	2	1.8%	5	3.3%	4	2.6%	8	7.6%	2	2.7%	7	4.7%	6	5.2%	7	4.6%	41	4.0%
	5 Not important at all	2	1.8%	2	1.3%	2	1.3%	1	1.0%			3	2.0%	5	4.3%	11	7.3%	26	2.6%
	6 DK	2	1.8%			2	1.3%			4	5.5%			1	.9%	2	1.3%	11	1.1%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%

Table 25: Relative importance of competition factors (B)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Competition factor Customer service	1 Very important	81	71.7%	101	66.4%	108	69.7%	67	63.8%	45	61.6%	104	69.3%	78	67.2%	112	74.2%	696	68.6%
	2	24	21.2%	43	28.3%	39	25.2%	30	28.6%	20	27.4%	42	28.0%	28	24.1%	31	20.5%	257	25.3%
	3	4	3.5%	6	3.9%	6	3.9%	5	4.8%	6	8.2%	4	2.7%	6	5.2%	3	2.0%	40	3.9%
	4	1	.9%	1	.7%	2	1.3%	3	2.9%	1	1.4%			2	1.7%			10	1.0%
	5 Not important at all	1	.9%	1	.7%									1	.9%	2	1.3%	5	.5%
	6 DK	2	1.8%							1	1.4%			1	.9%	3	2.0%	7	.7%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%
Competition factor Technological lead	1 Very important	56	49.6%	77	50.7%	71	45.8%	45	42.9%	29	39.7%	72	48.0%	47	40.5%	66	43.7%	463	45.6%
	2	30	26.5%	52	34.2%	49	31.6%	36	34.3%	27	37.0%	57	38.0%	46	39.7%	46	30.5%	343	33.8%
	3	13	11.5%	10	6.6%	28	18.1%	16	15.2%	8	11.0%	16	10.7%	15	12.9%	20	13.2%	126	12.4%
	4	7	6.2%	5	3.3%	5	3.2%	2	1.9%	2	2.7%	4	2.7%	3	2.6%	12	7.9%	40	3.9%
	5 Not important at all	4	3.5%	8	5.3%	2	1.3%	5	4.8%	5	6.8%			2	1.7%	6	4.0%	32	3.2%
	6 DK	3	2.7%					1	1.0%	2	2.7%	1	.7%	3	2.6%	1	.7%	11	1.1%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%
Competition factor The size of a company	1 Very important	11	9.7%	6	3.9%	9	5.8%	10	9.5%	5	6.8%	26	17.3%	7	6.0%	14	9.3%	88	8.7%
	2	27	23.9%	25	16.4%	32	20.6%	25	23.8%	24	32.9%	55	36.7%	29	25.0%	25	16.6%	242	23.8%
	3	40	35.4%	60	39.5%	56	36.1%	37	35.2%	22	30.1%	44	29.3%	42	36.2%	55	36.4%	356	35.1%
	4	20	17.7%	32	21.1%	34	21.9%	16	15.2%	11	15.1%	19	12.7%	25	21.6%	26	17.2%	183	18.0%
	5 Not important at all	11	9.7%	28	18.4%	23	14.8%	16	15.2%	9	12.3%	6	4.0%	11	9.5%	28	18.5%	132	13.0%
	6 DK	4	3.5%	1	.7%	1	.6%	1	1.0%	2	2.7%			2	1.7%	3	2.0%	14	1.4%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100%

Table 26: Relative importance of competition factors (means)

P1 P1: Country	G14_1 Competition factor price of products	G14_2 Competition factor Product quality	G14_3 Competition factor Product variety	G14_4 Competition factor Image and design of the products or company	G14_5 Competition factor Customer service	G14_6 Competition factor Technological lead	G14_7 Competition factor The size of a company
12 Belgium	1.98	1.20	2.33	1.68	1.35	1.85	2.94
13 Germany	2.12	1.16	2.55	1.91	1.41	1.78	3.34
14 Denmark	2.15	1.28	2.03	1.75	1.37	1.83	3.19
17 Finland	2.30	1.30	2.47	1.90	1.47	1.90	3.03
22 Netherlands	1.75	1.44	2.71	1.72	1.49	1.97	2.93
23 Portugal	1.85	1.28	2.00	1.93	1.33	1.68	2.49
24 Sweden	2.37	1.32	2.54	2.07	1.43	1.82	3.04
25 United Kingdom	1.99	1.32	2.48	2.04	1.30	1.97	3.20
Total	2.07	1.28	2.35	1.89	1.38	1.84	3.03

Table 27: Innovative activity in the 12 months prior to the survey

			P1: Country								Total
			12 Belgium	13 Germany	14 Denmark	17 Finland	22 Netherlands	23 Portugal	24 Sweden	25 United Kingdom	
Launched new products or services in past 12 months	1 Yes	Count	76	104	120	70	34	101	84	97	686
		Col %	67.3%	68.4%	77.4%	66.7%	46.6%	67.3%	72.4%	64.2%	67.6%
	2 No	Count	34	48	35	34	38	49	30	53	321
		Col %	30.1%	31.6%	22.6%	32.4%	52.1%	32.7%	25.9%	35.1%	31.6%
	3 DK	Count	3			1	1		2	1	8
		Col %	2.7%			1.0%	1.4%		1.7%	.7%	.8%
Total	Count		113	152	155	105	73	150	116	151	1015
	Col %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Launched improved products or services in past 12 months	1 Yes	Count	72	99	103	63	35	93	83	98	646
		Col %	63.7%	65.1%	66.5%	60.0%	47.9%	62.0%	71.6%	64.9%	63.6%
	2 No	Count	40	50	50	40	36	54	29	52	351
		Col %	35.4%	32.9%	32.3%	38.1%	49.3%	36.0%	25.0%	34.4%	34.6%
	3 DK	Count	1	3	2	2	2	3	4	1	18
		Col %	.9%	2.0%	1.3%	1.9%	2.7%	2.0%	3.4%	.7%	1.8%
Total	Count		113	152	155	105	73	150	116	151	1015
	Col %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Introduced new or significantly improved processes in past 12 months	1 Yes	Count	70	100	96	59	31	106	71	97	630
		Col %	61.9%	65.8%	61.9%	56.2%	42.5%	70.7%	61.2%	64.2%	62.1%
	2 No	Count	42	52	58	45	41	42	43	53	376
		Col %	37.2%	34.2%	37.4%	42.9%	56.2%	28.0%	37.1%	35.1%	37.0%
	3 DK	Count	1		1	1	1	2	2	1	9
		Col %	.9%		.6%	1.0%	1.4%	1.3%	1.7%	.7%	.9%
Total	Count		113	152	155	105	73	150	116	151	1015
	Col %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Requested or been granted new patents	1 Yes	Count	20	29	23	20	11	17	28	21	169
		Col %	17.7%	19.1%	14.8%	19.0%	15.1%	11.3%	24.1%	13.9%	16.7%
	2 No	Count	84	111	131	83	57	129	79	120	794
		Col %	74.3%	73.0%	84.5%	79.0%	78.1%	86.0%	68.1%	79.5%	78.2%
	3 DK	Count	9	12	1	2	5	4	9	10	52
		Col %	8.0%	7.9%	.6%	1.9%	6.8%	2.7%	7.8%	6.6%	5.1%

Table 28: Innovative activity in the 12 months prior to the survey (synthetic indicator)

			P1: Country								Total
			12 Belgium	13 Germany	14 Denmark	17 Finland	22 Netherlands	23 Portugal	24 Sweden	25 United Kingdom	
Product innovation	1 new product	Count	76	104	120	70	34	101	84	97	686
		Col %	67.3%	68.4%	77.4%	66.7%	46.6%	67.3%	72.4%	64.2%	67.6%
	2 product improvements only	Count	14	16	8	12	10	8	15	23	106
		Col %	12.4%	10.5%	5.2%	11.4%	13.7%	5.3%	12.9%	15.2%	10.4%
	3 neither new nor improved product	Count	22	32	27	23	28	41	16	30	219
		Col %	19.5%	21.1%	17.4%	21.9%	38.4%	27.3%	13.8%	19.9%	21.6%
	4 DK	Count	1				1		1	1	4
		Col %	.9%				1.4%		.9%	.7%	.4%
Total	Count		113	152	155	105	73	150	116	151	1015
	Col %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

6.2.3 Global Collaboration Practice

Table 29: Type of global collaboration partners

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Collaborated with branch, subsidiary or sisten company	1 yes	46	40.7%	42	27.6%	40	25.8%	29	27.6%	15	20.5%	19	12.7%	53	45.7%	46	30.5%	290	28.6%
	2 no	64	56.6%	109	71.7%	114	73.5%	75	71.4%	58	79.5%	131	87.3%	59	50.9%	102	67.5%	712	70.1%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with company headquarters	1 yes	24	21.2%	19	12.5%	17	11.0%	8	7.6%	5	6.8%	13	8.7%	29	25.0%	30	19.9%	145	14.3%
	2 no	86	76.1%	132	86.8%	137	88.4%	96	91.4%	68	93.2%	137	91.3%	83	71.6%	118	78.1%	857	84.4%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with clients or customers	1 yes	90	79.6%	138	90.8%	117	75.5%	82	78.1%	54	74.0%	104	69.3%	80	69.0%	122	80.8%	787	77.5%
	2 no	20	17.7%	13	8.6%	37	23.9%	22	21.0%	19	26.0%	46	30.7%	32	27.6%	26	17.2%	215	21.2%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with production facilities	1 yes	36	31.9%	49	32.2%	49	31.6%	40	38.1%	16	21.9%	11	7.3%	43	37.1%	46	30.5%	290	28.6%
	2 no	74	65.5%	102	67.1%	105	67.7%	64	61.0%	57	78.1%	139	92.7%	69	59.5%	102	67.5%	712	70.1%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with suppliers of goods	1 yes	51	45.1%	75	49.3%	95	61.3%	71	67.6%	38	52.1%	93	62.0%	70	60.3%	91	60.3%	584	57.5%
	2 no	59	52.2%	76	50.0%	59	38.1%	33	31.4%	35	47.9%	57	38.0%	42	36.2%	57	37.7%	418	41.2%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with logistics or distribution partners	1 yes	32	28.3%	67	44.1%	38	24.5%	36	34.3%	16	21.9%	23	15.3%	48	41.4%	53	35.1%	313	30.8%
	2 no	78	69.0%	84	55.3%	116	74.8%	68	64.8%	57	78.1%	127	84.7%	64	55.2%	95	62.9%	689	67.9%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with other service providers	1 yes	31	27.4%	68	44.7%	49	31.6%	49	46.7%	22	30.1%	14	9.3%	36	31.0%	51	33.8%	320	31.5%
	2 no	79	69.9%	83	54.6%	105	67.7%	55	52.4%	51	69.9%	136	90.7%	76	65.5%	97	64.2%	682	67.2%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with research organisations / consultancies	1 yes	16	14.2%	29	19.1%	37	23.9%	28	26.7%	8	11.0%	4	2.7%	22	19.0%	34	22.5%	178	17.5%
	2 no	94	83.2%	122	80.3%	117	75.5%	76	72.4%	65	89.0%	146	97.3%	90	77.6%	114	75.5%	824	81.2%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with universities etc.	1 yes	20	17.7%	31	20.4%	25	16.1%	18	17.1%	6	8.2%	8	5.3%	27	23.3%	31	20.5%	166	16.4%
	2 no	90	79.6%	120	78.9%	129	83.2%	86	81.9%	67	91.8%	142	94.7%	85	73.3%	117	77.5%	836	82.4%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%
Collaborated with other public sector organisations	1 yes	19	16.8%	42	27.6%	27	17.4%	15	14.3%	2	2.7%	6	4.0%	28	24.1%	27	17.9%	166	16.4%
	2 no	91	80.5%	109	71.7%	127	81.9%	89	84.8%	71	97.3%	144	96.0%	84	72.4%	121	80.1%	836	82.4%
	11 DK	3	2.7%	1	.7%	1	.6%	1	1.0%					4	3.4%	3	2.0%	13	1.3%

Table 30: Origin of global collaboration partners

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Africa	1 Yes	46	40.7%	36	23.7%	29	18.7%	19	18.1%	29	39.7%	77	51.3%	18	15.5%	42	27.8%	296	29.2%
	2 No	67	59.3%	116	76.3%	125	80.6%	85	81.0%	44	60.3%	73	48.7%	93	80.2%	109	72.2%	712	70.1%
	3 DK					1	.6%	1	1.0%					5	4.3%			7	.7%
Asia	1 Yes	68	60.2%	94	61.8%	91	58.7%	64	61.0%	48	65.8%	42	28.0%	76	65.5%	85	56.3%	568	56.0%
	2 No	45	39.8%	57	37.5%	63	40.6%	40	38.1%	25	34.2%	108	72.0%	38	32.8%	63	41.7%	439	43.3%
	3 DK			1	.7%	1	.6%	1	1.0%					2	1.7%	3	2.0%	8	.8%
Middle East	1 Yes	41	36.3%	49	32.2%	37	23.9%	19	18.1%	40	54.8%	18	12.0%	37	31.9%	57	37.7%	298	29.4%
	2 No	72	63.7%	103	67.8%	118	76.1%	85	81.0%	33	45.2%	132	88.0%	79	68.1%	93	61.6%	715	70.4%
	3 DK							1	1.0%							1	.7%	2	.2%
North-America	1 Yes	66	58.4%	81	53.3%	90	58.1%	65	61.9%	47	64.4%	57	38.0%	67	57.8%	106	70.2%	579	57.0%
	2 No	47	41.6%	71	46.7%	65	41.9%	38	36.2%	26	35.6%	93	62.0%	48	41.4%	43	28.5%	431	42.5%
	3 DK							2	1.9%					1	.9%	2	1.3%	5	.5%
Latin America	1 Yes	30	26.5%	37	24.3%	33	21.3%	26	24.8%	28	38.4%	52	34.7%	36	31.0%	39	25.8%	281	27.7%
	2 No	83	73.5%	115	75.7%	122	78.7%	77	73.3%	45	61.6%	98	65.3%	78	67.2%	110	72.8%	728	71.7%
	3 DK							2	1.9%					2	1.7%	2	1.3%	6	.6%
Australia, New Zealand or other Oceania	1 Yes	33	29.2%	32	21.1%	49	31.6%	27	25.7%	30	41.1%	12	8.0%	34	29.3%	59	39.1%	276	27.2%
	2 No	80	70.8%	119	78.3%	106	68.4%	77	73.3%	43	58.9%	138	92.0%	82	70.7%	90	59.6%	735	72.4%
	3 DK			1	.7%			1	1.0%							2	1.3%	4	.4%
A country formerly belonging to the Soviet Union	1 Yes	48	42.5%	57	37.5%	53	34.2%	51	48.6%	37	50.7%	15	10.0%	44	37.9%	43	28.5%	348	34.3%
	2 No	63	55.8%	95	62.5%	101	65.2%	53	50.5%	35	47.9%	135	90.0%	71	61.2%	107	70.9%	660	65.0%
	3 DK	2	1.8%			1	.6%	1	1.0%	1	1.4%			1	.9%	1	.7%	7	.7%
Switzerland, Norway or another European country not in the EU	1 Yes	67	59.3%	115	75.7%	116	74.8%	50	47.6%	47	64.4%	23	15.3%	91	78.4%	66	43.7%	575	56.7%
	2 No	46	40.7%	37	24.3%	38	24.5%	54	51.4%	26	35.6%	127	84.7%	25	21.6%	83	55.0%	436	43.0%
	3 DK					1	.6%	1	1.0%							2	1.3%	4	.4%

6.2.4 Tools Used for Global Collaboration

Table 31: Usage and importance of traditional communication techniques for global collaboration

