

LogOn Baltic Regional reports
30:2007



**LOGISTICS SURVEY IN THE
SOUTHERN METROPOLITAN
REGION OF HAMBURG, GERMANY**

**Wolfgang Kersten,
Mareike Böger,
Meike Schröder,
Carolin Singer and
Tomi Solakivi**



Project part-financed by the European Union
(European Regional Development Fund) within
the BSR INTERREG III B Neighbourhood Programme

LogOn Baltic Regional reports
30:2007

LOGISTICS SURVEY IN THE SOUTHERN
METROPOLITAN REGION OF HAMBURG,
GERMANY

Wolfgang Kersten,
Mareike Böger,
Meike Schröder,
Carolin Singer
and
Tomi Solakivi

© Kühne School of Logistics and Management GmbH
at Hamburg University of Technology (TUHH)
Kasernenstraße 12, 21073 Hamburg, Germany
And
Turku School of Economics
Rehtorinpellonkatu 3, FI-20500 TURKU, Finland

Published by
LogOn Baltic
Turku School of Economics
Rehtorinpellonkatu 3, FI-20500 TURKU, Finland
www.logonbaltic.info

All rights reserved. No part of this publication may be produced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publisher. Whilst all reasonable care has been taken to ensure the accuracy of this publication, the publishers cannot accept responsibility for any errors or omissions.

This publication has been produced with the financial assistance of the European Union. The content of this publication is the sole responsibility of the publisher and can under no circumstances be regarded as reflecting the position of the European Union.

The content of this publication reflects the author's views. The Investitionsbank Schleswig-Holstein is not liable for any use that may be made of the information contained herein.

EXECUTIVE SUMMARY

This report is part of the LogOn Baltic project. The aim of this project is to provide an understanding and comparable results on how best to develop regions through effective ICT and logistics activities and spatial planning means. The results are based on user needs of manufacturing and trading firms and logistics service providers. The project, which is part of the Baltic Sea Region (BSR) INTERREG III B Programme, is co-funded by the European Union (EU) and national project partners.

One of the methodologies used in the project is an online-based logistics survey, whose results are presented in this report. The objective of the survey is to determine the current status and needs of logistics in the business community in the participating regions.

The following report focuses on the results of the logistics survey conducted in the Southern Metropolitan Region of Hamburg and is divided into five chapters. The first chapter of this study describes the LogOn Baltic project, the regional partners involved and the questionnaire. The second chapter specifies the implementation of the survey. Furthermore, the respondents are classified according to their company size, industry and position in the company.

The main results of the survey are presented and interpreted in chapters 3 and 4, depending on the industry. The main topics covered for manufacturing and trade companies are:

- Logistics costs depending on the industry,
- Logistics competence,
- Outsourcing of logistics operations,
- Operating environment and
- Self assessment of the companies.

The report comprises the following sections for the logistics service providers:

- Client structure and market development,
- Logistics competence,
- Development needs and threats of the future,
- Operating environment and
- Self assessment of the companies.

The fifth chapter of the report summarizes the results and gives an outlook on future regional development issues.

EXECUTIVE SUMMARY

Dieser Bericht ist Bestandteil des EU-Projektes LogOn Baltic. Ziel dieses Projektes ist es, die regionale Entwicklung und Integration in den Bereichen Logistik sowie Informations- und Kommunikationstechnologien (IKT, Englisch: ICT) durch Erfahrungs- und Wissensaustausch voranzutreiben. Das Projekt ist Teil des Baltic Sea Region (BSR) INTERREG III B Programms der Europäischen Union.

Eine der im Projekt genutzten Methoden ist eine großzahlige Online-Befragung zur Ermittlung des Ist-Zustandes sowie der Anforderungen der Logistik in der bzw. an die Geschäftswelt. Die Ergebnisse dieser Befragung sind Gegenstand des vorliegenden Berichts.

Der Bericht betrachtet die Ergebnisse der Umfrage in der südlichen Metropolregion Hamburg und gliedert sich in fünf Teile. Kapitel 1 beschreibt das Projekt, seine regionalen Partner sowie den Logistikfragebogen selbst. Im zweiten Kapitel wird die Durchführung der Befragung näher erläutert. Ferner wird eine Einordnung der Befragten in Abhängigkeit von der Unternehmensgröße, der Branchenzugehörigkeit sowie der Position im Unternehmen vorgenommen.

In Kapitel 3 werden die Hauptergebnisse der Befragung nach Branchenzugehörigkeit präsentiert und interpretiert. Im Falle der Produktions- und Handelsunternehmen werden die folgenden Themen behandelt:

- Logistikkosten nach Branchenzugehörigkeit,
- Logistikkompetenz,
- Outsourcing logistischer Prozesse,
- Geschäftsumfeld sowie
- Selbsteinschätzung der Unternehmen.

Für die Logistikdienstleister umfasst der Bericht die nachstehenden Bereiche:

- Kundenstruktur und Marktentwicklung,
- Logistikkompetenz,
- Entwicklungsanforderungen und zukünftige Gefahren,
- Geschäftsumfeld sowie
- Selbsteinschätzung der Unternehmen.

Im fünften Kapitel werden die Ergebnisse zusammengefasst und es erfolgt ein Ausblick auf die künftige Entwicklung der südlichen Metropolregion Hamburg.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
EXECUTIVE SUMMARY	7
TABLE OF CONTENTS.....	9
LIST OF FIGURES	11
LIST OF TABLES	13
LIST OF ABBREVIATIONS	15
1 INTRODUCTION	17
1.1 Project introduction – LogOn Baltic.....	17
1.2 Regional partner introduction.....	18
1.3 Logistics survey introduction.....	19
2 SURVEY DESIGN	21
2.1 Target group and sample	21
2.2 Main themes of the survey	24
2.3 International reference data	25
2.3.1 Logistics costs on national level	25
2.3.2 Logistics costs on company level	27
2.3.3 Logistics outsourcing.....	27
2.3.4 Location and operating preconditions.....	28
3 FINDINGS FROM MANUFACTURING AND TRADE.....	29
3.1 Logistics costs.....	29
3.1.1 Logistics costs manufacturing	29
3.1.2 Logistics costs trade.....	31
3.2 Logistics competence	33
3.3 Operating environment	37
3.4 Self assessment of the companies	40
4 FINDINGS FROM LOGISTICS SERVICE PROVIDERS.....	47
4.1 Client structure and market development	47
4.2 Logistics competence	49

4.3	Development needs and threats of the future.....	50
4.4	Operating environment	52
4.5	Self assessment of the companies	54
5	SUMMARY AND CONCLUSIONS	59
	REFERENCES	63
	APPENDIX.....	65
	Appendix 1 Interview guideline	65

LIST OF FIGURES

Figure 1	Number of respondents according to company size (turnover in 2005).....	22
Figure 2	Number of respondents according to main industry	23
Figure 3	Number of respondents according to respondent's position in the company	24
Figure 4	Logistics costs as a percentage of companies' turnover in the ELA/A.T. Kearney survey in 1987, 1993, 1998 and 2003 (European Logistics Association and A.T. Kearney, 2004).....	27
Figure 5	Logistics costs as a percentage of turnover in manufacturing companies	30
Figure 6	Estimate of the development of logistics costs, manufacturing companies	31
Figure 7	Logistics costs as a percentage of turnover, trading companies.....	32
Figure 8	The estimate of the development of logistics costs, trading companies.....	33
Figure 9	The development needs of personnel competence, manufacturing companies	34
Figure 10	The development needs of personnel competence, trading companies.....	35
Figure 11	Outsourcing of different logistics functions, manufacturing and trading companies.....	36
Figure 12	The relative trend of outsourcing	37
Figure 13	Manufacturing companies' opinions about their operating environment	38
Figure 14	Trading companies' opinions about their operating environment	39
Figure 15	The usage of different ICT-systems, manufacturing and trading companies.....	40
Figure 16	The most important future development needs of manufacturing companies	46
Figure 17	Distribution of turnover in logistic services companies for different types of services 2006 and 2010 (estimate)	47
Figure 18	Increase in demand by 2010, logistics service providers.....	48