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Importance of Scheduled face-to-face meetings	1 Very important	63	55.8%	95	62.5%	81	52.3%	68	64.8%	35	47.9%	36	24.0%	58	50.0%	75	49.7%	511	50.3%
	2 ...	17	15.0%	33	21.7%	21	13.5%	14	13.3%	22	30.1%	32	21.3%	20	17.2%	25	16.6%	184	18.1%
	3 ...	10	8.8%	4	2.6%	9	5.8%	5	4.8%	9	12.3%	19	12.7%	15	12.9%	16	10.6%	87	8.6%
	4 ...					2	1.3%	7	6.7%			4	2.7%	3	2.6%	5	3.3%	21	2.1%
	5 Not important at all			1	.7%	3	1.9%	2	1.9%			1	.7%	2	1.7%			9	.9%
	6 DK													3	2.6%			3	.3%
	7 not used	23	20.4%	19	12.5%	39	25.2%	9	8.6%	7	9.6%	58	38.7%	15	12.9%	30	19.9%	200	19.7%
Importance of Informal face-to-face conversations	1 Very important	23	20.4%	48	31.6%	30	19.4%	26	24.8%	15	20.5%	32	21.3%	36	31.0%	39	25.8%	249	24.5%
	2 ...	24	21.2%	40	26.3%	25	16.1%	31	29.5%	16	21.9%	41	27.3%	29	25.0%	35	23.2%	241	23.7%
	3 ...	19	16.8%	16	10.5%	24	15.5%	19	18.1%	8	11.0%	18	12.0%	22	19.0%	30	19.9%	156	15.4%
	4 ...	3	2.7%	3	2.0%	4	2.6%	9	8.6%	2	2.7%	4	2.7%	8	6.9%	6	4.0%	39	3.8%
	5 Not important at all	1	.9%					1	1.0%			1	.7%	2	1.7%	1	.7%	6	.6%
	6 DK													4	3.4%	2	1.3%	6	.6%
	7 not used	43	38.1%	45	29.6%	72	46.5%	19	18.1%	32	43.8%	54	36.0%	15	12.9%	38	25.2%	318	31.3%
Importance of Telephone calls	1 Very important	68	60.2%	101	66.4%	86	55.5%	52	49.5%	53	72.6%	81	54.0%	44	37.9%	91	60.3%	576	56.7%
	2 ...	31	27.4%	40	26.3%	37	23.9%	31	29.5%	14	19.2%	38	25.3%	47	40.5%	36	23.8%	274	27.0%
	3 ...	10	8.8%	5	3.3%	22	14.2%	15	14.3%	6	8.2%	18	12.0%	13	11.2%	16	10.6%	105	10.3%
	4 ...	2	1.8%	3	2.0%	2	1.3%	5	4.8%			7	4.7%	6	5.2%	4	2.6%	29	2.9%
	5 Not important at all	2	1.8%			1	.6%	1	1.0%			2	1.3%	1	.9%	2	1.3%	9	.9%
	6 DK													3	2.6%			3	.3%
	7 not used			3	2.0%	7	4.5%	1	1.0%			4	2.7%	2	1.7%	2	1.3%	19	1.9%
Importance of Telephone conferences	1 Very important	41	36.3%	40	26.3%	32	20.6%	23	21.9%	9	12.3%	32	21.3%	30	25.9%	47	31.1%	254	25.0%
	2 ...	26	23.0%	33	21.7%	32	20.6%	16	15.2%	16	21.9%	23	15.3%	22	19.0%	43	28.5%	211	20.8%
	3 ...	14	12.4%	18	11.8%	17	11.0%	8	7.6%	6	8.2%	13	8.7%	20	17.2%	14	9.3%	110	10.8%
	4 ...	6	5.3%	4	2.6%	8	5.2%	7	6.7%	1	1.4%	3	2.0%	6	5.2%	7	4.6%	42	4.1%
	5 Not important at all	2	1.8%	1	.7%			1	1.0%	1	1.4%	2	1.3%			3	2.0%	10	1.0%
	6 DK													3	2.6%			3	.3%
	7 not used	24	21.2%	56	36.8%	66	42.6%	50	47.6%	40	54.8%	77	51.3%	35	30.2%	37	24.5%	385	37.9%

Table 32: Uptake of online collaboration tools for global collaboration

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Using E-mail	1 Yes	113	100.0%	152	100.0%	155	100.0%	105	100.0%	71	97.3%	150	100.0%	115	99.1%	150	99.3%	1011	99.6%
	2 No									2	2.7%			1	.9%	1	.7%	4	.4%
Using Lotus Notes or other groupware	1 Yes	60	53.1%	79	52.0%	78	50.3%	26	24.8%	51	69.9%	74	49.3%	54	46.6%	74	49.0%	496	48.9%
	2 No	49	43.4%	69	45.4%	68	43.9%	76	72.4%	20	27.4%	71	47.3%	56	48.3%	74	49.0%	483	47.6%
	4 DK	4	3.5%	4	2.6%	9	5.8%	3	2.9%	2	2.7%	5	3.3%	6	5.2%	3	2.0%	36	3.5%
Using Special websites for collaboration in a team or project	1 Yes	47	41.6%	57	37.5%	58	37.4%	42	40.0%	23	31.5%	57	38.0%	50	43.1%	61	40.4%	395	38.9%
	2 No	60	53.1%	95	62.5%	94	60.6%	62	59.0%	48	65.8%	90	60.0%	66	56.9%	85	56.3%	600	59.1%
	4 DK	6	5.3%			3	1.9%	1	1.0%	2	2.7%	3	2.0%			5	3.3%	20	2.0%
Using Video conferencing	1 Yes	33	29.2%	25	16.4%	30	19.4%	20	19.0%	12	16.4%	44	29.3%	23	19.8%	50	33.1%	237	23.3%
	2 No	78	69.0%	127	83.6%	124	80.0%	84	80.0%	60	82.2%	106	70.7%	93	80.2%	100	66.2%	772	76.1%
	4 DK	2	1.8%			1	.6%	1	1.0%	1	1.4%					1	.7%	6	.6%
Using Skype or other voice over IP applications	1 Yes	53	46.9%	50	32.9%	70	45.2%	45	42.9%	36	49.3%	74	49.3%	50	43.1%	58	38.4%	436	43.0%
	2 No	57	50.4%	101	66.4%	84	54.2%	60	57.1%	37	50.7%	75	50.0%	66	56.9%	88	58.3%	568	56.0%
	4 DK	3	2.7%	1	.7%	1	.6%					1	.7%			5	3.3%	11	1.1%
Using Net-Meeting, Groupboard or other Whiteboard	1 Yes	22	19.5%	25	16.4%	27	17.4%	21	20.0%	8	11.0%	33	22.0%	22	19.0%	36	23.8%	194	19.1%
	2 No	80	70.8%	125	82.2%	125	80.6%	81	77.1%	63	86.3%	112	74.7%	88	75.9%	113	74.8%	787	77.5%
	4 DK	11	9.7%	2	1.3%	3	1.9%	3	2.9%	2	2.7%	5	3.3%	6	5.2%	2	1.3%	34	3.3%
Using Wikis or knowledge blogs	1 Yes	16	14.2%	17	11.2%	18	11.6%	10	9.5%	6	8.2%	33	22.0%	9	7.8%	22	14.6%	131	12.9%
	2 No	84	74.3%	129	84.9%	128	82.6%	87	82.9%	65	89.0%	114	76.0%	101	87.1%	122	80.8%	830	81.8%
	4 DK	13	11.5%	6	3.9%	9	5.8%	8	7.6%	2	2.7%	3	2.0%	6	5.2%	7	4.6%	54	5.3%
Using LinkedIn, Xing or other social networking services	1 Yes	22	19.5%	28	18.4%	43	27.7%	14	13.3%	18	24.7%	22	14.7%	12	10.3%	24	15.9%	183	18.0%
	2 No	86	76.1%	124	81.6%	104	67.1%	81	77.1%	52	71.2%	120	80.0%	93	80.2%	122	80.8%	782	77.0%
	4 DK	5	4.4%			8	5.2%	10	9.5%	3	4.1%	8	5.3%	11	9.5%	5	3.3%	50	4.9%
Using Industry-specific online collaboration tools	1 Yes	40	35.4%	33	21.7%	34	21.9%	20	19.0%	23	31.5%	62	41.3%	35	30.2%	33	21.9%	280	27.6%
	2 No	67	59.3%	117	77.0%	115	74.2%	80	76.2%	48	65.8%	84	56.0%	77	66.4%	106	70.2%	694	68.4%
	4 DK	6	5.3%	2	1.3%	6	3.9%	5	4.8%	2	2.7%	4	2.7%	4	3.4%	12	7.9%	41	4.0%

Table 33: Uptake of online collaboration tools for global collaboration (any online collaboration tool, excluding e-mail)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Using virtual collaboration tools	1 yes	98	86.7%	125	82.2%	128	82.6%	77	73.3%	67	91.8%	132	88.0%	91	78.4%	127	84.1%	845	83.3%
	2 no	15	13.3%	27	17.8%	26	16.8%	28	26.7%	6	8.2%	18	12.0%	25	21.6%	24	15.9%	169	16.7%
	3 DK					1	.6%											1	.1%
Total		113	100.0%	152	100.0%	155	100.0%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100.0%

Table 34: Number on online collaboration tools used for global collaboration (means)

P1 P1: Country	sector Sector	C2_1_count Number of online collaboration tools
12 Belgium	1 Manufacturing	2.18
	2 Services	2.81
	Total	2.59
13 Germany	1 Manufacturing	1.37
	2 Services	2.59
	Total	2.07
14 Denmark	1 Manufacturing	1.42
	2 Services	2.93
	Total	2.31
17 Finland	1 Manufacturing	1.40
	2 Services	2.18
	Total	1.89
22 Netherlands	1 Manufacturing	2.37
	2 Services	2.50
	Total	2.42
23 Portugal	1 Manufacturing	2.00
	2 Services	3.27
	Total	2.66
24 Sweden	1 Manufacturing	1.61
	2 Services	2.75
	Total	2.20
25 United Kingdom	1 Manufacturing	1.77
	2 Services	2.77
	Total	2.37
Total	1 Manufacturing	1.74
	2 Services	2.76
	Total	2.32

Table 35: Number on online collaboration tools used for global collaboration (classified)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Number of online collaboration tools	0 none (only e-mail)	15	13.3%	27	17.8%	27	17.4%	28	26.7%	6	8.2%	18	12.0%	25	21.6%	24	15.9%	170	16.7%
	1 1	29	25.7%	41	27.0%	39	25.2%	27	25.7%	19	26.0%	28	18.7%	23	19.8%	34	22.5%	240	23.6%
	2 2 or 3	33	29.2%	53	34.9%	51	32.9%	29	27.6%	30	41.1%	60	40.0%	40	34.5%	58	38.4%	354	34.9%
	3 4 or more	36	31.9%	31	20.4%	38	24.5%	21	20.0%	18	24.7%	44	29.3%	28	24.1%	35	23.2%	251	24.7%
Total		113	100.0%	152	100%	155	100%	105	100%	73	100%	150	100%	116	100%	151	100.0%	1015	100.0%

Table 36: Importance of online collaboration tools for global collaboration (A)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Importance of E-mail	1 Very important	102	90.3%	139	91.4%	141	91.0%	98	93.3%	67	94.4%	131	87.3%	103	89.6%	135	90.0%	916	90.6%
	2 ...	8	7.1%	10	6.6%	9	5.8%	3	2.9%	4	5.6%	13	8.7%	7	6.1%	11	7.3%	65	6.4%
	3 ...	2	1.8%	2	1.3%	3	1.9%	2	1.9%			4	2.7%	2	1.7%	1	.7%	16	1.6%
	4 ...			1	.7%	1	.6%	1	1.0%			1	.7%			1	.7%	5	.5%
	5 Not important at all	1	.9%			1	.6%					1	.7%	2	1.7%	2	1.3%	7	.7%
	6 DK							1	1.0%					1	.9%			2	.2%
Importance of Lotus Notes or other groupware	1 Very important	32	53.3%	42	53.2%	43	55.1%	13	50.0%	19	37.3%	30	40.5%	26	48.1%	33	44.6%	238	48.0%
	2 ...	14	23.3%	19	24.1%	21	26.9%	4	15.4%	19	37.3%	29	39.2%	10	18.5%	19	25.7%	135	27.2%
	3 ...	6	10.0%	13	16.5%	12	15.4%	3	11.5%	12	23.5%	11	14.9%	9	16.7%	10	13.5%	76	15.3%
	4 ...	4	6.7%	1	1.3%	1	1.3%	3	11.5%	1	2.0%	2	2.7%	6	11.1%	3	4.1%	21	4.2%
	5 Not important at all	2	3.3%	3	3.8%	1	1.3%	2	7.7%			2	2.7%	1	1.9%	7	9.5%	18	3.6%
	6 DK	2	3.3%	1	1.3%			1	3.8%					2	3.7%	2	2.7%	8	1.6%
Importance of Special websites for collaboration in a team or project	1 Very important	21	44.7%	14	24.6%	16	27.6%	11	26.2%	9	39.1%	22	38.6%	15	30.0%	26	42.6%	134	33.9%
	2 ...	14	29.8%	27	47.4%	15	25.9%	18	42.9%	10	43.5%	25	43.9%	13	26.0%	14	23.0%	136	34.4%
	3 ...	5	10.6%	12	21.1%	13	22.4%	7	16.7%	2	8.7%	8	14.0%	14	28.0%	15	24.6%	76	19.2%
	4 ...	3	6.4%	3	5.3%	8	13.8%	3	7.1%	1	4.3%	2	3.5%	5	10.0%	2	3.3%	27	6.8%
	5 Not important at all	2	4.3%	1	1.8%	6	10.3%	3	7.1%	1	4.3%			1	2.0%	3	4.9%	17	4.3%
	6 DK	2	4.3%											2	4.0%	1	1.6%	5	1.3%
Importance of Video conferencing	1 Very important	12	36.4%	5	20.0%	7	23.3%	5	25.0%	2	16.7%	19	43.2%	2	8.7%	12	24.0%	64	27.0%
	2 ...	6	18.2%	11	44.0%	5	16.7%	2	10.0%	6	50.0%	8	18.2%	10	43.5%	14	28.0%	62	26.2%
	3 ...	9	27.3%	7	28.0%	12	40.0%	8	40.0%	1	8.3%	14	31.8%	5	21.7%	17	34.0%	73	30.8%
	4 ...	5	15.2%	2	8.0%	4	13.3%	3	15.0%	3	25.0%	3	6.8%	4	17.4%	7	14.0%	31	13.1%
	5 Not important at all	1	3.0%			2	6.7%	2	10.0%					1	4.3%			6	2.5%
	6 DK													1	4.3%			1	.4%
Importance of Skype or other voice over IP applications	1 Very important	19	35.8%	13	26.0%	24	34.3%	9	20.0%	12	33.3%	30	40.5%	6	12.0%	16	27.6%	129	29.6%
	2 ...	11	20.8%	17	34.0%	17	24.3%	12	26.7%	12	33.3%	22	29.7%	19	38.0%	15	25.9%	125	28.7%
	3 ...	13	24.5%	10	20.0%	18	25.7%	17	37.8%	5	13.9%	16	21.6%	13	26.0%	14	24.1%	106	24.3%
	4 ...	5	9.4%	8	16.0%	7	10.0%	5	11.1%	2	5.6%	5	6.8%	8	16.0%	7	12.1%	47	10.8%
	5 Not important at all	3	5.7%	1	2.0%	4	5.7%	2	4.4%	4	11.1%	1	1.4%	4	8.0%	5	8.6%	24	5.5%
	6 DK	2	3.8%	1	2.0%					1	2.8%					1	1.7%	5	1.1%

Table 37: Importance of online collaboration tools for global collaboration (B)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Importance of Net-Meeting, Groupboard or other Whiteboard	1 Very important	5	22.7%	5	20.0%	9	33.3%	2	9.5%	3	37.5%	13	39.4%	2	9.1%	10	27.8%	49	25.3%
	2 ...	6	27.3%	6	24.0%	10	37.0%	9	42.9%	4	50.0%	11	33.3%	7	31.8%	14	38.9%	67	34.5%
	3 ...	3	13.6%	12	48.0%	5	18.5%	6	28.6%	1	12.5%	7	21.2%	9	40.9%	7	19.4%	50	25.8%
	4 ...	6	27.3%	2	8.0%	2	7.4%	2	9.5%			1	3.0%	2	9.1%	2	5.6%	17	8.8%
	5 Not important at all	1	4.5%			1	3.7%	2	9.5%					1	4.5%			5	2.6%
	6 DK	1	4.5%									1	3.0%	1	4.5%	3	8.3%	6	3.1%
Importance of Wikis or knowledge blogs	1 Very important	1	6.3%	4	23.5%	4	22.2%	1	10.0%			9	27.3%	2	22.2%	4	18.2%	25	19.1%
	2 ...	3	18.8%	2	11.8%	3	16.7%	2	20.0%	3	50.0%	14	42.4%	4	44.4%	2	9.1%	33	25.2%
	3 ...	8	50.0%	11	64.7%	7	38.9%	3	30.0%	3	50.0%	9	27.3%	1	11.1%	10	45.5%	52	39.7%
	4 ...	4	25.0%			3	16.7%	3	30.0%			1	3.0%	2	22.2%	5	22.7%	18	13.7%
	5 Not important at all					1	5.6%	1	10.0%							1	4.5%	3	2.3%
Importance of LinkedIn, Xing or other social networking services	1 Very important	2	9.1%	6	21.4%	5	11.6%	2	14.3%	7	38.9%	8	36.4%			4	16.7%	34	18.6%
	2 ...	5	22.7%	5	17.9%	3	7.0%	2	14.3%	6	33.3%	8	36.4%	1	8.3%	8	33.3%	38	20.8%
	3 ...	6	27.3%	10	35.7%	16	37.2%	7	50.0%	4	22.2%	3	13.6%	6	50.0%	8	33.3%	60	32.8%
	4 ...	4	18.2%	4	14.3%	9	20.9%	2	14.3%	1	5.6%	1	4.5%	5	41.7%	4	16.7%	30	16.4%
	5 Not important at all	4	18.2%	3	10.7%	9	20.9%	1	7.1%			2	9.1%					19	10.4%
	6 DK	1	4.5%			1	2.3%											2	1.1%
Importance of Industry-specific online collaboration tools	1 Very important	17	42.5%	11	33.3%	18	52.9%	9	45.0%	12	52.2%	24	38.7%	4	11.4%	11	33.3%	106	37.9%
	2 ...	14	35.0%	8	24.2%	11	32.4%	3	15.0%	8	34.8%	30	48.4%	10	28.6%	12	36.4%	96	34.3%
	3 ...	5	12.5%	13	39.4%	3	8.8%	7	35.0%	3	13.0%	5	8.1%	12	34.3%	9	27.3%	57	20.4%
	4 ...	1	2.5%			2	5.9%					2	3.2%	5	14.3%	1	3.0%	11	3.9%
	5 Not important at all	3	7.5%	1	3.0%							1	1.6%	2	5.7%			7	2.5%
	6 DK							1	5.0%					2	5.7%			3	1.1%

Table 38: Importance of online collaboration tools for global collaboration – combined indicator (C)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Importance of online collaboration tools	1 very important	61	54.0%	71	46.7%	74	47.7%	33	31.4%	35	47.9%	71	47.3%	43	37.1%	66	43.7%	454	44.7%
	2 ...	18	15.9%	25	16.4%	31	20.0%	23	21.9%	23	31.5%	44	29.3%	25	21.6%	29	19.2%	218	21.5%
	3 ...	10	8.8%	21	13.8%	12	7.7%	15	14.3%	8	11.0%	13	8.7%	14	12.1%	21	13.9%	114	11.2%
	4 ...	4	3.5%	3	2.0%	6	3.9%	4	3.8%	1	1.4%	1	.7%	5	4.3%	6	4.0%	30	3.0%
	5 not important at all	3	2.7%	5	3.3%	5	3.2%	1	1.0%			3	2.0%	2	1.7%	5	3.3%	24	2.4%
	7 none used	17	15.0%	27	17.8%	27	17.4%	29	27.6%	6	8.2%	18	12.0%	27	23.3%	24	15.9%	175	17.2%
Total		113	100.0%	152	100.0%	155	100%	105	100.0%	73	100.0%	150	100.0%	116	100.0%	151	100.0%	1015	100.0%

Table 39: Importance of traditional communication channels and online collaboration tools for global collaboration (means)

Report

Mean

P1 P1: Country	C1_2_1 Importance of Scheduled face-to-face meetings	C1_2_2 Importance of Informal face-to-face conversations	C1_2_3 Importance of Telephone calls	C1_2_4 Importance of Telephone conferences	C2_2_1 Importance of E-mail	C2_2_2 Importance of Lotus Notes or other groupware	C2_2_3 Importance of Special websites for collaboration in a team or project	C2_2_4 Importance of Video conferencing	C2_2_5 Importance of Skype or other voice over IP applications	C2_2_6 Importance of Net-Meeting, Groupboard or other Whiteboard	C2_2_7 Importance of Wikis or knowledge blogs	C2_2_8 Importance of LinkedIn, Xing or other social networking services	C2_2_9 Importance of Industry-specific online collaboration tools
12 Belgium	1.41	2.07	1.58	1.90	1.14	1.79	1.91	2.30	2.25	2.62	2.94	3.14	1.98
13 Germany	1.34	1.76	1.40	1.89	1.11	1.77	2.12	2.24	2.33	2.44	2.41	2.75	2.15
14 Denmark	1.49	2.02	1.61	2.01	1.14	1.67	2.53	2.63	2.29	2.11	2.67	3.33	1.68
17 Finland	1.55	2.16	1.77	2.04	1.10	2.08	2.26	2.75	2.53	2.67	3.10	2.86	1.89
22 Netherlands	1.61	1.93	1.36	2.06	1.06	1.90	1.91	2.42	2.26	1.75	2.50	1.94	1.61
23 Portugal	1.93	1.97	1.71	1.90	1.19	1.88	1.82	2.02	1.99	1.88	2.06	2.14	1.81
24 Sweden	1.68	2.08	1.86	2.03	1.17	1.96	2.25	2.64	2.70	2.67	2.33	3.33	2.73
25 United Kingdom	1.60	2.05	1.59	1.91	1.16	2.06	2.03	2.38	2.47	2.03	2.86	2.50	2.00
Total	1.56	2.00	1.61	1.95	1.14	1.86	2.12	2.38	2.33	2.27	2.55	2.79	1.98

Table 40: Online collaboration tool use score, according to company size class

		Size class						Total	
		1 5-9 employees		2 10-49 employees		3 50 to 250 employees		Count	Col %
		Count	Col %	Count	Col %	Count	Col %		
Online collaboration tool use score (classes)	1 0 to 5 points	73	31.1%	68	15.4%	41	12.1%	182	17.9%
	2 6 to 10 points	61	26.0%	121	27.4%	93	27.5%	275	27.1%
	3 11 to 15 points	49	20.9%	111	25.1%	71	21.0%	231	22.8%
	4 16 to 20 points	29	12.3%	70	15.8%	53	15.7%	152	15.0%
	5 21 to 45 points	23	9.8%	72	16.3%	80	23.7%	175	17.2%
Total		235	100.0%	442	100.0%	338	100.0%	1015	100.0%

Table 41: Suitability of online tools for collaboration purposes

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Create trust within the team	1 Fully agree	14	12.4%	12	7.9%	39	25.2%	9	8.6%	4	5.5%	36	24.0%	17	14.7%	32	21.2%	163	16.1%
	2	28	24.8%	45	29.6%	59	38.1%	34	32.4%	24	32.9%	64	42.7%	30	25.9%	39	25.8%	323	31.8%
	3	48	42.5%	58	38.2%	37	23.9%	43	41.0%	22	30.1%	47	31.3%	44	37.9%	40	26.5%	339	33.4%
	4	10	8.8%	25	16.4%	11	7.1%	9	8.6%	2	2.7%	3	2.0%	16	13.8%	20	13.2%	96	9.5%
	5 Do not agree at all	9	8.0%	10	6.6%	4	2.6%	7	6.7%	4	5.5%			5	4.3%	15	9.9%	54	5.3%
	6 Do not know	4	3.5%	2	1.3%	5	3.2%	3	2.9%	17	23.3%			4	3.4%	5	3.3%	40	3.9%
Bridge cultural differences	1 Fully agree	19	16.8%	14	9.2%	27	17.4%	14	13.3%	1	1.4%	33	22.0%	14	12.1%	36	23.8%	158	15.6%
	2	26	23.0%	34	22.4%	46	29.7%	28	26.7%	17	23.3%	58	38.7%	35	30.2%	36	23.8%	280	27.6%
	3	26	23.0%	49	32.2%	42	27.1%	24	22.9%	20	27.4%	39	26.0%	25	21.6%	40	26.5%	265	26.1%
	4	18	15.9%	22	14.5%	18	11.6%	24	22.9%	7	9.6%	14	9.3%	24	20.7%	17	11.3%	144	14.2%
	5 Do not agree at all	19	16.8%	30	19.7%	17	11.0%	11	10.5%	11	15.1%	6	4.0%	14	12.1%	19	12.6%	127	12.5%
	6 Do not know	5	4.4%	3	2.0%	5	3.2%	4	3.8%	17	23.3%			4	3.4%	3	2.0%	41	4.0%
Enable negotiations without meeting face-to-face	1 Fully agree	27	23.9%	37	24.3%	72	46.5%	45	42.9%	2	2.7%	54	36.0%	30	25.9%	58	38.4%	325	32.0%
	2	24	21.2%	44	28.9%	43	27.7%	29	27.6%	12	16.4%	45	30.0%	21	18.1%	44	29.1%	262	25.8%
	3	23	20.4%	32	21.1%	21	13.5%	13	12.4%	24	32.9%	29	19.3%	36	31.0%	19	12.6%	197	19.4%
	4	13	11.5%	21	13.8%	12	7.7%	9	8.6%	11	15.1%	18	12.0%	15	12.9%	14	9.3%	113	11.1%
	5 Do not agree at all	22	19.5%	18	11.8%	5	3.2%	7	6.7%	10	13.7%	4	2.7%	11	9.5%	13	8.6%	90	8.9%
	6 Do not know	4	3.5%			2	1.3%	2	1.9%	14	19.2%			3	2.6%	3	2.0%	28	2.8%
Support learning and knowledge sharing	1 Fully agree	27	23.9%	32	21.1%	82	52.9%	28	26.7%	10	13.7%	62	41.3%	31	26.7%	44	29.1%	316	31.1%
	2	43	38.1%	63	41.4%	47	30.3%	37	35.2%	31	42.5%	64	42.7%	41	35.3%	59	39.1%	385	37.9%
	3	27	23.9%	43	28.3%	17	11.0%	26	24.8%	13	17.8%	22	14.7%	30	25.9%	37	24.5%	215	21.2%
	4	6	5.3%	10	6.6%	3	1.9%	7	6.7%	2	2.7%	1	.7%	9	7.8%	6	4.0%	44	4.3%
	5 Do not agree at all	5	4.4%	4	2.6%			4	3.8%	2	2.7%	1	.7%	3	2.6%	3	2.0%	22	2.2%
	6 Do not know	5	4.4%			6	3.9%	3	2.9%	15	20.5%			2	1.7%	2	1.3%	33	3.3%
Support coordination of tasks within the team	1 Fully agree	46	40.7%	44	28.9%	71	45.8%	33	31.4%	7	9.6%	54	36.0%	37	31.9%	50	33.1%	342	33.7%
	2	35	31.0%	73	48.0%	54	34.8%	33	31.4%	34	46.6%	63	42.0%	43	37.1%	63	41.7%	398	39.2%
	3	19	16.8%	28	18.4%	21	13.5%	28	26.7%	12	16.4%	31	20.7%	23	19.8%	21	13.9%	183	18.0%
	4	4	3.5%	5	3.3%	2	1.3%	4	3.8%	2	2.7%	1	.7%	7	6.0%	5	3.3%	30	3.0%
	5 Do not agree at all	4	3.5%	1	.7%	2	1.3%	5	4.8%	3	4.1%			3	2.6%	7	4.6%	25	2.5%
	6 Do not know	5	4.4%	1	.7%	5	3.2%	2	1.9%	15	20.5%	1	.7%	3	2.6%	5	3.3%	37	3.6%
Support the exchange of opinions and joint decision making	1 Fully agree	28	24.8%	35	23.0%	41	26.5%	32	30.5%	8	11.0%	59	39.3%	23	19.8%	49	32.5%	275	27.1%
	2	35	31.0%	61	40.1%	47	30.3%	35	33.3%	27	37.0%	57	38.0%	35	30.2%	55	36.4%	352	34.7%
	3	26	23.0%	44	28.9%	38	24.5%	24	22.9%	17	23.3%	31	20.7%	37	31.9%	33	21.9%	250	24.6%
	4	13	11.5%	8	5.3%	12	7.7%	9	8.6%	3	4.1%			11	9.5%	6	4.0%	62	6.1%
	5 Do not agree at all	7	6.2%	4	2.6%	12	7.7%	2	1.9%	3	4.1%	2	1.3%	7	6.0%	5	3.3%	42	4.1%
	6 Do not know	4	3.5%			5	3.2%	3	2.9%	15	20.5%	1	.7%	3	2.6%	3	2.0%	34	3.3%
Support generation of ideas	1 Fully agree	18	15.9%	16	10.5%	46	29.7%	13	12.4%	2	2.7%	46	30.7%	16	13.8%	37	24.5%	194	19.1%
	2	38	33.6%	49	32.2%	49	31.6%	28	26.7%	32	43.8%	58	38.7%	30	25.9%	53	35.1%	337	33.2%
	3	33	29.2%	57	37.5%	34	21.9%	39	37.1%	18	24.7%	42	28.0%	40	34.5%	40	26.5%	303	29.9%
	4	12	10.6%	19	12.5%	16	10.3%	16	15.2%	3	4.1%	3	2.0%	16	13.8%	11	7.3%	96	9.5%
	5 Do not agree at all	8	7.1%	11	7.2%	6	3.9%	6	5.7%	3	4.1%	1	.7%	10	8.6%	6	4.0%	51	5.0%
	6 Do not know	4	3.5%			4	2.6%	3	2.9%	15	20.5%			4	3.4%	4	2.6%	34	3.3%

Table 42: Perceived suitability of online tools for collaboration purposes (means)

P1 P1: Country	C5_1 Create trust within the team	C5_2 Bridge cultural differences	C5_3 Enable negotiations without meeting face-to-face	C5_4 Support learning and knowledge sharing	C5_5 Support coordination of tasks within the team	C5_6 Support the exchange of opinions and joint decision making	C5_7 Support generation of ideas
12 Belgium	2.74	2.93	2.81	2.25	1.94	2.41	2.58
13 Germany	2.84	3.13	2.60	2.28	1.98	2.24	2.74
14 Denmark	2.21	2.68	1.92	1.60	1.73	2.38	2.25
17 Finland	2.72	2.90	2.07	2.24	2.17	2.16	2.75
22 Netherlands	2.61	3.18	3.25	2.22	2.31	2.41	2.53
23 Portugal	2.11	2.35	2.15	1.77	1.86	1.85	2.03
24 Sweden	2.66	2.90	2.61	2.23	2.08	2.50	2.77
25 United Kingdom	2.64	2.64	2.19	2.09	2.01	2.07	2.29
Total	2.54	2.80	2.37	2.05	1.98	2.23	2.46

6.2.5 Drivers, Barriers and Preparation Related to Global Collaboration

Table 43: Reasons for engaging in global collaboration (A)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Get access to a foreign market	1 Very important	57	50.4%	74	48.7%	79	51.0%	57	54.3%	37	50.7%	78	52.0%	59	50.9%	77	51.0%	518	51.0%
	2	25	22.1%	43	28.3%	27	17.4%	16	15.2%	23	31.5%	48	32.0%	18	15.5%	41	27.2%	241	23.7%
	3	15	13.3%	18	11.8%	18	11.6%	11	10.5%	7	9.6%	15	10.0%	14	12.1%	16	10.6%	114	11.2%
	4	4	3.5%	7	4.6%	11	7.1%	8	7.6%	1	1.4%	4	2.7%	11	9.5%	6	4.0%	52	5.1%
	5 Not important at all	10	8.8%	10	6.6%	19	12.3%	11	10.5%	5	6.8%	5	3.3%	11	9.5%	9	6.0%	80	7.9%
	6 Do not know	2	1.8%			1	.6%	2	1.9%					3	2.6%	2	1.3%	10	1.0%
Increase the speed of developmen t	1 Very important	29	25.7%	19	12.5%	42	27.1%	17	16.2%	14	19.2%	56	37.3%	20	17.2%	38	25.2%	235	23.2%
	2	33	29.2%	30	19.7%	40	25.8%	26	24.8%	21	28.8%	62	41.3%	37	31.9%	39	25.8%	288	28.4%
	3	24	21.2%	47	30.9%	32	20.6%	28	26.7%	20	27.4%	21	14.0%	31	26.7%	34	22.5%	237	23.3%
	4	6	5.3%	23	15.1%	12	7.7%	13	12.4%	9	12.3%	5	3.3%	15	12.9%	10	6.6%	93	9.2%
	5 Not important at all	15	13.3%	33	21.7%	25	16.1%	18	17.1%	6	8.2%	5	3.3%	10	8.6%	29	19.2%	141	13.9%
	6 Do not know	6	5.3%			4	2.6%	3	2.9%	3	4.1%	1	.7%	3	2.6%	1	.7%	21	2.1%
Realise direct cost savings	1 Very important	29	25.7%	25	16.4%	44	28.4%	22	21.0%	26	35.6%	55	36.7%	24	20.7%	36	23.8%	261	25.7%
	2	20	17.7%	35	23.0%	27	17.4%	20	19.0%	22	30.1%	32	21.3%	29	25.0%	39	25.8%	224	22.1%
	3	18	15.9%	30	19.7%	27	17.4%	12	11.4%	12	16.4%	25	16.7%	26	22.4%	30	19.9%	180	17.7%
	4	13	11.5%	22	14.5%	18	11.6%	18	17.1%	6	8.2%	19	12.7%	10	8.6%	10	6.6%	116	11.4%
	5 Not important at all	26	23.0%	39	25.7%	37	23.9%	31	29.5%	5	6.8%	19	12.7%	23	19.8%	34	22.5%	214	21.1%
	6 Do not know	7	6.2%	1	.7%	2	1.3%	2	1.9%	2	2.7%			4	3.4%	2	1.3%	20	2.0%
Get access to new technology	1 Very important	24	21.2%	20	13.2%	25	16.1%	13	12.4%	8	11.0%	68	45.3%	25	21.6%	42	27.8%	225	22.2%
	2	19	16.8%	27	17.8%	19	12.3%	14	13.3%	35	47.9%	38	25.3%	22	19.0%	39	25.8%	213	21.0%
	3	22	19.5%	29	19.1%	35	22.6%	16	15.2%	13	17.8%	22	14.7%	26	22.4%	24	15.9%	187	18.4%
	4	18	15.9%	25	16.4%	26	16.8%	26	24.8%	4	5.5%	13	8.7%	18	15.5%	13	8.6%	143	14.1%
	5 Not important at all	26	23.0%	51	33.6%	47	30.3%	34	32.4%	13	17.8%	9	6.0%	23	19.8%	31	20.5%	234	23.1%
	6 Do not know	4	3.5%			3	1.9%	2	1.9%					2	1.7%	2	1.3%	13	1.3%
Get access to low wage labour	1 Very important	11	9.7%	14	9.2%	4	2.6%	7	6.7%	7	9.6%	7	4.7%	12	10.3%	9	6.0%	71	7.0%
	2	10	8.8%	8	5.3%	10	6.5%	6	5.7%	18	24.7%	11	7.3%	13	11.2%	14	9.3%	90	8.9%
	3	15	13.3%	24	15.8%	11	7.1%	10	9.5%	16	21.9%	37	24.7%	12	10.3%	24	15.9%	149	14.7%
	4	15	13.3%	21	13.8%	22	14.2%	19	18.1%	12	16.4%	38	25.3%	22	19.0%	24	15.9%	173	17.0%
	5 Not important at all	50	44.2%	84	55.3%	105	67.7%	63	60.0%	20	27.4%	56	37.3%	52	44.8%	71	47.0%	501	49.4%
	6 Do not know	12	10.6%	1	.7%	3	1.9%					1	.7%	5	4.3%	9	6.0%	31	3.1%