Figure 19	The most important development needs of personnel competence, logistics service providers	49
Figure 20	Largest threats to business, logistics service providers.....	50
Figure 21	The most important development needs of the future, logistics service providers.....	51
Figure 22	Logistics service providers' opinions about their operating environment	52
Figure 23	The usage of different ICT systems, logistics service providers	53

LIST OF TABLES

Table 1	Global logistics costs in billion USD, % of GDP in selected areas of the world in 1997, 2000 and 2002 (Rodrigues, Bowersox and Calantone, 2005).....	26
Table 2	Comparison of logistics costs in selected European Union countries. Billion USD & % of GDP in 1997,2000 and 2002 (Rodrigues, Bowersox and Calantone, 2005).....	26
Table 3	Companies' self assessment of their supply chain performance relative to their competitors.....	41
Table 4	Companies' views on performance evaluation measures....	42
Table 5	Companies' self assessment on the importance of logistics in their operations.....	43
Table 6	Companies' self assessment on internal collaboration in logistics operations	44
Table 7	Companies' self assessment on external collaboration in logistics operations	45
Table 8	Companies' self assessment on their supply chain performance relative to its competitors	54
Table 9	Logistics service providers' views on performance evaluation measures.....	55
Table 10	Companies' self assessment on internal collaboration in logistics operations	56
Table 11	Companies' self assessment on external collaboration in logistics operations	57

LIST OF ABBREVIATIONS

BSR	Baltic Sea Region
cp.	compare
DEMIA	Development Measure Impact Analysis
e.g.	for example
ERDF	European Regional Development Fund
EU	European Union
HSL	Hamburg School of Logistics
ICT	Information and Communication Technology
i.e.	that is
LSP	Logistics Service Provider
PPP	Public Private Partnership
RFID	Radio Frequency IDentification
SAG	Wachstumsinitiative Süderelbe AG
SMEs	Small and Medium-sized Enterprises
TUHH	Hamburg University of Technology
WP	Work Package

1 INTRODUCTION

1.1 Project introduction – LogOn Baltic

The LogOn Baltic project was approved within the Baltic Sea Region (BSR) INTERREG III B Neighbourhood Programme, which is sponsored by the European Regional Development Fund (ERDF), as part of the Structural Funds, and co-financed by national project partners.

The purpose of LogOn Baltic is to present solutions to improve the interplay between logistics and Information and Communication Technologies (ICT) competence and spatial planning and strengthening Small and Medium-sized Enterprises (SMEs) competitiveness in the BSR. This is primarily done by the production and dissemination of information for regional development agencies on how to support enterprises in the participating regions in the field of ICT and logistics, thus improving regional development.

The following regions are participating in the project:

- South-West Finland
- Östergötland (Sweden)
- Denmark
- Southern Metropolitan Region of Hamburg (Germany)
- West-Mecklenburg (Germany)
- North-East Poland
- Lithuania
- Latvia
- Estonia
- St. Petersburg (Russia)

LogOn Baltic provides an overview of logistics efficiency and logistics information systems and their exploitation, in order to improve the interaction between SMEs and other public/private actors.

On the one hand, the empirical activities of LogOn Baltic compare the existing logistics services and infrastructure with the logistics needs in the participating regions, making it possible to develop perspectives and action plans for strengthening the logistics competence in the regions. On the other hand it describes the existing ICT infrastructure and services,

revealing up to what extent they meet with the companies' needs for further development. In this way, LogOn Baltic focuses on:

- a. identifying development agencies and evaluating their performance in each region
- b. evaluating the level of logistics and ICT efficiency
- c. suggesting concrete actions for regional and local public sector bodies

Data are gathered in each participating region using four tools, Development Measure Impact Analysis (DEMIA), Logistics survey, ICT survey and Expert Interviews; each of these is presented in a separate report. These results together with secondary data is presented in a regional report, that will describe the state of affairs in the region, with recommendations on what and how the region needs to develop. The regional reports are used as a basis for making an interregional comparison which is reported in an inter-regional report. All reports are available on the project homepage, www.logonbaltic.info.

1.2 Regional partner introduction

The **HSL Hamburg School of Logistics** was founded in 2003 as an innovative partnership between the Hamburg University of Technology (TUHH) and the Kuehne Foundation of Schindellegi (Switzerland). Its aim is to combat current shortfalls in the training of logistics managers. It provides appropriate further training and prepares young professionals within the logistics sector for their future tasks in senior management. The HSL vision is to become a top business and logistics school and a leading international competence centre for applied research in logistics.

The challenging program offered by the HSL includes three elements: in addition to the one-year full-time or two-year part-time MBA degree, which is targeted at highly-qualified young professionals, the HSL also offers part-time training and a competence centre for practice-oriented research. A network of high-calibre academic and business partners ensure that training is both practice-oriented and academically sound. In the LogOn Baltic project the HSL participates as work package (WP) 3 leader due to its expertise in logistics research.

The regional partner of the HSL Hamburg School of Logistics is the **Wachstumsinitiative Süderelbe AG** (SAG). SAG was founded in December 2004 against the background of an increased need for regional cooperation between Hamburg and its surrounding region in regard to the growing international metropolis competition. Representing a new type of

a regional development agency, the SAG cooperates with its partners in the form of a “*private-public partnership*” (PPP) in which the participation of the business sector is to the fore. With its cluster-oriented strategy the SAG aims to achieve sustainable economic growth in the Southern Metropolitan Region of Hamburg by forming networks and accomplishing project-oriented cooperation between regional companies, service providers, scientific institutions and authorities, thereby crossing borderlines of municipalities, districts and federal states. For this innovative approach to action the SAG was recently awarded the national “kommKoop Award” by the Federal Ministry of Transport, Building and Urban Development. According to the laudation, the SAG is “an outstanding and trend-setting example of inter-communal co-operation” in Germany.

1.3 Logistics survey introduction

The survey is one of four tools being used for primary data collection, reflecting the current status and needs of logistics in the business community in the region. Three versions of the survey have been used, focusing on the following three types of companies:

- a. Manufacturing/construction companies
- b. Trading companies
- c. Logistics service providers

The questionnaire consists of two parts: The first part contains general questions (being the same for the three types of companies). The second part contains specific questions pertaining to the type of companies concerned. The same questionnaire has been used in all regions, but each region had the opportunity to add one or two questions that focus on specific regional issues. The regional reports will therefore differ slightly.

The survey was mainly conducted as a web-based survey, but mail, telephone and interviews were used as complementary measures in some regions.

This is by far the largest survey conducted in the Baltic Sea Region in the field of logistics. In this report, data and analysis will be presented for one region only.

The data will also be used to make a cross-regional analysis that focus on differences and similarities between the regions. The cross-regional analysis is presented in a separate report. It is available on the project homepage www.logonbaltic.info.

2 SURVEY DESIGN

In the following, the target group and sample as well as the main topics covered in the interviews are described.

2.1 Target group and sample

Target group of the survey were companies from three industry groups: Manufacturing industry, retail industry and logistics service providers. As the survey was designed as an online-based questionnaire, the Hamburg School of Logistics (HSL) sent emails to around 5,000 persons from these company groups in December 2006 and asked them to take part in the survey. The emails contained a link leading to a website where the participants could directly answer the questions.

The majority of email-addresses stem from the database of the HSL and the Wachstumsinitiative Süderelbe. Other databases with a specific focus on companies in the logistics sector were used, for instance from the chamber of commerce Hamburg.

After sending the first email, two reminders were sent at two-weekly intervals in order to increase the response rate. Furthermore, the survey was announced on the HSL homepage as well as on four conferences which took place in the Metropolitan Region of Hamburg in December, January and February. In total, the participants had three months time to respond to the questionnaire from the first email in December until the closure in the end of February. 119 participants finally answered the questionnaire.