Table 44: Reasons for engaging in global collaboration (B)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Get access to highly-skilled labour and expertise	1 Very important	22	19.5%	17	11.2%	25	16.1%	6	5.7%	10	13.7%	55	36.7%	19	16.4%	34	22.5%	188	18.5%
	2	16	14.2%	28	18.4%	26	16.8%	14	13.3%	23	31.5%	49	32.7%	30	25.9%	38	25.2%	224	22.1%
	3	19	16.8%	31	20.4%	28	18.1%	22	21.0%	18	24.7%	28	18.7%	25	21.6%	22	14.6%	193	19.0%
	4	18	15.9%	30	19.7%	18	11.6%	20	19.0%	5	6.8%	8	5.3%	20	17.2%	15	9.9%	134	13.2%
	5 Not important at all	34	30.1%	45	29.6%	56	36.1%	42	40.0%	14	19.2%	10	6.7%	20	17.2%	35	23.2%	256	25.2%
	6 Do not know	4	3.5%	1	.7%	2	1.3%	1	1.0%	3	4.1%			2	1.7%	7	4.6%	20	2.0%
Be able to observe international developments in your industry	1 Very important	39	34.5%	39	25.7%	37	23.9%	21	20.0%	25	34.2%	57	38.0%	33	28.4%	36	23.8%	287	28.3%
	2	33	29.2%	45	29.6%	42	27.1%	22	21.0%	27	37.0%	51	34.0%	34	29.3%	53	35.1%	307	30.2%
	3	14	12.4%	38	25.0%	34	21.9%	34	32.4%	13	17.8%	32	21.3%	26	22.4%	25	16.6%	216	21.3%
	4	8	7.1%	11	7.2%	14	9.0%	15	14.3%	2	2.7%	7	4.7%	13	11.2%	16	10.6%	86	8.5%
	5 Not important at all	14	12.4%	19	12.5%	27	17.4%	10	9.5%	5	6.8%	3	2.0%	8	6.9%	19	12.6%	105	10.3%
	6 Do not know	5	4.4%			1	.6%	3	2.9%	1	1.4%			2	1.7%	2	1.3%	14	1.4%
Avoid regulatory barriers in (own country)	1 Very important	5	4.4%	15	9.9%	17	11.0%	1	1.0%	8	11.0%	20	13.3%	5	4.3%	16	10.6%	87	8.6%
	2	12	10.6%	18	11.8%	6	3.9%	5	4.8%	24	32.9%	29	19.3%	6	5.2%	16	10.6%	116	11.4%
	3	14	12.4%	36	23.7%	22	14.2%	5	4.8%	8	11.0%	37	24.7%	13	11.2%	24	15.9%	159	15.7%
	4	13	11.5%	24	15.8%	26	16.8%	14	13.3%	6	8.2%	33	22.0%	14	12.1%	18	11.9%	148	14.6%
	5 Not important at all	55	48.7%	57	37.5%	79	51.0%	80	76.2%	24	32.9%	29	19.3%	71	61.2%	71	47.0%	466	45.9%
	6 Do not know	14	12.4%	2	1.3%	5	3.2%			3	4.1%	2	1.3%	7	6.0%	6	4.0%	39	3.8%
Participate in or manage a global supply chain	1 Very important	15	13.3%	20	13.2%	17	11.0%	30	28.6%	7	9.6%	32	21.3%	26	22.4%	42	27.8%	189	18.6%
	2	16	14.2%	29	19.1%	21	13.5%	29	27.6%	18	24.7%	50	33.3%	23	19.8%	24	15.9%	210	20.7%
	3	15	13.3%	34	22.4%	20	12.9%	17	16.2%	18	24.7%	32	21.3%	23	19.8%	30	19.9%	189	18.6%
	4	13	11.5%	22	14.5%	16	10.3%	10	9.5%	3	4.1%	18	12.0%	12	10.3%	13	8.6%	107	10.5%
	5 Not important at all	42	37.2%	47	30.9%	73	47.1%	17	16.2%	9	12.3%	16	10.7%	27	23.3%	34	22.5%	265	26.1%
	6 Do not know	12	10.6%			8	5.2%	2	1.9%	18	24.7%	2	1.3%	5	4.3%	8	5.3%	55	5.4%
Follow important customers or clients into a foreign market	1 Very important	47	41.6%	60	39.5%	57	36.8%	32	30.5%	22	30.1%	60	40.0%	39	33.6%	58	38.4%	375	36.9%
	2	29	25.7%	51	33.6%	34	21.9%	23	21.9%	23	31.5%	46	30.7%	29	25.0%	37	24.5%	272	26.8%
	3	10	8.8%	13	8.6%	20	12.9%	20	19.0%	13	17.8%	21	14.0%	12	10.3%	22	14.6%	131	12.9%
	4	8	7.1%	9	5.9%	9	5.8%	9	8.6%	4	5.5%	10	6.7%	15	12.9%	12	7.9%	76	7.5%
	5 Not important at all	16	14.2%	18	11.8%	32	20.6%	19	18.1%	7	9.6%	13	8.7%	15	12.9%	18	11.9%	138	13.6%
	6 Do not know	3	2.7%	1	.7%	3	1.9%	2	1.9%	4	5.5%			6	5.2%	4	2.6%	23	2.3%

Table 45: Reasons for engaging in global collaboration (means)

P1 P1: Country	D1_1 Get access to a foreign market	D1_2 Increase the speed of development	D1_3 Realise direct cost savings	D1_4 Get access to new technology	D1_5 Get access to low wage labour	D1_6 Get access to highly-skilled labour and expertise	D1_7 Be able to observe international developments in your industry	D1_8 Avoid regulatory barriers in (own country)	D1_9 Participate in or manage a global supply chain	D1_10 Follow important customers or clients into a foreign market
12 Belgium	1.96	2.49	2.88	3.03	3.82	3.24	2.31	4.02	3.50	2.25
13 Germany	1.92	3.14	3.10	3.39	4.01	3.38	2.51	3.60	3.31	2.17
14 Denmark	2.12	2.59	2.85	3.34	4.41	3.35	2.69	3.96	3.73	2.51
17 Finland	2.03	2.89	3.16	3.52	4.19	3.75	2.72	4.59	2.56	2.61
22 Netherlands	1.82	2.60	2.18	2.71	3.27	2.86	2.10	3.20	2.80	2.29
23 Portugal	1.73	1.93	2.43	2.05	3.84	2.13	1.99	3.15	2.57	2.13
24 Sweden	2.09	2.63	2.81	2.93	3.80	2.93	2.38	4.28	2.92	2.44
25 United Kingdom	1.85	2.69	2.78	2.68	3.94	2.85	2.52	3.77	2.81	2.29
Total	1.94	2.61	2.80	2.95	3.96	3.05	2.42	3.81	3.05	2.32

Table 46: Achievement of goals of global collaboration (A)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Achieved: Get access to a foreign market	1 Fully achieved	35	36.1%	47	34.8%	55	44.4%	26	31.0%	11	16.4%	28	19.9%	45	49.5%	41	30.6%	288	33.0%
	2	30	30.9%	55	40.7%	39	31.5%	31	36.9%	34	50.7%	54	38.3%	16	17.6%	49	36.6%	308	35.3%
	3	22	22.7%	25	18.5%	15	12.1%	17	20.2%	22	32.8%	39	27.7%	21	23.1%	32	23.9%	193	22.1%
	4	4	4.1%	4	3.0%	7	5.6%	5	6.0%			14	9.9%	5	5.5%	6	4.5%	45	5.2%
	5 Not achieved at all	2	2.1%	3	2.2%	4	3.2%	4	4.8%			2	1.4%	4	4.4%	2	1.5%	21	2.4%
	6 Do not know	4	4.1%	1	.7%	4	3.2%	1	1.2%			4	2.8%			4	3.0%	18	2.1%
Achieved: Increase the speed of development	1 Fully achieved	20	23.3%	10	10.4%	23	20.2%	11	15.5%			16	11.5%	11	12.5%	24	21.6%	115	15.1%
	2	31	36.0%	29	30.2%	32	28.1%	26	36.6%	27	49.1%	52	37.4%	28	31.8%	33	29.7%	258	33.9%
	3	19	22.1%	40	41.7%	40	35.1%	19	26.8%	23	41.8%	51	36.7%	35	39.8%	37	33.3%	264	34.7%
	4	9	10.5%	8	8.3%	9	7.9%	12	16.9%	1	1.8%	15	10.8%	12	13.6%	6	5.4%	72	9.5%
	5 Not achieved at all	1	1.2%	4	4.2%	7	6.1%	2	2.8%	2	3.6%	2	1.4%	1	1.1%	6	5.4%	25	3.3%
	6 Do not know	6	7.0%	5	5.2%	3	2.6%	1	1.4%	2	3.6%	3	2.2%	1	1.1%	5	4.5%	26	3.4%
Achieved: Realise direct cost savings	1 Fully achieved	12	17.9%	17	18.9%	21	21.4%	10	18.5%	4	6.7%	13	11.6%	20	25.3%	19	18.1%	116	17.4%
	2	15	22.4%	27	30.0%	34	34.7%	22	40.7%	27	45.0%	21	18.8%	19	24.1%	40	38.1%	205	30.8%
	3	20	29.9%	33	36.7%	23	23.5%	11	20.4%	20	33.3%	42	37.5%	26	32.9%	26	24.8%	201	30.2%
	4	8	11.9%	8	8.9%	6	6.1%	7	13.0%	5	8.3%	20	17.9%	6	7.6%	8	7.6%	68	10.2%
	5 Not achieved at all	5	7.5%	3	3.3%	9	9.2%	2	3.7%	1	1.7%	12	10.7%	6	7.6%	7	6.7%	45	6.8%
	6 Do not know	7	10.4%	2	2.2%	5	5.1%	2	3.7%	3	5.0%	4	3.6%	2	2.5%	5	4.8%	30	4.5%
Achieved: Get access to new technology	1 Fully achieved	14	21.5%	7	9.2%	16	20.3%	8	18.6%	3	5.4%	24	18.8%	9	12.3%	20	19.0%	101	16.2%
	2	21	32.3%	24	31.6%	25	31.6%	11	25.6%	23	41.1%	55	43.0%	23	31.5%	44	41.9%	226	36.2%
	3	10	15.4%	30	39.5%	27	34.2%	19	44.2%	23	41.1%	31	24.2%	28	38.4%	21	20.0%	189	30.2%
	4	4	6.2%	10	13.2%	6	7.6%	2	4.7%	3	5.4%	9	7.0%	6	8.2%	8	7.6%	48	7.7%
	5 Not achieved at all	4	6.2%	4	5.3%	2	2.5%	3	7.0%	1	1.8%	5	3.9%	6	8.2%	5	4.8%	30	4.8%
	6 Do not know	12	18.5%	1	1.3%	3	3.8%			3	5.4%	4	3.1%	1	1.4%	7	6.7%	31	5.0%
Achieved: Get access to low wage labour	1 Fully achieved	7	19.4%	8	17.4%	3	12.0%	2	8.7%	4	9.8%	1	1.8%	13	35.1%	3	6.4%	41	13.2%
	2	6	16.7%	12	26.1%	8	32.0%	10	43.5%	14	34.1%	5	9.1%	7	18.9%	12	25.5%	74	23.9%
	3	12	33.3%	10	21.7%	7	28.0%	5	21.7%	17	41.5%	19	34.5%	11	29.7%	20	42.6%	101	32.6%
	4	2	5.6%	10	21.7%	5	20.0%	3	13.0%	1	2.4%	11	20.0%	2	5.4%	7	14.9%	41	13.2%
	5 Not achieved at all	5	13.9%	2	4.3%	1	4.0%	3	13.0%	1	2.4%	16	29.1%	3	8.1%	3	6.4%	34	11.0%
	6 Do not know	4	11.1%	4	8.7%	1	4.0%			4	9.8%	3	5.5%	1	2.7%	2	4.3%	19	6.1%

Table 47: Achievement of goals of global collaboration (B)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Achieved: Get access to highly-skilled labour and expertise	1 Fully achieved	17	29.8%	8	10.5%	15	19.0%	3	7.1%	4	7.8%	15	11.4%	16	21.6%	18	19.1%	96	15.9%
	2	18	31.6%	26	34.2%	23	29.1%	14	33.3%	20	39.2%	50	37.9%	22	29.7%	29	30.9%	202	33.4%
	3	9	15.8%	27	35.5%	19	24.1%	15	35.7%	20	39.2%	45	34.1%	28	37.8%	28	29.8%	191	31.6%
	4	7	12.3%	11	14.5%	7	8.9%	4	9.5%	2	3.9%	10	7.6%	5	6.8%	7	7.4%	53	8.8%
	5 Not achieved at all	2	3.5%	3	3.9%	10	12.7%	5	11.9%	1	2.0%	10	7.6%	3	4.1%	9	9.6%	43	7.1%
	6 Do not know	4	7.0%	1	1.3%	5	6.3%	1	2.4%	4	7.8%	2	1.5%			3	3.2%	20	3.3%
Achieved: Be able to observe international developments in your industry	1 Fully achieved	27	31.4%	16	13.1%	29	25.7%	15	19.5%	10	15.4%	12	8.6%	22	23.7%	21	18.4%	152	18.8%
	2	28	32.6%	61	50.0%	40	35.4%	29	37.7%	27	41.5%	61	43.6%	35	37.6%	44	38.6%	325	40.1%
	3	22	25.6%	31	25.4%	31	27.4%	25	32.5%	22	33.8%	51	36.4%	26	28.0%	37	32.5%	245	30.2%
	4	4	4.7%	11	9.0%	10	8.8%	6	7.8%	5	7.7%	7	5.0%	9	9.7%	5	4.4%	57	7.0%
	5 Not achieved at all	2	2.3%	3	2.5%	1	.9%	2	2.6%			5	3.6%			3	2.6%	16	2.0%
	6 Do not know	3	3.5%			2	1.8%			1	1.5%	4	2.9%	1	1.1%	4	3.5%	15	1.9%
Achieved: Avoid regulatory barriers in (own country)	1 Fully achieved	3	9.7%	9	13.0%	6	13.3%			4	10.0%	4	4.7%	1	4.2%	6	10.7%	33	9.1%
	2	9	29.0%	12	17.4%	13	28.9%	2	18.2%	26	65.0%	7	8.1%	2	8.3%	15	26.8%	86	23.8%
	3	10	32.3%	33	47.8%	16	35.6%	3	27.3%	8	20.0%	39	45.3%	12	50.0%	16	28.6%	137	37.8%
	4	5	16.1%	9	13.0%	3	6.7%	4	36.4%	1	2.5%	15	17.4%	4	16.7%	6	10.7%	47	13.0%
	5 Not achieved at all			5	7.2%	5	11.1%	2	18.2%	1	2.5%	15	17.4%	3	12.5%	8	14.3%	39	10.8%
	6 Do not know	4	12.9%	1	1.4%	2	4.4%					6	7.0%	2	8.3%	5	8.9%	20	5.5%
Achieved: Participate in or manage a global supply chain	1 Fully achieved	12	26.1%	14	16.9%	17	29.3%	17	22.4%	3	7.0%	6	5.3%	22	30.6%	18	18.8%	109	18.5%
	2	12	26.1%	27	32.5%	14	24.1%	21	27.6%	16	37.2%	29	25.4%	14	19.4%	40	41.7%	173	29.4%
	3	10	21.7%	26	31.3%	11	19.0%	28	36.8%	18	41.9%	36	31.6%	22	30.6%	27	28.1%	178	30.3%
	4	4	8.7%	9	10.8%	11	19.0%	6	7.9%	3	7.0%	18	15.8%	7	9.7%	4	4.2%	62	10.5%
	5 Not achieved at all	6	13.0%	4	4.8%	4	6.9%	4	5.3%			23	20.2%	5	6.9%	6	6.3%	52	8.8%
	6 Do not know	2	4.3%	3	3.6%	1	1.7%			3	7.0%	2	1.8%	2	2.8%	1	1.0%	14	2.4%
Achieved: Follow important customers or clients into a foreign market	1 Fully achieved	32	37.2%	39	31.5%	36	32.4%	15	20.0%	2	3.4%	24	18.9%	22	27.5%	36	30.8%	206	26.5%
	2	33	38.4%	48	38.7%	36	32.4%	24	32.0%	31	53.4%	42	33.1%	24	30.0%	43	36.8%	281	36.1%
	3	13	15.1%	23	18.5%	22	19.8%	22	29.3%	20	34.5%	45	35.4%	24	30.0%	26	22.2%	195	25.1%
	4	4	4.7%	8	6.5%	10	9.0%	8	10.7%	3	5.2%	8	6.3%	5	6.3%	5	4.3%	51	6.6%
	5 Not achieved at all	1	1.2%	5	4.0%	6	5.4%	6	8.0%	1	1.7%	7	5.5%	3	3.8%	1	.9%	30	3.9%
	6 Do not know	3	3.5%	1	.8%	1	.9%			1	1.7%	1	.8%	2	2.5%	6	5.1%	15	1.9%

Table 48: Achievement of goals of global collaboration (means)

P1 P1: Country	D2_1 Achieved: Get access to a foreign market	D2_2 Achieved: Increase the speed of development	D2_3 Achieved: Realise direct cost savings	D2_4 Achieved: Get access to new technology	D2_5 Achieved: Get access to low wage labour	D2_6 Achieved: Get access to highly-skilled labour and expertise	D2_7 Achieved: Be able to observe international developments in your industry	D2_8 Achieved: Avoid regulatory barriers in (own country)	D2_9 Achieved: Participate in or manage a global supply chain	D2_10 Achieved: Follow important customers or clients into a foreign market
12 Belgium	2.01	2.25	2.65	2.30	2.75	2.23	2.11	2.63	2.55	1.90
13 Germany	1.96	2.64	2.47	2.73	2.67	2.67	2.38	2.84	2.53	2.12
14 Denmark	1.88	2.50	2.44	2.38	2.71	2.65	2.23	2.72	2.49	2.22
17 Finland	2.16	2.54	2.40	2.56	2.78	2.85	2.36	3.55	2.46	2.55
22 Netherlands	2.16	2.58	2.51	2.55	2.49	2.49	2.34	2.23	2.53	2.47
23 Portugal	2.33	2.52	2.97	2.32	3.69	2.62	2.50	3.38	3.21	2.46
24 Sweden	1.98	2.59	2.47	2.68	2.31	2.42	2.24	3.27	2.41	2.27
25 United Kingdom	2.07	2.41	2.44	2.33	2.89	2.56	2.32	2.90	2.37	2.03
Total	2.07	2.50	2.56	2.46	2.84	2.56	2.32	2.92	2.61	2.24

Table 49: Problems experienced when engaing in global collaboration (A)

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Problems regarding data privacy	1 Very often	1	.9%	5	3.3%	2	1.3%	1	1.0%			3	2.0%	2	1.7%	7	4.6%	21	2.1%
	2	6	5.3%	10	6.6%	9	5.8%	10	9.5%			6	4.0%	8	6.9%	19	12.6%	68	6.7%
	3	11	9.7%	13	8.6%	13	8.4%	22	21.0%	9	12.3%	19	12.7%	23	19.8%	17	11.3%	127	12.5%
	4	26	23.0%	45	29.6%	28	18.1%	32	30.5%	23	31.5%	33	22.0%	31	26.7%	32	21.2%	250	24.6%
	5 Never	67	59.3%	76	50.0%	98	63.2%	39	37.1%	38	52.1%	89	59.3%	47	40.5%	69	45.7%	523	51.5%
	6 Do not know	2	1.8%	3	2.0%	5	3.2%	1	1.0%	3	4.1%			5	4.3%	7	4.6%	26	2.6%
Problems regarding data security	1 Very often	1	.9%	2	1.3%	2	1.3%	2	1.9%					3	2.6%	4	2.6%	14	1.4%
	2	4	3.5%	14	9.2%	15	9.7%	6	5.7%	2	2.7%	7	4.7%	4	3.4%	15	9.9%	67	6.6%
	3	13	11.5%	19	12.5%	15	9.7%	25	23.8%	15	20.5%	18	12.0%	23	19.8%	20	13.2%	148	14.6%
	4	25	22.1%	48	31.6%	34	21.9%	28	26.7%	16	21.9%	38	25.3%	31	26.7%	30	19.9%	250	24.6%
	5 Never	66	58.4%	66	43.4%	86	55.5%	42	40.0%	38	52.1%	87	58.0%	49	42.2%	77	51.0%	511	50.3%
	6 Do not know	4	3.5%	3	2.0%	3	1.9%	2	1.9%	2	2.7%			6	5.2%	5	3.3%	25	2.5%
Problems regarding protection of intellectual property	1 Very often	1	.9%	13	8.6%	8	5.2%	1	1.0%			1	.7%	4	3.4%	10	6.6%	38	3.7%
	2	6	5.3%	23	15.1%	18	11.6%	14	13.3%	2	2.7%	3	2.0%	11	9.5%	19	12.6%	96	9.5%
	3	10	8.8%	24	15.8%	20	12.9%	11	10.5%	19	26.0%	15	10.0%	17	14.7%	30	19.9%	146	14.4%
	4	25	22.1%	30	19.7%	20	12.9%	33	31.4%	8	11.0%	41	27.3%	24	20.7%	23	15.2%	204	20.1%
	5 Never	63	55.8%	58	38.2%	83	53.5%	45	42.9%	43	58.9%	87	58.0%	53	45.7%	61	40.4%	493	48.6%
	6 Do not know	8	7.1%	4	2.6%	6	3.9%	1	1.0%	1	1.4%	3	2.0%	7	6.0%	8	5.3%	38	3.7%
Lack of interoperability of processes and ICT systems	1 Very often			4	2.6%	2	1.3%	2	1.9%			4	2.7%	3	2.6%	7	4.6%	22	2.2%
	2	9	8.0%	13	8.6%	21	13.5%	14	13.3%	3	4.1%	1	.7%	15	12.9%	14	9.3%	90	8.9%
	3	14	12.4%	46	30.3%	21	13.5%	26	24.8%	19	26.0%	53	35.3%	32	27.6%	36	23.8%	247	24.3%
	4	28	24.8%	43	28.3%	33	21.3%	19	18.1%	14	19.2%	43	28.7%	25	21.6%	27	17.9%	232	22.9%
	5 Never	47	41.6%	44	28.9%	66	42.6%	42	40.0%	35	47.9%	48	32.0%	34	29.3%	49	32.5%	365	36.0%
	6 Do not know	15	13.3%	2	1.3%	12	7.7%	2	1.9%	2	2.7%	1	.7%	7	6.0%	18	11.9%	59	5.8%
Difficulty of building trust between collaboration partners	1 Very often	1	.9%	3	2.0%	1	.6%	2	1.9%			2	1.3%	1	.9%	6	4.0%	16	1.6%
	2	9	8.0%	29	19.1%	26	16.8%	14	13.3%	7	9.6%	13	8.7%	15	12.9%	13	8.6%	126	12.4%
	3	23	20.4%	38	25.0%	29	18.7%	38	36.2%	18	24.7%	37	24.7%	44	37.9%	52	34.4%	279	27.5%
	4	34	30.1%	44	28.9%	39	25.2%	24	22.9%	23	31.5%	48	32.0%	26	22.4%	31	20.5%	269	26.5%
	5 Never	42	37.2%	37	24.3%	56	36.1%	27	25.7%	23	31.5%	49	32.7%	26	22.4%	41	27.2%	301	29.7%
	6 Do not know	4	3.5%	1	.7%	4	2.6%			2	2.7%	1	.7%	4	3.4%	8	5.3%	24	2.4%

Table 50: Problems experienced when engaging in global collaboration (B)

		P1: Country														Total	
		12 Belgium	13 Germany	14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Count	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Difficulty of meeting face-to-face when necessary	1 Very often	4	5	5	3.2%	2	1.9%			5	3.3%	6	5.2%	10	6.6%	37	3.6%
	2	9	25	27	17.4%	21	20.0%	3	4.1%	21	14.0%	25	21.6%	39	25.8%	170	16.7%
	3	25	36	36	23.2%	23	21.9%	9	12.3%	35	23.3%	33	28.4%	40	26.5%	237	23.3%
	4	25	41	23	14.8%	31	29.5%	23	31.5%	41	27.3%	30	25.9%	17	11.3%	231	22.8%
	5 Never	47	44	60	38.7%	28	26.7%	36	49.3%	48	32.0%	19	16.4%	43	28.5%	325	32.0%
	6 Do not know	3	1	4	2.6%			2	2.7%			3	2.6%	2	1.3%	15	1.5%
Problems caused by language or other cultural barriers	1 Very often	2	2	2	1.3%	8	7.6%	1	1.4%	1	.7%	7	6.0%	11	7.3%	34	3.3%
	2	19	33	23	14.8%	30	28.6%	5	6.8%	11	7.3%	25	21.6%	27	17.9%	173	17.0%
	3	26	50	37	23.9%	24	22.9%	26	35.6%	31	20.7%	36	31.0%	39	25.8%	269	26.5%
	4	23	34	44	28.4%	23	21.9%	21	28.8%	42	28.0%	29	25.0%	35	23.2%	251	24.7%
	5 Never	41	32	44	28.4%	20	19.0%	18	24.7%	65	43.3%	18	15.5%	35	23.2%	273	26.9%
	6 Do not know	2	1	5	3.2%			2	2.7%			1	.9%	4	2.6%	15	1.5%
Problems in organising work across time zones	1 Very often	1	3	5	3.2%	3	2.9%			1	.7%	5	4.3%	5	3.3%	23	2.3%
	2	10	23	16	10.3%	11	10.5%	7	9.6%	20	13.3%	7	6.0%	37	24.5%	131	12.9%
	3	21	35	22	14.2%	26	24.8%	18	24.7%	25	16.7%	34	29.3%	34	22.5%	215	21.2%
	4	29	31	38	24.5%	26	24.8%	15	20.5%	48	32.0%	28	24.1%	26	17.2%	241	23.7%
	5 Never	50	59	69	44.5%	38	36.2%	32	43.8%	56	37.3%	41	35.3%	44	29.1%	389	38.3%
	6 Do not know	2	1	5	3.2%	1	1.0%	1	1.4%			1	.9%	5	3.3%	16	1.6%
Difficulty of making employees adapt their working times to the demands of global collaboration	1 Very often	2	3	1	.6%					6	4.0%	3	2.6%	5	3.3%	20	2.0%
	2	5	21	12	7.7%	7	6.7%	4	5.5%	12	8.0%	11	9.5%	19	12.6%	91	9.0%
	3	13	25	24	15.5%	16	15.2%	20	27.4%	29	19.3%	23	19.8%	25	16.6%	175	17.2%
	4	19	37	32	20.6%	30	28.6%	15	20.5%	46	30.7%	30	25.9%	37	24.5%	246	24.2%
	5 Never	67	63	83	53.5%	51	48.6%	29	39.7%	57	38.0%	49	42.2%	59	39.1%	458	45.1%
	6 Do not know	7	3	3	1.9%	1	1.0%	5	6.8%					6	4.0%	25	2.5%
Increasing stress among employees	1 Very often	6	5	4	2.6%	1	1.0%	1	1.4%	2	1.3%	5	4.3%	8	5.3%	32	3.2%
	2	9	18	11	7.1%	14	13.3%	6	8.2%	9	6.0%	16	13.8%	15	9.9%	98	9.7%
	3	28	45	24	15.5%	28	26.7%	26	35.6%	26	17.3%	28	24.1%	30	19.9%	235	23.2%
	4	24	33	24	15.5%	25	23.8%	15	20.5%	51	34.0%	31	26.7%	35	23.2%	238	23.4%
	5 Never	41	48	85	54.8%	33	31.4%	24	32.9%	62	41.3%	31	26.7%	50	33.1%	374	36.8%
	6 Do not know	5	3	7	4.5%	4	3.8%	1	1.4%			5	4.3%	13	8.6%	38	3.7%
Problems due to regulatory barriers in cooperation partners countries	1 Very often	5	9	6	3.9%	6	5.7%	1	1.4%	4	2.7%	8	6.9%	11	7.3%	50	4.9%
	2	15	34	24	15.5%	21	20.0%	7	9.6%	18	12.0%	18	15.5%	16	10.6%	153	15.1%
	3	25	43	34	21.9%	24	22.9%	30	41.1%	24	16.0%	19	16.4%	29	19.2%	228	22.5%
	4	21	25	24	15.5%	19	18.1%	15	20.5%	45	30.0%	24	20.7%	31	20.5%	204	20.1%
	5 Never	39	41	60	38.7%	34	32.4%	18	24.7%	57	38.0%	46	39.7%	55	36.4%	350	34.5%
	6 Do not know	8		7	4.5%	1	1.0%	2	2.7%	2	1.3%	1	.9%	9	6.0%	30	3.0%

P1 P1: Country	D3_1 Problems regarding data privacy	D3_2 Problems regarding data security	D3_3 Problems regarding protection of intellectual property	D3_4 Lack of interoperability of processes and ICT systems	D3_5 Difficulty of building trust between collaboration partners	D3_6 Difficulty of meeting face-to-face when necessary	D3_7 Problems caused by language or other cultural barriers	D3_8 Problems in organising work across time zones	D3_9 Difficulty of making employees adapt their working times	D3_10 Increasing stress among employees	D3_11 Problems due to regulatory barriers in host countries
12 Belgium	4.37	4.39	4.36	4.15	3.98	3.93	3.74	4.05	4.36	3.79	3.70
13 Germany	4.19	4.09	3.66	3.73	3.55	3.62	3.40	3.79	3.91	3.68	3.36
14 Denmark	4.41	4.23	4.02	3.98	3.81	3.70	3.70	4.00	4.21	4.18	3.73
17 Finland	3.94	3.99	4.03	3.83	3.57	3.59	3.16	3.82	4.20	3.74	3.52
22 Netherlands	4.41	4.27	4.28	4.14	3.87	4.30	3.70	4.00	4.01	3.76	3.59
23 Portugal	4.33	4.37	4.43	3.87	3.87	3.71	4.06	3.92	3.91	4.08	3.90
24 Sweden	4.02	4.08	4.02	3.66	3.54	3.27	3.23	3.81	3.96	3.60	3.71
25 United Kingdom	3.95	4.10	3.74	3.73	3.62	3.30	3.38	3.46	3.87	3.75	3.73
Total	4.20	4.19	4.04	3.87	3.72	3.64	3.56	3.84	4.04	3.84	3.66

Table 51: Organisational support for global collaboration

		P1: Country																Total	
		12 Belgium		13 Germany		14 Denmark		17 Finland		22 Netherlands		23 Portugal		24 Sweden		25 United Kingdom		Count	Col %
		Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Procedures for identifying suitable partners	1 Fully applies	14	12.4%	29	19.1%	30	19.4%	33	31.4%	13	17.8%	22	14.7%	28	24.1%	38	25.2%	207	20.4%
	2	23	20.4%	46	30.3%	18	11.6%	34	32.4%	19	26.0%	45	30.0%	29	25.0%	36	23.8%	250	24.6%
	3	15	13.3%	36	23.7%	38	24.5%	27	25.7%	15	20.5%	38	25.3%	32	27.6%	36	23.8%	237	23.3%
	4	11	9.7%	15	9.9%	31	20.0%	5	4.8%	6	8.2%	21	14.0%	16	13.8%	11	7.3%	116	11.4%
	5 Does not apply at all	37	32.7%	26	17.1%	31	20.0%	4	3.8%	16	21.9%	23	15.3%	8	6.9%	26	17.2%	171	16.8%
	6 Do not know	13	11.5%			7	4.5%	2	1.9%	4	5.5%	1	.7%	3	2.6%	4	2.6%	34	3.3%
Special training to employees involved in collaboration	1 Fully applies	14	12.4%	17	11.2%	22	14.2%	15	14.3%	15	20.5%	42	28.0%	18	15.5%	18	11.9%	161	15.9%
	2	19	16.8%	26	17.1%	31	20.0%	10	9.5%	17	23.3%	40	26.7%	22	19.0%	28	18.5%	193	19.0%
	3	18	15.9%	27	17.8%	31	20.0%	30	28.6%	9	12.3%	36	24.0%	16	13.8%	26	17.2%	193	19.0%
	4	20	17.7%	21	13.8%	25	16.1%	15	14.3%	6	8.2%	17	11.3%	27	23.3%	24	15.9%	155	15.3%
	5 Does not apply at all	40	35.4%	60	39.5%	45	29.0%	35	33.3%	25	34.2%	15	10.0%	30	25.9%	52	34.4%	302	29.8%
	6 Do not know	2	1.8%	1	.7%	1	.6%			1	1.4%			3	2.6%	3	2.0%	11	1.1%
ICT infrastructure was adapted for global collaboration	1 Fully applies	21	18.6%	24	15.8%	21	13.5%	19	18.1%	13	17.8%	27	18.0%	21	18.1%	32	21.2%	178	17.5%
	2	14	12.4%	21	13.8%	38	24.5%	20	19.0%	20	27.4%	34	22.7%	33	28.4%	26	17.2%	206	20.3%
	3	20	17.7%	32	21.1%	37	23.9%	33	31.4%	16	21.9%	61	40.7%	24	20.7%	26	17.2%	249	24.5%
	4	16	14.2%	31	20.4%	24	15.5%	14	13.3%	8	11.0%	13	8.7%	11	9.5%	21	13.9%	138	13.6%
	5 Does not apply at all	32	28.3%	42	27.6%	27	17.4%	15	14.3%	14	19.2%	15	10.0%	25	21.6%	37	24.5%	207	20.4%
	6 Do not know	10	8.8%	2	1.3%	8	5.2%	4	3.8%	2	2.7%			2	1.7%	9	6.0%	37	3.6%
ICT infrastructure was adapted against risk to security	1 Fully applies	19	16.8%	25	16.4%	25	16.1%	23	21.9%	15	20.5%	27	18.0%	19	16.4%	42	27.8%	195	19.2%
	2	16	14.2%	35	23.0%	40	25.8%	21	20.0%	16	21.9%	35	23.3%	41	35.3%	27	17.9%	231	22.8%
	3	18	15.9%	28	18.4%	32	20.6%	28	26.7%	15	20.5%	58	38.7%	26	22.4%	28	18.5%	233	23.0%
	4	12	10.6%	21	13.8%	19	12.3%	13	12.4%	9	12.3%	15	10.0%	10	8.6%	16	10.6%	115	11.3%
	5 Does not apply at all	39	34.5%	41	27.0%	28	18.1%	17	16.2%	15	20.5%	15	10.0%	16	13.8%	30	19.9%	201	19.8%
	6 Do not know	9	8.0%	2	1.3%	11	7.1%	3	2.9%	3	4.1%			4	3.4%	8	5.3%	40	3.9%

Table 52: Organisational support for global collaboration (means)

P1 P1: Country	E1_1 Procedures for identifying suitable partners	E1_2 Special training to employees involved in collaboration	E1_3 ICT infrastructure was adapted for global collaboration	E1_4 ICT infrastructure was adapted against risk to security
12 Belgium	3.34	3.48	3.23	3.35
13 Germany	2.76	3.54	3.31	3.12
14 Denmark	3.10	3.26	2.99	2.90
17 Finland	2.16	3.43	2.86	2.80
22 Netherlands	2.90	3.13	2.86	2.90
23 Portugal	2.85	2.49	2.70	2.71
24 Sweden	2.53	3.26	2.88	2.67
25 United Kingdom	2.67	3.43	3.04	2.76
Total	2.79	3.24	2.99	2.89