In this report, the respondent companies were generally categorized according to the sector and the company size. Micro, small or medium-sized companies depending on the turnover are defined by the European Commission as follows (European Commission 2003):

- Micro companies: €0-2 million
- Small companies: €2-10 million
- Medium-sized companies: €10-50 million

Large companies are therefore characterized by a turnover of more than €50 million.

Micro, small and medium-sized companies are also referred to as SMEs (small and medium enterprises). The company size and sector were generally used as background parameters.

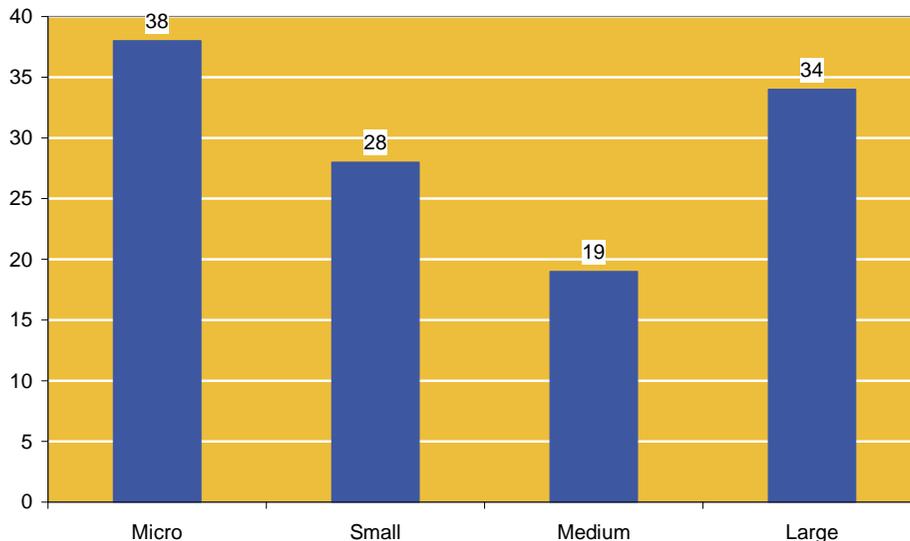


Figure 1 Number of respondents according to company size (turnover in 2005)

Figure 1 shows the number of respondent companies according to their company size. Out of the 119 companies that responded to the questionnaire, 32% (38) represent micro companies, 22% (28) belong to small companies, 16% (19) are medium-sized and 30% (34) represent large companies.

As a result, about two thirds of the respondents can be classified as SMEs. The German economy is characterized by an even higher number of SMEs (99.7%, Statistisches Bundesamt Deutschland 2006), with the percentage of SMEs varying from one region to another. Thus, the distribution of participating companies does not fully reflect the proportion of companies in Germany. This may have several reasons, one being that there was a higher proportion of large companies' email addresses in the databases. Another reason could be that SMEs generally have a lower willingness to answer surveys, mainly due to only limited personnel resources.

However, as the majority of respondent companies represent SMEs, the distribution of participants supports the objective of the LogOn Baltic

project to evaluate the needs and to strengthen the competitiveness of SMEs in particular.