6.3 Survey Results – Regression Analyses

Table 53: Regression analysis on predictors of uptake and perceived significance of online collaboration tools for global collaborative activities

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.90	1.93		-0.46	0.64
	Country (reference: Germany)					
	Belgium	1.37	0.85	0.06	1.62	0.11
	Denmark	0.59	0.79	0.03	0.74	0.46
	Finland	-1.44	0.87	-0.06	-1.66	0.10
	Netherlands	**3.94**	**1.00**	**0.13**	**3.92**	**0.00**
	Portugal	**4.44**	**0.84**	**0.20**	**5.29**	**0.00**
	Sweden	-0.92	0.85	-0.04	-1.08	0.28
	UK	0.64	0.78	0.03	0.82	0.41
	size Size class	0.70	0.33	0.07	2.15	0.03
	Sector (reference: KIBE)					
	hightec High-tech Manufacturing	**-3.44**	**0.64**	**-0.15**	**-5.37**	**0.00**
	mediumtec Medium High-tech Manufacturing	**-4.56**	**0.52**	**-0.27**	**-8.79**	**0.00**
	g4reg Company age	0.36	0.31	0.04	1.16	0.24
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	**2.11**	**0.55**	**0.12**	**3.85**	**0.00**
	X6_2reg Take-over of a foreign company	0.90	0.85	0.03	1.07	0.29
	X6_3reg Being taken over by a foreign company	-0.74	0.93	-0.02	-0.80	0.43
	X6_4reg Merger with a foreign company	0.42	1.13	0.01	0.37	0.71
	X6_5reg Joint venture, alliance or any other type of for	0.80	0.47	0.05	1.71	0.09
	X6_6reg Cooperation with foreign supply chain partne	0.61	0.46	0.04	1.32	0.19
	Importance of competition factors					
	G14_1reg Competition factor price of products	-0.11	0.20	-0.02	-0.53	0.59
	G14_2reg Competition factor Product quality	-0.19	0.30	-0.02	-0.62	0.54
	G14_3reg Competition factor Product variety	0.20	0.19	0.03	1.06	0.29
	G14_4reg Competition factor Image and design of the	0.38	0.22	0.05	1.73	0.08
	G14_5reg Competition factor Customer service	0.42	0.31	0.04	1.34	0.18
	G14_6reg Competition factor Technological lead	**0.73**	**0.21**	**0.10**	**3.39**	**0.00**
	G14_7reg Competition factor The size of a company	0.48	0.19	0.07	2.54	0.01
	Innovative activities					
	G9reg Product innovation	**1.05**	**0.27**	**0.11**	**3.92**	**0.00**
	G10reg Process innovation	0.84	0.45	0.05	1.85	0.06
	Collaboration partners					
	B1_01reg Branch, subsidiary or sisten company	0.40	0.56	0.02	0.70	0.48
	B1_02reg Company headquarters	**2.02**	**0.66**	**0.09**	**3.06**	**0.00**
	B1_03reg Clients or customers	0.65	0.52	0.04	1.25	0.21
	B1_04reg CProduction facilities	0.74	0.54	0.04	1.37	0.17
	B1_05reg Suppliers of goods	0.72	0.48	0.05	1.50	0.13
	B1_06reg Logistics or distribution partners	0.42	0.52	0.03	0.82	0.41
	B1_07reg Other service providers	**1.89**	**0.50**	**0.11**	**3.74**	**0.00**
	B1_08reg Research organisations / consultancies	1.59	0.63	0.08	2.54	0.01
	B1_09reg Universities etc.	-0.17	0.66	-0.01	-0.25	0.80
	B1_10reg Other public sector organisations	0.73	0.66	0.03	1.09	0.27

a Dependent Variable: C2_addup Online collaboration tool use intensity score

ANOVA(b)

Model		Sum of Squar	df	Mean Square	F	Sig.
1	Regression	18545	36	515	12	0.00
	Residual	42311	978	43		
	Total	60855	1014			

a Predictors: (Constant), B1_10reg, B1_05reg, G14_7reg, X6_3reg, Denmark, B1_03reg, g4reg, hightec High-tech Manufacturing, ...

b Dependent Variable: C2_addup Online collaboration tool use intensity score

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.552	0.305	0.279	6.577

a Predictors: (Constant), B1_10reg, B1_05reg, G14_7reg, X6_3reg, Denmark, B1_03reg, g4reg, hightec High-tech Manufacturing, ...

Table 54: Regression analysis on predictors of problems experienced when engaging in global collaboration

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	**5.22**	**1.47**		**3.56**	**0.00**
	Country (reference: Germany)					
	Belgium	**-3.17**	**0.90**	**-0.13**	**-3.51**	**0.00**
	Denmark	-1.62	0.82	-0.08	-1.97	0.05
	Finland	-0.01	0.93	0.00	-0.01	0.99
	Netherlands	**-4.04**	**1.04**	**-0.14**	**-3.88**	**0.00**
	Portugal	**-4.12**	**1.00**	**-0.19**	**-4.13**	**0.00**
	Sweden	0.77	0.90	0.03	0.86	0.39
	UK	0.56	0.84	0.03	0.67	0.51
	size Size class	0.42	0.34	0.04	1.24	0.21
	Sector (reference: KIBE)					
	hightec High-tech Manufacturing	-0.75	0.67	-0.03	-1.12	0.26
	mediumtec Medium High-tech Manufacturing	-0.18	0.56	-0.01	-0.32	0.75
	g4reg Company age	0.38	0.32	0.04	1.18	0.24
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	0.68	0.57	0.04	1.21	0.23
	X6_2reg Take-over of a foreign company	-0.40	0.87	-0.01	-0.46	0.64
	X6_3reg Being taken over by a foreign company	**2.82**	**0.97**	**0.09**	**2.90**	**0.00**
	X6_4reg Merger with a foreign company	-0.55	1.19	-0.01	-0.46	0.64
	X6_5reg Joint venture, alliance or any other type of form	0.08	0.48	0.01	0.17	0.86
	X6_6reg Cooperation with foreign supply chain partner	0.55	0.48	0.04	1.14	0.25
	Collaboration partners (factor loadings)					
	FAC1_B1 Research organisations & public sector	0.48	0.24	0.06	1.97	0.05
	FAC2_B1 Suppliers of goods, production facilities	0.45	0.25	0.06	1.81	0.07
	FAC3_B1 Other parts of same enterprise	-0.31	0.26	-0.04	-1.22	0.22
	FAC4_B1 Clients, customers, service providers	0.35	0.24	0.05	1.43	0.15
	Collaboration destinations					
	B2_1reg Africa	**1.56**	**0.55**	**0.09**	**2.85**	**0.00**
	B2_2reg Asia	1.15	0.50	0.07	2.28	0.02
	B2_3reg Middle East	-0.93	0.57	-0.06	-1.64	0.10
	B2_4reg North-America	0.54	0.49	0.03	1.11	0.27
	B2_5reg Latin America	0.02	0.56	0.00	0.03	0.98
	B2_6reg Australia, New Zealand, other Oceania	-1.14	0.60	-0.07	-1.90	0.06
	B2_7reg country formerly belonging to USSR	**1.89**	**0.52**	**0.12**	**3.65**	**0.00**
	B2_8reg non-EU Europe	-0.62	0.52	-0.04	-1.20	0.23
	C2_addup Online collaboration tool use intensity	0.06	0.03	0.06	1.79	0.07
	Collaboration goals					
	D1_1reg Get access to foreign market	0.43	0.21	0.07	2.07	0.04
	D1_2reg Increase speed of development	0.24	0.20	0.04	1.17	0.24
	D1_3reg Realise direct cost savings	-0.24	0.18	-0.05	-1.34	0.18
	D1_4reg Get access to new technology	-0.07	0.19	-0.01	-0.37	0.71
	D1_5reg Get access to low wage labout	**0.84**	**0.20**	**0.14**	**4.15**	**0.00**
	D1_6reg Get access to high-skilled labour & expertise	0.14	0.19	0.03	0.76	0.45
	D1_7reg Observe developments in own industry	-0.09	0.20	-0.02	-0.44	0.66
	D1_8reg Avoid regulatory barriers in own country	**0.98**	**0.19**	**0.18**	**5.19**	**0.00**
	D1_9reg Participate in global supply chain	0.35	0.17	0.07	2.01	0.05
	D1_10reg Follow important clients into a market	0.08	0.18	0.02	0.47	0.64
	Organisational support					
	E1_1reg Procedures for identifying suitable partners	0.17	0.17	0.03	0.99	0.32
	E1_2reg Special training to employees	0.23	0.17	0.04	1.34	0.18
	E1_3reg Specifically adapted ICT infrastructure	-0.28	0.22	-0.05	-1.28	0.20
	E1_4reg Adapted infrastructure to avoid security risks	0.06	0.21	0.01	0.30	0.76
a	Dependent Variable: D3_problems Problems index					

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14961	44	340	8	0.00
	Residual	43239	957	45		
	Total	58200	1001			
a	Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, hightec High-tech Manufacturing, ...					
b	Dependent Variable: D3_problems Problems index					

Model Summary

Model	R	R Square	Adjusted R Squ	Std. Error of the Estimate
1	0.507	0.257	0.223	6.722
a	Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, hightec High-tech Manufacturing, ...			

Table 55: Regression analysis on predictors of difficulties in building trust relationships

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Ct		Sig.
		B	Std. Error	Beta		
1	(Constant)	0.32	0.23		1.37	0.17
	Country (reference: Germany)					
	Belgium	**-0.37**	**0.14**	**-0.11**	**-2.64**	**0.01**
	Denmark	-0.15	0.13	-0.05	-1.18	0.24
	Finland	0.08	0.14	0.02	0.54	0.59
	Netherlands	**-0.46**	**0.17**	**-0.11**	**-2.78**	**0.01**
	Portugal	-0.34	0.15	-0.11	-2.22	0.03
	Sweden	0.16	0.14	0.05	1.15	0.25
	UK	0.00	0.13	0.00	0.01	0.99
	size_Size class	0.07	0.05	0.05	1.42	0.16
	Sector (reference: KIBE)					
	hightec_High-tech Manufacturing	-0.09	0.10	-0.03	-0.83	0.41
	mediumtec_Medium High-tech Manufacturing	0.05	0.09	0.02	0.63	0.53
	g4reg Company age	**0.20**	**0.05**	**0.13**	**3.82**	**0.00**
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	0.01	0.09	0.01	0.14	0.89
	X6_2reg Take-over of a foreign company	-0.12	0.14	-0.03	-0.90	0.37
	X6_3reg Being taken over by a foreign company	0.14	0.15	0.03	0.95	0.34
	X6_4reg Merger with a foreign company	-0.04	0.18	-0.01	-0.20	0.84
	X6_5reg Joint venture, alliance or any other type of form	0.11	0.07	0.05	1.43	0.15
	X6_6reg Cooperation with foreign supply chain partner	0.03	0.07	0.01	0.37	0.71
	Collaboration partners (factor loadings)					
	FAC1_B1 Research organisations & public sector	0.05	0.04	0.04	1.25	0.21
	FAC2_B1 Suppliers of goods, production facilities	0.08	0.04	0.07	2.02	0.04
	FAC3_B1 Other parts of same enterprise	0.00	0.04	0.00	-0.01	0.99
	FAC4_B1 Clients, customers, service providers	0.01	0.04	0.01	0.19	0.85
	Collaboration destinations					
	B2_1reg Africa	0.16	0.08	0.07	1.91	0.06
	B2_2reg Asia	0.03	0.08	0.01	0.39	0.70
	B2_3reg Middle East	-0.04	0.09	-0.02	-0.50	0.62
	B2_4reg North-America	-0.05	0.08	-0.02	-0.63	0.53
	B2_5reg Latin America	0.01	0.09	0.00	0.09	0.93
	B2_6reg Australia, New Zealand, other Oceania	-0.06	0.09	-0.02	-0.59	0.56
	B2_7reg country formerly belonging to USSR	0.09	0.08	0.04	1.10	0.27
	B2_8reg non-EU Europe	-0.04	0.08	-0.02	-0.51	0.61
	C2_addup_Online collaboration tool use intensity sc	**0.01**	**0.01**	**0.11**	**2.81**	**0.01**
	Collaboration goals					
	D1_1reg Get access to foreign market	0.08	0.03	0.09	2.49	0.01
	D1_2reg Increase speed of development	0.01	0.03	0.02	0.47	0.64
	D1_3reg Realise direct cost savings	0.00	0.03	0.01	0.14	0.89
	D1_4reg Get access to new technology	-0.07	0.03	-0.10	-2.35	0.02
	D1_5reg Get access to low wage labout	**0.12**	**0.03**	**0.14**	**3.72**	**0.00**
	D1_6reg Get access to high-skilled labour & expertise	-0.01	0.03	-0.02	-0.39	0.70
	D1_7reg Observe developments in own industry	0.00	0.03	0.00	-0.11	0.91
	D1_8reg Avoid regulatory barriers in own country	**0.10**	**0.03**	**0.13**	**3.44**	**0.00**
	D1_9reg Participate in global supply chain	0.00	0.03	0.00	-0.13	0.90
	D1_10reg Follow important clients into a market	0.00	0.03	0.00	0.01	0.99
	Organisational support					
	E1_1reg Procedures for identifying suitable partners	0.02	0.03	0.03	0.75	0.45
	E1_2reg Special training to employees	0.00	0.03	0.00	-0.02	0.98
	E1_3reg Specifically adapted ICT infrastructure	-0.04	0.03	-0.06	-1.28	0.20
	E1_4reg Adapted infrastructure to avoid security risks	0.00	0.03	0.00	0.10	0.92

a Dependent Variable: D3_5y

ANOVA(b)

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	151	44	3	3	0.00
	Residual	967	920	1		
	Total	1118	964			

a Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, hightec High-tech Manufacturing, ...

b Dependent Variable: D3_5y

Model Summary

Model	R	R Square	Adjusted R Squ	Std. Error of the Estimate
1	0.367	0.135	0.094	1.025

a Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, hightec High-tech Manufacturing, ...

Table 56: Regression analysis on predictors of problems in organising work across time zones

Coefficients(a)

Model		Unstandardized Coefficients		Standardized C t		Sig.
		B	Std. Error	Beta		
1	(Constant)	0.04	0.24		0.18	0.86
	Country (reference: Germany)					
	Belgium	-0.28	0.15	-0.08	-1.93	0.05
	Denmark	-0.11	0.13	-0.03	-0.81	0.42
	Finland	-0.04	0.15	-0.01	-0.27	0.79
	Netherlands	-0.42	0.17	-0.09	-2.46	0.01
	Portugal	-0.21	0.16	-0.07	-1.29	0.20
	Sweden	-0.03	0.14	-0.01	-0.21	0.84
	UK	0.28	0.14	0.09	2.07	0.04
	size Size class	0.03	0.05	0.02	0.63	0.53
	Sector (reference: KIBE)					
	hightec High-tech Manufacturing	0.00	0.11	0.00	-0.04	0.97
	mediumtec Medium High-tech Manufacturing	-0.17	0.09	-0.07	-1.88	0.06
	g4reg Company age	0.08	0.05	0.05	1.51	0.13
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	0.01	0.09	0.01	0.15	0.88
	X6_2reg Take-over of a foreign company	0.04	0.14	0.01	0.30	0.76
	X6_3reg Being taken over by a foreign company	**0.49**	**0.16**	**0.11**	**3.05**	**0.00**
	X6_4reg Merger with a foreign company	-0.04	0.19	-0.01	-0.23	0.82
	X6_5reg Joint venture, alliance or any other type of form	-0.05	0.08	-0.02	-0.68	0.50
	X6_6reg Cooperation with foreign supply chain partner	0.10	0.08	0.04	1.27	0.21
	Collaboration partners (factor loadings)					
	FAC1_B1 Research organisations & public sector	0.00	0.04	0.00	-0.01	0.99
	FAC2_B1 Suppliers of goods, production facilities	0.06	0.04	0.06	1.59	0.11
	FAC3_B1 Other parts of same enterprise	-0.04	0.04	-0.03	-0.93	0.35
	FAC4_B1 Clients, customers, service providers	-0.02	0.04	-0.02	-0.63	0.53
	Collaboration destinations					
	B2_1reg Africa	0.17	0.09	0.07	1.96	0.05
	B2_2reg Asia	0.10	0.08	0.04	1.23	0.22
	B2_3reg Middle East	-0.05	0.09	-0.02	-0.53	0.60
	B2_4reg North-America	**0.28**	**0.08**	**0.12**	**3.57**	**0.00**
	B2_5reg Latin America	-0.08	0.09	-0.03	-0.89	0.37
	B2_6reg Australia, New Zealand, other Oceania	-0.07	0.10	-0.03	-0.73	0.47
	B2_7reg country formerly belonging to USSR	0.21	0.08	0.09	2.46	0.01
	B2_8reg non-EU Europe	0.01	0.08	0.01	0.15	0.88
	C2_addup Online collaboration tool use intensity score	0.01	0.01	0.04	1.13	0.26
	Collaboration goals					
	D1_1reg Get access to foreign market	0.05	0.03	0.05	1.45	0.15
	D1_2reg Increase speed of development	0.05	0.03	0.06	1.42	0.15
	D1_3reg Realise direct cost savings	-0.05	0.03	-0.07	-1.72	0.09
	D1_4reg Get access to new technology	0.01	0.03	0.02	0.43	0.67
	D1_5reg Get access to low wage labout	0.06	0.03	0.07	1.86	0.06
	D1_6reg Get access to high-skilled labour & expertise	0.04	0.03	0.05	1.31	0.19
	D1_7reg Observe developments in own industry	0.01	0.03	0.01	0.33	0.74
	D1_8reg Avoid regulatory barriers in own country	**0.09**	**0.03**	**0.11**	**2.89**	**0.00**
	D1_9reg Participate in global supply chain	0.04	0.03	0.05	1.34	0.18
	D1_10reg Follow important clients into a market	0.01	0.03	0.01	0.31	0.76
	Organisational support					
	E1_1reg Procedures for identifying suitable partners	0.03	0.03	0.04	1.03	0.30
	E1_2reg Special training to employees	0.01	0.03	0.02	0.44	0.66
	E1_3reg Specifically adapted ICT infrastructure	-0.05	0.04	-0.06	-1.33	0.19
	E1_4reg Adapted infrastructure to avoid security risks	0.02	0.03	0.02	0.48	0.63

a Dependent Variable: D3_8y

ANOVA(b)

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	204	44	5	4	0.00
	Residual	1077	928	1		
	Total	1281	972			

a Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, hightec High-tech Manufacturing, ...

b Dependent Variable: D3_8y

Model Summary

Model	R	R Square	Adjusted R Squ	Std. Error of the Estimate
1	0.399	0.159	0.119	1.077

a Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, hightec High-tech Manufacturing, ...

Table 57: Regression analysis on predictors of problems due to regulatory barriers in cooperation partners' countries

Coefficients(a)

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	0.56	0.26		2.12	0.03
	Country (reference: Germany)					
	Belgium	-0.23	0.16	-0.06	-1.45	0.15
	Denmark	-0.28	0.14	-0.08	-1.92	0.05
	Finland	-0.02	0.16	-0.01	-0.14	0.89
	Netherlands	-0.44	0.19	-0.09	-2.32	0.02
	Portugal	**-0.64**	**0.17**	**-0.18**	**-3.66**	**0.00**
	Sweden	-0.17	0.16	-0.04	-1.10	0.27
	UK	-0.21	0.15	-0.06	-1.38	0.17
	size_Size class	0.05	0.06	0.03	0.77	0.44
	Sector (reference: KIBE)					
	hightec_High-tech Manufacturing	0.06	0.12	0.02	0.54	0.59
	mediumtec_Medium High-tech Manufacturing	0.06	0.10	0.02	0.62	0.53
	g4reg Company age	0.03	0.06	0.02	0.52	0.60
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	0.20	0.10	0.07	1.99	0.05
	X6_2reg Take-over of a foreign company	-0.27	0.15	-0.06	-1.74	0.08
	X6_3reg Being taken over by a foreign company	0.27	0.18	0.05	1.50	0.13
	X6_4reg Merger with a foreign company	0.13	0.21	0.02	0.60	0.55
	X6_5reg Joint venture, alliance or any other type of form	0.13	0.09	0.05	1.53	0.13
	X6_6reg Cooperation with foreign supply chain partner	-0.08	0.09	-0.03	-0.93	0.35
	Collaboration partners (factor loadings)					
	FAC1_B1 Research organisations & public sector	0.00	0.04	0.00	0.05	0.96
	FAC2_B1 Suppliers of goods, production facilities	0.06	0.04	0.04	1.26	0.21
	FAC3_B1 Other parts of same enterprise	-0.02	0.05	-0.02	-0.52	0.61
	FAC4_B1 Clients, customers, service providers	-0.01	0.04	-0.01	-0.25	0.80
	Collaboration destinations					
	B2_1reg Africa	0.15	0.10	0.05	1.51	0.13
	B2_2reg Asia	0.02	0.09	0.01	0.26	0.80
	B2_3reg Middle East	-0.22	0.10	-0.08	-2.16	0.03
	B2_4reg North-America	**-0.25**	**0.09**	**-0.10**	**-2.91**	**0.00**
	B2_5reg Latin America	**0.26**	**0.10**	**0.09**	**2.62**	**0.01**
	B2_6reg Australia, New Zealand, other Oceania	0.00	0.11	0.00	-0.04	0.97
	B2_7reg country formerly belonging to USSR	**0.38**	**0.09**	**0.14**	**4.13**	**0.00**
	B2_8reg non-EU Europe	-0.01	0.09	0.00	-0.12	0.91
	C2_addup_Online collaboration tool use intensity score	0.00	0.01	0.02	0.53	0.59
	Collaboration goals					
	D1_1reg Get access to foreign market	**0.13**	**0.04**	**0.13**	**3.66**	**0.00**
	D1_2reg Increase speed of development	0.02	0.04	0.02	0.61	0.54
	D1_3reg Realise direct cost savings	0.01	0.03	0.01	0.16	0.88
	D1_4reg Get access to new technology	-0.06	0.03	-0.07	-1.74	0.08
	D1_5reg Get access to low wage labout	0.06	0.04	0.06	1.71	0.09
	D1_6reg Get access to high-skilled labour & expertise	-0.03	0.03	-0.04	-1.01	0.31
	D1_7reg Observe developments in own industry	-0.04	0.04	-0.04	-1.04	0.30
	D1_8reg Avoid regulatory barriers in own country	**0.17**	**0.03**	**0.18**	**4.97**	**0.00**
	D1_9reg Participate in global supply chain	-0.01	0.03	-0.01	-0.25	0.80
	D1_10reg Follow important clients into a market	0.01	0.03	0.01	0.41	0.68
	Organisational support					
	E1_1reg Procedures for identifying suitable partners	0.01	0.03	0.02	0.44	0.66
	E1_2reg Special training to employees	**0.12**	**0.03**	**0.15**	**4.05**	**0.00**
	E1_3reg Specifically adapted ICT infrastructure	-0.05	0.04	-0.05	-1.18	0.24
	E1_4reg Adapted infrastructure to avoid security risks	0.00	0.04	-0.01	-0.12	0.90

a Dependent Variable: D3_11y

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	254	44	6	4	0.00
	Residual	1240	915	1		
	Total	1495	959			

a Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, B2_1reg, hightec High-tech Manufacturing,...

b Dependent Variable: D3_11y

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.412	0.170	0.130	1.164

a Predictors: (Constant), E1_4reg, Netherlands, B2_8reg, B2_1reg, hightec High-tech Manufacturing,...

Table 58: Regression analysis on predictors of success in increasing the speed of development

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Ct		Sig.
		B	Std. Error	Beta		
1	**(Constant)**	**1.63**	**0.25**		**6.63**	**0.00**
	Country (reference: Germany)					
	Belgium	**0.44**	**0.15**	**0.14**	**2.87**	**0.00**
	Denmark	0.05	0.14	0.02	0.38	0.71
	Finland	0.09	0.16	0.03	0.60	0.55
	Netherlands	-0.05	0.19	-0.01	-0.25	0.80
	Portugal	-0.07	0.16	-0.03	-0.45	0.65
	Sweden	0.04	0.15	0.01	0.26	0.79
	UK	0.23	0.15	0.08	1.57	0.12
	size_Size class	0.03	0.06	0.02	0.49	0.62
	Sector (reference: KIBE)					
	hightec_High-tech Manufacturing	-0.01	0.11	0.00	-0.11	0.91
	mediumtec_Medium High-tech Manufacturing	0.03	0.09	0.02	0.36	0.72
	g4reg Company age	0.02	0.06	0.02	0.37	0.71
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	0.07	0.09	0.03	0.76	0.45
	X6_2reg Take-over of a foreign company	-0.20	0.14	-0.06	-1.42	0.16
	X6_3reg Being taken over by a foreign company	-0.23	0.16	-0.06	-1.43	0.15
	X6_4reg Merger with a foreign company	0.02	0.19	0.00	0.09	0.93
	X6_5reg Joint venture, alliance or any other type of form	-0.02	0.08	-0.01	-0.28	0.78
	X6_6reg Cooperation with foreign supply chain partner	-0.06	0.08	-0.03	-0.77	0.44
	Collaboration partners (factor loadings)					
	FAC1_B1 Research organisations & public sector	-0.04	0.04	-0.04	-1.04	0.30
	FAC2_B1 Suppliers of goods, production facilities	0.06	0.04	0.06	1.54	0.12
	FAC3_B1 Other parts of same enterprise	-0.03	0.04	-0.03	-0.71	0.48
	FAC4_B1 Clients, customers, service providers	-0.04	0.04	-0.04	-0.91	0.36
	Collaboration destinations					
	B2_1reg Africa	0.04	0.09	0.02	0.47	0.64
	B2_2reg Asia	-0.02	0.09	-0.01	-0.20	0.84
	B2_3reg Middle East	-0.06	0.09	-0.03	-0.67	0.50
	B2_4reg North-America	0.00	0.08	0.00	0.05	0.96
	B2_5reg Latin America	-0.01	0.09	0.00	-0.08	0.94
	B2_6reg Australia, New Zealand, other Oceania	-0.01	0.10	0.00	-0.08	0.93
	B2_7reg country formerly belonging to USSR	-0.06	0.09	-0.03	-0.73	0.47
	B2_8reg non-EU Europe	0.07	0.09	0.03	0.75	0.45
	C2_addup_Online collaboration tool use intensity s	**0.02**	**0.01**	**0.14**	**3.20**	**0.00**
	Organisational support					
	E1_1reg Procedures for identifying suitable partners	0.00	0.03	0.00	0.04	0.97
	E1_2reg Special training to employees	0.05	0.03	0.08	1.77	0.08
	E1_3reg Specifically adapted ICT infrastructure	0.06	0.04	0.09	1.64	0.10
	E1_4reg Adapted infrastructure to avoid security risks	0.04	0.04	0.06	1.10	0.27

a Dependent Variable: D2_2reg

ANOVA(b)

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	61.71987398	34	1.815290411	1.983412348	0.000861983
	Residual	626.0214334	684	0.915236014		
	Total	687.7413074	718			

a Predictors: (Constant), E1_4reg, UK, B2_3reg, hightec High-tech Manufacturing, X

b Dependent Variable: D2_2reg

Model Summary

Model	R	R Square	Adjusted R Squ	Std. Error of the Estimate
1	0.300	0.090	0.044	0.957

a Predictors: (Constant), E1_4reg, UK, B2_3reg, hightec High-tech Manufacturing, X

Table 59: Regression analysis on predictors of success in achieving direct cost savings

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	**2.23**	**0.29**		**7.62**	**0.00**
	Country (reference: Germany)					
	Belgium	-0.19	0.19	-0.05	-1.01	0.31
	Denmark	-0.23	0.17	-0.07	-1.36	0.17
	Finland	0.01	0.19	0.00	0.04	0.97
	Netherlands	-0.27	0.21	-0.07	-1.29	0.20
	Portugal	**-0.78**	**0.19**	**-0.26**	**-4.02**	**0.00**
	Sweden	-0.20	0.18	-0.06	-1.11	0.27
	UK	-0.11	0.17	-0.03	-0.63	0.53
	size_Size class	0.01	0.07	0.01	0.19	0.85
	Sector (reference: KIBE)					
	hightec_High-tech Manufacturing	0.02	0.14	0.01	0.14	0.89
	mediumtec_Medium High-tech Manufacturing	-0.16	0.11	-0.07	-1.46	0.15
	g4reg Company age	-0.09	0.07	-0.06	-1.35	0.18
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	0.27	0.11	0.11	2.42	0.02
	X6_2reg Take-over of a foreign company	0.17	0.17	0.04	0.99	0.32
	X6_3reg Being taken over by a foreign company	0.31	0.20	0.07	1.60	0.11
	X6_4reg Merger with a foreign company	-0.31	0.23	-0.06	-1.35	0.18
	X6_5reg Joint venture, alliance or any other type of forma	0.12	0.10	0.05	1.22	0.22
	X6_6reg Cooperation with foreign supply chain partner	-0.02	0.10	-0.01	-0.22	0.83
	Collaboration partners (factor loadings)					
	FAC1_B1 Research organisations & public sector	-0.04	0.05	-0.03	-0.79	0.43
	FAC2_B1 Suppliers of goods, production facilities	0.09	0.05	0.08	1.88	0.06
	FAC3_B1 Other parts of same enterprise	**-0.18**	**0.05**	**-0.16**	**-3.58**	**0.00**
	FAC4_B1 Clients, customers, service providers	**-0.16**	**0.05**	**-0.14**	**-3.36**	**0.00**
	Collaboration destinations					
	B2_1reg Africa	-0.18	0.11	-0.07	-1.62	0.11
	B2_2reg Asia	0.05	0.10	0.02	0.54	0.59
	B2_3reg Middle East	0.05	0.12	0.02	0.42	0.67
	B2_4reg North-America	-0.21	0.10	-0.09	-2.17	0.03
	B2_5reg Latin America	0.04	0.11	0.01	0.32	0.75
	B2_6reg Australia, New Zealand, other Oceania	0.08	0.12	0.03	0.65	0.51
	B2_7reg country formerly belonging to USSR	-0.16	0.11	-0.07	-1.49	0.14
	B2_8reg non-EU Europe	-0.03	0.11	-0.01	-0.30	0.76
	C2_addup_Online collaboration tool use intensity sc	**0.02**	**0.01**	**0.17**	**3.57**	**0.00**
	Organisational support					
	E1_1reg Procedures for identifying suitable partners	-0.03	0.04	-0.03	-0.75	0.46
	E1_2reg Special training to employees	0.03	0.04	0.04	0.84	0.40
	E1_3reg Specifically adapted ICT infrastructure	0.03	0.05	0.03	0.57	0.57
	E1_4reg Adapted infrastructure to avoid security risks	0.08	0.04	0.10	1.80	0.07

a Dependent Variable: D2_3reg

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	125	34	4	3	0.00
	Residual	653	580	1		
	Total	777	614			

a Predictors: (Constant), E1_4reg, g4reg, Finland, hightec High-tech Manufacturing, ...

b Dependent Variable: D2_3reg

Model Summary

Model	R	R Square	Adjusted R Squ	Std. Error of the Estimate
1	0.400	0.160	0.111	1.061

a Predictors: (Constant), E1_4reg, g4reg, Finland, hightec High-tech Manufacturing, ...

Table 60: Regression analysis on predictors of success in gaining access to highly-skilled labour and expertise

Coefficients(a)

Model		Unstandardized Coefficients B	Std. Error	Standardized Beta	t	Sig.
1	**(Constant)**	**1.49**	**0.30**		**4.99**	**0.00**
	Country (reference: Germany)					
	Belgium	0.35	0.20	0.09	1.74	0.08
	Denmark	-0.13	0.18	-0.04	-0.72	0.47
	Finland	-0.23	0.21	-0.05	-1.08	0.28
	Netherlands	0.20	0.22	0.05	0.94	0.35
	Portugal	0.03	0.20	0.01	0.14	0.89
	Sweden	0.10	0.18	0.03	0.57	0.57
	UK	0.08	0.18	0.03	0.45	0.66
	size Size class	0.04	0.07	0.02	0.52	0.61
	Sector (reference: KIBE)					
	hightec High-tech Manufacturing	0.03	0.14	0.01	0.20	0.84
	mediumtec Medium High-tech Manufacturing	-0.10	0.12	-0.04	-0.86	0.39
	g4reg Company age	0.01	0.07	0.01	0.22	0.83
	Globalisation strategy in recent past					
	X6_1reg Set-up of a unit or subsidiary abroad	0.03	0.12	0.01	0.28	0.78
	X6_2reg Take-over of a foreign company	-0.21	0.17	-0.06	-1.23	0.22
	X6_3reg Being taken over by a foreign company	0.26	0.21	0.06	1.24	0.22
	X6_4reg Merger with a foreign company	-0.07	0.23	-0.02	-0.32	0.75
	X6_5reg Joint venture, alliance or any other type of form	0.04	0.10	0.02	0.43	0.67
	X6_6reg Cooperation with foreign supply chain partner	-0.01	0.10	0.00	-0.09	0.93
	Collaboration partners (factor loadings)					
	FAC1_B1 Research organisations & public sector	0.06	0.05	0.06	1.30	0.20
	FAC2_B1 Suppliers of goods, production facilities	-0.03	0.05	-0.03	-0.62	0.54
	FAC3_B1 Other parts of same enterprise	0.08	0.05	0.07	1.43	0.15
	FAC4_B1 Clients, customers, service providers	-0.12	0.05	-0.11	-2.49	0.01
	Collaboration destinations					
	B2_1reg Africa	-0.14	0.11	-0.06	-1.26	0.21
	B2_2reg Asia	-0.14	0.10	-0.06	-1.31	0.19
	B2_3reg Middle East	-0.13	0.12	-0.05	-1.06	0.29
	B2_4reg North-America	0.04	0.10	0.02	0.43	0.67
	B2_5reg Latin America	0.00	0.11	0.00	0.00	1.00
	B2_6reg Australia, New Zealand, other Oceania	0.09	0.13	0.04	0.74	0.46
	B2_7reg country formerly belonging to USSR	0.04	0.11	0.02	0.40	0.69
	B2_8reg non-EU Europe	0.13	0.11	0.06	1.17	0.24
	C2_addup Online collaboration tool use intensity score	0.01	0.01	0.05	0.92	0.36
	Organisational support					
	E1_1reg Procedures for identifying suitable partners	0.04	0.04	0.05	1.03	0.30
	E1_2reg Special training to employees	0.03	0.04	0.04	0.82	0.41
	E1_3reg Specifically adapted ICT infrastructure	**0.16**	**0.05**	**0.20**	**3.39**	**0.00**
	E1_4reg Adapted infrastructure to avoid security risks	0.01	0.05	0.01	0.12	0.91

a Dependent Variable: D2_6reg

ANOVA(b)

Model		Sum of Squar	df	Mean Square	F	Sig.
1	Regression	89	34	3	2	0.00
	Residual	588	533	1		
	Total	677	567			

a Predictors: (Constant), E1_4reg, hightec High-tech Manufacturing, UK, g4reg, ...

b Dependent Variable: D2_6reg

Model Summary

Model	R	R Square	Adjusted R Sc	Std. Error of the Estimate
1	0.362	0.131	0.076	1.051

a Predictors: (Constant), E1_4reg, hightec High-tech Manufacturing, UK, g4reg, ...