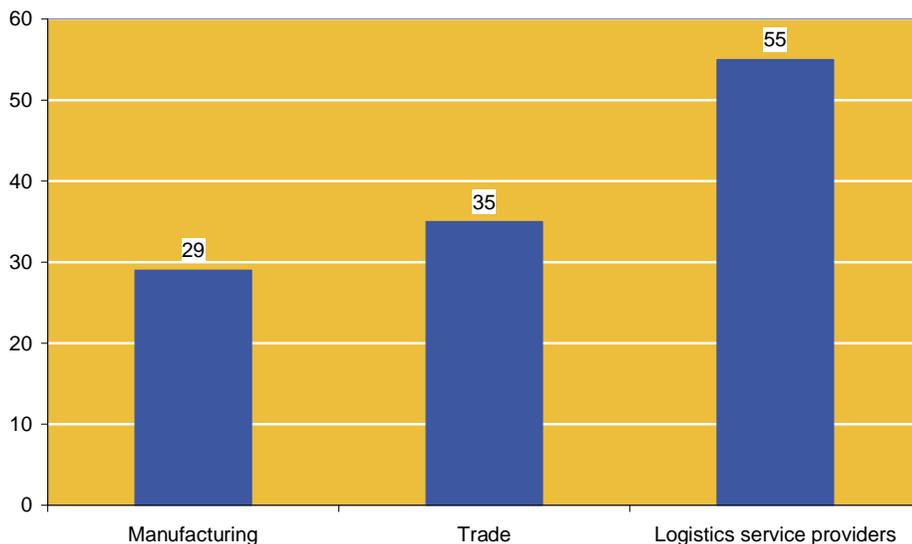


Figure 2 Number of respondents according to main industry

In addition to their size, companies were also classified according to their industrial sectors (see figure 2). 24% represent the manufacturing industry, 29% belong to the trading industry and 46% are logistics service providers. Logistics service providers were the main focus of the survey. The majority of the sample also belonged to this industry group. The other two sectors were chosen because companies from these industries also deal with logistics issues which become more and more important to their business. Thus, they are also considered to be able to evaluate their own and the region's situation with regard to logistics.

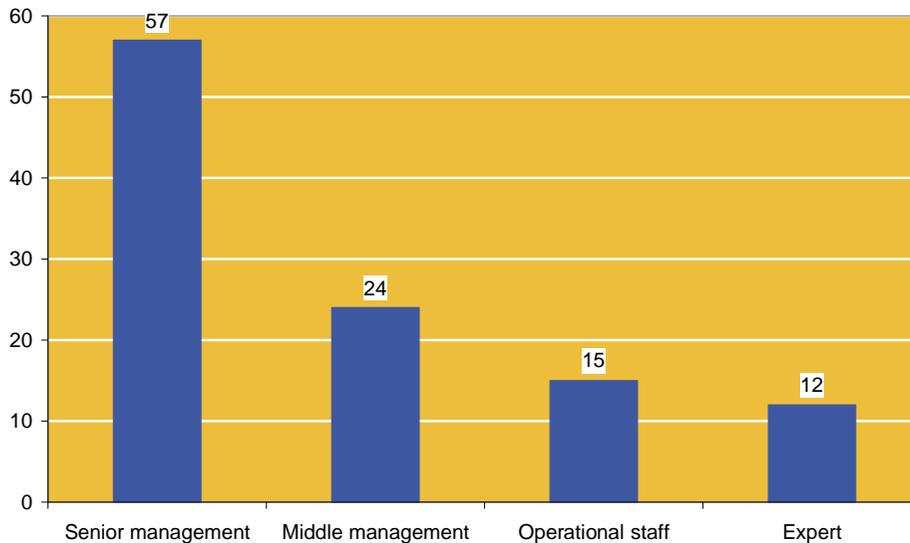


Figure 3 Number of respondents according to respondent's position in the company

The respondents were also categorized according to their positions in the companies (see figure 3). More than two thirds of the respondents either belong to the senior or the middle management. 48% (57) of the participants stated they are from the senior management and 20% (24) come from the middle management. This is not surprising, since the majority of companies are SMEs. 13% (15) of the participants are operational staff, 10% are experts. 9% (11) of the participants did not respond to this question. The high number of senior and middle managers supports the credibility of the survey. The management can be expected to have a broad overview of their current situation with respect to logistics and also to have a strategic view on future developments and trends. In SMEs, the management is often involved in operational issues as well and thus has a good knowledge of daily problems and challenges.

2.2 Main themes of the survey

The aim of this survey was to evaluate the internal situation of companies, especially of SMEs, with respect to logistics, but also the view of the companies on their regional business environment and future trends. Thus, the main themes of the survey are:

- Current logistics costs and their development

- The need for further competence development
- Outsourcing – today's situation and the expected development within the firms
- Operating environment – an assessment of the regional advantages and disadvantages
- A self-assessment of the companies' logistics activities and to what extent they are coordinated.