6.4 Information on survey response and sample exhaustion

6.4.1 Belgium

	Country:	BELGIUM			
			number of employees (X1/X1a)		
	Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1	Sample (gross) [i.e. telephone numbers dialled at least once]	**1862**	923	544	395
1.1	Telephone number does not exist	**327**	177	94	56
1.2	Not a company (i.e. private household etc.)	**20**	20	0	0
1.3	Fax machine /modem	*in pos. 1.1*	*in pos. 1.1*	*in pos. 1.1*	*in pos. 1.1*
1.4	Quota completed, therefore address not used	**0**	0	0	0
1.5	No target person in company **(S3, Pos. 9)**	**3**	2	0	1
1.6	Language problems	**26**	14	10	2
1.7.1.	**S1: Pos. 3** (No such person)	**207**	136	45	26
1.7.2.	***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	**0**	0	0	0
1.8.1	**S5b: Pos. 2 or 3** (No or DK)	**23**	7	8	8
1.8.2	**S6: Pos. 2 or 3** (No or DK)	**153**	82	51	20
1.9	**X1/X1a:** Quota failures (size <5 or >250 or "DK")	**10**	3	1	6
1.10	Sum	**769**	441	209	119
2	Net sample	**1093**	482	335	276
2.1	Nobody picks up phone (and max. contacts not yet exhausted)	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*
2.2	Line busy, engaged	**332**	159	94	79
2.3	Answering machine	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*
2.4	Contact person refuses (i.e. refusal at reception, switchboard)	**374**	198	94	82
2.5	Target person refuses	**66**	23	22	21
2.6	no appointment during fieldwork period possible	**183**	56	80	47
2.7	open appointment	**0**	0	0	0
2.8	target person is ill / cannot follow the interview	**0**	0	0	0
2.9	Interview abandoned	**25**	7	10	8
2.10	Interview error, cannot be used	**0**	0	0	0
2.11	Sum	**980**	443	300	237
2.12	**Successful interviews**	**113**	39	35	39
3	**Completion rate:**	**10.34%**	**8.09%**	**10.45%**	**14.13%**
4	**Average Interview Length (in minutes : seconds)**	**21,17**	20,56	20,88	20,84

6.4.2 Denmark

	Country:	Denmark			
			number of employees (X1/X1a)		
	Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1	Sample (gross) [i.e. telephone numbers dialled at least once]	**1099**	605	371	123
1.1	Telephone number does not exist	**46**	24	16	6
1.2	Not a company (i.e. private household etc.)	**10**	9	1	0
1.3	Fax machine /modem	**14**	8	3	3
1.4	Quota completed, therefore address not used	**13**	13	0	0
1.5	No target person in company **(S3, Pos. 9)**	**7**	4	2	1
1.6	Language problems	**2**	1	1	0
1.7.1.	**S1: Pos. 3** (No such person)	**29**	17	9	3
1.7.2.	***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	*n.a.*	*n.a.*	*n.a.*	*n.a.*
1.8.1	**S5b: Pos. 2 or 3** (No or DK)	**16**	8	6	2
1.8.2	**S6: Pos. 2 or 3** (No or DK)	**344**	246	86	12
1.9	**X1/X1a:** Quota failures (size <5 or >250 or "DK")	**37**	19	10	8
1.10	Sum	**518**	349	134	35
2	Net sample	**581**	256	237	88
2.1	Nobody picks up phone (and max. contacts not yet exhausted)	**34**	19	13	2
2.2	Line busy, engaged	**70**	19	41	10
2.3	Answering machine	**26**	7	11	8
2.4	Contact person refuses (i.e. refusal at reception, switchboard)	**15**	9	4	2
2.5	Target person refuses	**105**	44	47	14
2.6	no appointment during fieldwork period possible	**0**	0	0	0
2.7	open appointment	**172**	77	67	28
2.8	target person is ill / cannot follow the interview	**0**	0	0	0
2.9	Interview abandoned	**4**	4	0	0
2.10	Interview error, cannot be used	**0**	0	0	0
2.11	Sum	**426**	179	183	64
2.12	**Successful interviews**	**155**	77	54	24
3	**Completion rate:**	**26.68%**	**30.08%**	**22.78%**	**27.27%**
4	**Average Interview Length (in minutes : seconds)**	**13 : 21**	12 : 59	13 : 48	13 : 20

6.4.3 Finland

Country:	Finland			
		number of employees (X1/X1a)		
Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1 Sample (gross) [i.e. telephone numbers dialled at least once]	**1301**	712	445	144
1.1 Telephone number does not exist	**9**	9	0	0
1.2 Not a company (i.e. private household etc.)	**0**	0	0	0
1.3 Fax machine /modem	**0**	0	0	0
1.4 Quota completed, therefore address not used	**11**	8	2	1
1.5 No target person in company **(S3, Pos. 9)**	**0**	0	0	0
1.6 Language problems	**0**	0	0	0
1.7.1. **S1: Pos. 3** (No such person)	**132**	82	37	13
1.7.2. ***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	*n.a.*	*n.a.*	*n.a.*	*n.a.*
1.8.1 **S5b: Pos. 2 or 3** (No or DK)	**11**	7	3	1
1.8.2 **S6: Pos. 2 or 3** (No or DK)	**115**	68	39	8
1.9 **X1/X1a:** Quota failures (size <5 or >250 or "DK")	**18**	9	3	6
1.10 Sum	**296**	183	84	29
2 Net sample	**1005**	529	361	115
2.1 Nobody picks up phone (and max. contacts not yet exhausted)	**173**	115	44	14
2.2 Line busy, engaged	**1**	0	0	1
2.3 Answering machine	**0**	0	0	0
2.4 Contact person refuses (i.e. refusal at reception, switchboard)	**156**	102	44	10
2.5 Target person refuses	**91**	45	40	6
2.6 no appointment during fieldwork period possible	**0**	0	0	0
2.7 open appointment	**477**	228	179	70
2.8 target person is ill / cannot follow the interview	**0**	0	0	0
2.9 Interview abandoned	**2**	0	2	0
2.10 Interview error, cannot be used	**0**	0	0	0
2.11 Sum	**900**	490	309	101
2.12 **Successful interviews**	**105**	39	52	14
3 Completion rate:	**10.45%**	**7.37%**	**14.40%**	**12.17%**
4 Average Interview Length (in minutes : seconds)	**17: 03**	00 : 00	00 : 00	00 : 00

6.4.4 Germany

Country:	Germany			
		Number of employees (Z2b)		
Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1 Sample (gross) [i.e. telephone numbers dialled at least once]	**4676**	**2297**	**1146**	**1233**
1.1 Telephone number does not exist	**158**	79	38	41
1.2 Not a company (i.e. private household etc.)	**16**	11	2	3
1.3 Fax machine /modem	**44**	31	6	7
1.4 Quota completed, therefore address not used	**315**	105	92	118
1.5 No target person in company **(S3, Pos. 9)**	**1**	1	0	0
1.6 Language problems	**1**	0	1	0
1.7.1. **S1: Pos. 3** (No such person)	**1196**	632	325	239
1.7.2. ***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	*n.a.*	*n.a.*	*n.a.*	*n.a.*
1.8.1 **S5b: Pos. 2 or 3** (No or DK)	**43**	22	14	7
1.8.2 **S6: Pos. 2 or 3** (No or DK)	**290**	215	47	28
1.9 **X1/X1a:** Quota failures (size <5 or >250 or "DK")	**19**	7	2	10
1.10 Sum	**2083**	1103	527	453
2 Net sample	**2593**	1194	619	780
2.1 Nobody picks up phone (and max. contacts not yet exhausted)	**993**	467	232	294
2.2 Line busy, engaged	**0**	0	0	0
2.3 Answering machine	*in pos. 2.1*	*in pos. 2.2*	*in pos. 2.3*	*in pos. 2.4*
2.4 Contact person refuses (i.e. refusal at reception, switchboard)	**826**	330	224	272
2.5 Target person refuses	**270**	121	74	75
2.6 no appointment during fieldwork period possible	**63**	49	8	6
2.7 open appointment	**278**	167	42	69
2.8 target person is ill / cannot follow the interview	**1**	0	1	0
2.9 Interview abandoned	**10**	5	4	1
2.10 Interview error, cannot be used	**0**	0	0	0
2.11 Sum	**2441**	1139	585	717
2.12 **Successful interviews**	**152**	55	34	63
3 Completion rate:	**5.86%**	**4.61%**	**5.49%**	**8.08%**
4 Average Interview Length (in minutes : seconds)	**15 : 45**	00 : 00	00 : 00	00 : 00

6.4.5 The Netherlands

Country:	Netherlands			
		number of employees (X1/X1a)		
Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1 Sample (gross) [i.e. telephone numbers dialled at least once]	**1516**	497	478	541
1.1 Telephone number does not exist	**122**	32	37	53
1.2 Not a company (i.e. private household etc.)	**6**	6	0	0
1.3 Fax machine /modem	*in pos. 1.1*	*in pos. 1.1*	*in pos. 1.1*	*in pos. 1.1*
1.4 Quota completed, therefore address not used	**0**	0	0	0
1.5 No target person in company **(S3, Pos. 9)**	**0**	0	0	0
1.6 Language problems	**0**	0	0	0
1.7.1. **S1: Pos. 3** (No such person)	**226**	92	66	68
1.7.2. ***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	*n.a.*	*n.a.*	*n.a.*	*n.a.*
1.8.1 **S5b: Pos. 2 or 3** (No or DK)	**4**	3	1	0
1.8.2 **S6: Pos. 2 or 3** (No or DK)	**91**	37	26	28
1.9 **X1/X1a:** Quota failures (size <5 or >250 or "DK")	**10**	2	5	3
1.10 Sum	**459**	172	135	152
2 Net sample	**1057**	325	343	389
2.1 Nobody picks up phone (and max. contacts not yet exhausted)	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*
2.2 Line busy, engaged	**664**	199	222	243
2.3 Answering machine	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*	*in pos. 2.2*
2.4 Contact person refuses (i.e. refusal at reception, switchboard)	**227**	85	66	76
2.5 Target person refuses	**44**	12	16	16
2.6 no appointment during fieldwork period possible	**36**	12	12	12
2.7 open appointment	**10**	2	1	7
2.8 target person is ill / cannot follow the interview	**0**	0	0	0
2.9 Interview abandoned	**3**	0	2	1
2.10 Interview error, cannot be used	**0**	0	0	0
2.11 Sum	**984**	310	319	355
2.12 **Successful interviews**	**73**	15	24	34
3 Completion rate:	**6.91%**	**4.62%**	**7.00%**	**8.74%**
4 Average Interview Length (in minutes : seconds)	**21:00**	19,44	22,05	20,84

6.4.6 Portugal

	Country:	Portugal			
			number of employees (on the address		
	Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1	Sample (gross) [i.e. telephone numbers dialled at least once]	**875**	416	326	133
1.1	Telephone number does not exist / changed	**63**	40	21	2
1.2	Not a company (i.e. private household etc.)	**0**	0	0	0
1.3	Fax machine /modem	**8**	6	2	0
1.4	Quota completed, therefore address not used	**14**	0	4	10
1.5	No target person in company **(S3, Pos. 9)**	**1**	0	1	0
1.6	Language problems	**0**	0	0	0
1.7.1.	**S1: Pos. 3** (No such person)	*in pos. 2.4*	*in pos. 2.4*	*in pos. 2.4*	*in pos. 2.4*
1.7.2.	***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	*n.a.*	*n.a.*	*n.a.*	*n.a.*
1.8.1	**S5b: Pos. 2 or 3** (No or DK)	**15**	8	4	3
1.8.2	**S6: Pos. 2 or 3** (No or DK)	**103**	70	28	5
1.9	**X1/X1a:** Quota failures (size <5 or >250 or "DK")	**8**	2	2	4
1.10	Sum	**212**	126	62	24
2	Net sample	**663**	290	264	109
2.1	Nobody picks up phone (and max. contacts not yet exhausted)	**80**	49	18	13
2.2	Line busy, engaged	**14**	7	4	3
2.3	Answering machine	**22**	14	7	1
2.4	Contact person refuses (i.e. refusal at reception, switchboard)	**391**	163	163	65
2.5	Target person refuses	**0**	0	0	0
2.6	no appointment during fieldwork period possible	**0**	0	0	0
2.7	open appointment	**4**	1	2	1
2.8	target person is ill / cannot follow the interview	**0**	0	0	0
2.9	Interview abandoned	**0**	0	0	0
2.10	Interview error, cannot be used	**2**	0	1	1
2.11	Sum	**513**	234	195	84
2.12	**Successful interviews**	**150**	56	69	25
3	**Completion rate:**	**22.62%**	**19.31%**	**26.14%**	**22.94%**
4	**Average Interview Length (in minutes : seconds)**	**19:44**	00 : 00	00 : 00	00 : 00

6.4.7 Sweden

Country:	Sweden			
		number of employees (X1/X1a)		
Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1 Sample (gross) [i.e. telephone numbers dialled at least once]	**2893**	822	941	1130
1.1 Telephone number does not exist	**172**	40	50	82
1.2 Not a company (i.e. private household etc.)	**0**	0	0	0
1.3 Fax machine /modem	**26**	7	6	13
1.4 Quota completed, therefore address not used	**0**	0	0	0
1.5 No target person in company **(S3, Pos. 9)**	**0**	0	0	0
1.6 Language problems	**0**	0	0	0
1.7.1. **S1: Pos. 3** (No such person)	**847**	299	278	270
1.7.2. ***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	*n.a.*	*n.a.*	*n.a.*	*n.a.*
1.8.1 **S5b: Pos. 2 or 3** (No or DK)	**23**	10	10	3
1.8.2 **S6: Pos. 2 or 3** (No or DK)	**15**	6	5	4
1.9 **X1/X1a:** Quota failures (size <5 or >250 or "DK")	**32**	5	4	23
1.10 Sum	**1115**	367	353	395
2 Net sample	**1778**	455	588	735
2.1 Nobody picks up phone (and max. contacts not yet exhausted)	**388**	88	118	182
2.2 Line busy, engaged	**0**	0	0	0
2.3 Answering machine	**7**	2	3	2
2.4 Contact person refuses (i.e. refusal at reception, switchboard)	**593**	196	202	195
2.5 Target person refuses	**259**	61	85	113
2.6 no appointment during fieldwork period possible	**32**	8	7	17
2.7 open appointment	**371**	70	135	166
2.8 target person is ill / cannot follow the interview	**0**	0	0	0
2.9 Interview abandoned	**12**	3	5	4
2.10 Interview error, cannot be used	**0**	0	0	0
2.11 Sum	**1662**	428	555	679
2.12 **Successful interviews**	**116**	27	33	56
3 Completion rate:	**6.52%**	**5.93%**	**5.61%**	**7.62%**
4 Average Interview Length (in minutes : seconds)	**17 : 24**	00 : 00	00 : 00	00 : 00

6.4.8 U.K.

Country:	United Kingdon			
		number of employees (X1/X1a)		
Completion Table	**TOTAL**	SE (5 - 9)	ME 1 (10 - 49)	ME 2 (50 - 250)
1 Sample (gross) [i.e. telephone numbers dialled at least once]	**3932**	2219	619	1094
1.1 Telephone number does not exist	**286**	151	42	93
1.2 Not a company (i.e. private household etc.)	**8**	6	2	0
1.3 Fax machine /modem	**15**	10	1	4
1.4 Quota completed, therefore address not used	**1882**	1054	319	509
1.5 No target person in company **(S3, Pos. 9)**	**1**	1	0	0
1.6 Language problems	**0**	0	0	0
1.7.1. **S1: Pos. 3** (No such person)	**38**	14	4	20
1.7.2. ***S1:** only IF an **EXTRA code used at S1** for **"no collaboration with companies ..."***	**629**	392	93	144
1.8.1 **S5b: Pos. 2 or 3** (No or DK)	**30**	17	5	8
1.8.2 **S6: Pos. 2 or 3** (No or DK)	**170**	110	25	35
1.9 **X1/X1a:** Quota failures (size <5 or >250 or "DK")	**29**	15	0	14
1.10 Sum	**3088**	1770	491	827
2 Net sample	**844**	449	128	267
2.1 Nobody picks up phone (and max. contacts not yet exhausted)	**6**	0	0	6
2.2 Line busy, engaged	**0**	0	0	0
2.3 Answering machine	**117**	96	2	19
2.4 Contact person refuses (i.e. refusal at reception, switchboard)	**261**	123	45	93
2.5 Target person refuses	**219**	123	34	62
2.6 no appointment during fieldwork period possible	**9**	7	0	2
2.7 open appointment	**41**	23	5	13
2.8 target person is ill / cannot follow the interview	**2**	1	1	0
2.9 Interview abandoned	**38**	14	11	13
2.10 Interview error, cannot be used	**0**	0	0	0
2.11 Sum	**693**	387	98	208
2.12 **Successful interviews**	**151**	62	30	59
3 Completion rate:	**17.89%**	**13.81%**	**23.44%**	**22.10%**
4 Average Interview Length (in minutes : seconds)	**14 : 33**	14 : 25	15 : 50	14 : 02

6.5 Final Field Questionnaire

See separate file