The questions concerning manufacturing and trade companies were similar. They will be reported in chapter 3. The findings from the logistics service providers will be presented in chapter 4.

2.3 International reference data

During the recent years, numerous surveys about different aspects of logistics have been performed and published (see for example Bordeaux Ecole de Management 2003, Naula et al. 2006 and IBM 2005). Unlike the LogOn Baltic survey, most of the available logistics surveys tend to have a rather narrow scope, focusing on a smaller set of themes such as logistics costs or outsourcing of different logistics functions.

2.3.1 Logistics costs on national level

In 2005 Rodrigues, Bowersox and Calantone estimated the level of logistics costs in relation to the gross domestic product. Based on their survey from 2005, the logistics costs globally in 2002 were around USD 6,700 billion (approximately €6,450 billion), which would correspond to around 13.8% of global GDP. According to Rodrigues et al. the logistics costs have been decreasing around the world outside Europe. On the contrary, the logistics costs in some European countries have been rising at the same time.

Table 1 Global logistics costs in billion USD, % of GDP in selected areas of the world in 1997, 2000 and 2002 (Rodrigues, Bowersox and Calantone, 2005)

Region	1997		2000		2002	
	USD bill.	% of GDP	USD bill.	% of GDP	USD bill.	% of GDP
Europe	884	12,2 %	1100	12,8 %	1229	13,3 %
N. America	1035	11,0 %	1240	10,6 %	1203	9,9 %
Pacific Region	1459	14,5 %	1989	15,3 %	2127	15,7 %
S.America	225	14,3 %	280	14,4 %	272	14,3 %
Other areas	1492	15,4 %	1778	15,7 %	1902	16,0 %
Whole world	5095	13,4 %	6387	13,7 %	6732	13,8 %

Another estimate on the logistics costs on the national level is the estimate by The Council of Supply Chain Management Professionals (CSCMP, see www.cscmp.org). The council estimates that India's logistics costs as 11% of its GDP and as much as 21% in the case of China. The level of logistics costs in the USA seems to have fallen from 14.5% to as low as 8% in the past 25 years. The CSCMP estimates that the logistics costs in Europe are somewhat higher, at least 11% of GDP (The Economist, 2006).

Table 2 Comparison of logistics costs in selected European Union countries. Billion USD & % of GDP in 1997, 2000 and 2002 (Rodrigues, Bowersox and Calantone, 2005)

	1997		2000		2002	
	Billion USD	% of GDP	Billion USD	% of GDP	Billion USD	% of GDP
Belgium	27	11,4 %	33	11,6 %	35	12,1 %
Denmark	16	12,9 %	20	13,0 %	23	13,6 %
France	158	12,0 %	177	11,9 %	186	11,6 %
Germany	228	13,1 %	323	15,3 %	374	16,7 %
Greece	17	12,6 %	24	12,9 %	26	13,0 %
Ireland	8	14,0 %	19	15,3 %	21	14,9 %
Italy	149	12,0 %	167	11,8 %	186	12,2 %
Holland	41	11,9 %	50	11,8 %	56	11,8 %
Portugal	19	12,9 %	24	13,6 %	25	13,4 %
Spain	94	14,7 %	107	13,3 %	124	14,1 %
UK	125	10,1 %	157	10,7 %	174	11,3 %

2.3.2 Logistics costs on company level

Since 1982, the European Logistics Association (ELA) has together with the consulting company A.T. Kearney published a survey on logistics costs and other logistics related key variables. According to ELA, logistics costs as a share of companies' turnover has steadily decreased during 1987-2007 to a current level of some 6 percent of turnover. The results of the ELA –survey have to be interpreted with a bit of caution, though. The respondents of the survey, some 200 companies, are large, international companies with resources and competence to deal with logistics related issues and enjoy the possibilities of economies of scale and scope. In a sense, the results of the ELA –survey are not fully compatible with the results of the LogOn Baltic survey.

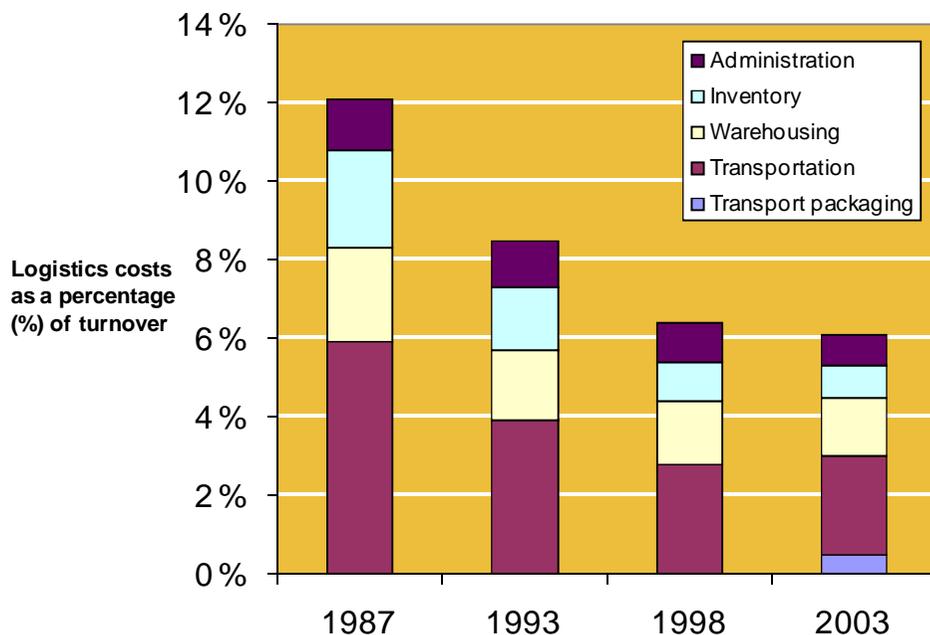


Figure 4 Logistics costs as a percentage of companies' turnover in the ELA/A.T. Kearney survey in 1987, 1993, 1998 and 2003 (European Logistics Association and A.T. Kearney, 2004)

2.3.3 Logistics outsourcing

Recent studies on logistics outsourcing and the development of logistics markets are for example Larson and Gammelgaard (2001) and Langley,

Dort, Ang and Sykes (2005). According to the respective surveys, the common trend seems to be that the outsourcing of logistics operations is increasing rapidly around the world, although the current status and the pace of the development seem to vary across the different areas of the world. Outsourcing is also spreading to new areas of business and to a set of new logistics functions. Whereas the outsourcing of logistics has previously been mainly outsourcing of basic logistics operations such as transportation and warehousing, some new functions like logistics IT-systems will be growing in the future.

2.3.4 Location and operating preconditions

One of the dimensions of the LogOn Baltic study is the location of the company and the operating preconditions on the location. For example Gullander and Larsson (2001) have discussed the effect and significance of location and particularly its relation with the outsourcing of logistics. Logistics IT-systems have previously been discussed for example by Lai, Ngai and Cheng (2005).

3 FINDINGS FROM MANUFACTURING AND TRADE

The structure of this chapter follows the structure of the questionnaire. Therefore, the following subchapters concerning manufacturing and trading companies refer to the five parts of the guideline listing and analysing the findings regarding logistics costs, logistics competence, outsourcing of logistics operations, operating environment and self assessment of the companies.

3.1 Logistics costs

In the following, logistics costs are displayed separately according to the two industries, manufacturing and trade.

3.1.1 Logistics costs manufacturing

The four major logistics cost elements examined in the survey are transport, warehousing, inventory and administration. All costs are given as a percentage of the turnover. For each category, a drop down menu was used, ranging from 0–40% in 1%-intervals. Companies indicating a sum of costs equal to 0% or greater than 40% were taken out of the sample for plausible reasons.

The overall logistics costs in the manufacturing industry vary from 10% in large companies to more than 12% in micro companies. Transportation costs are the highest costs for all company sizes. While large manufacturing companies have the lowest logistics costs in total, there are no significant differences in the sum of costs between micro, small and medium companies (see figure 5).

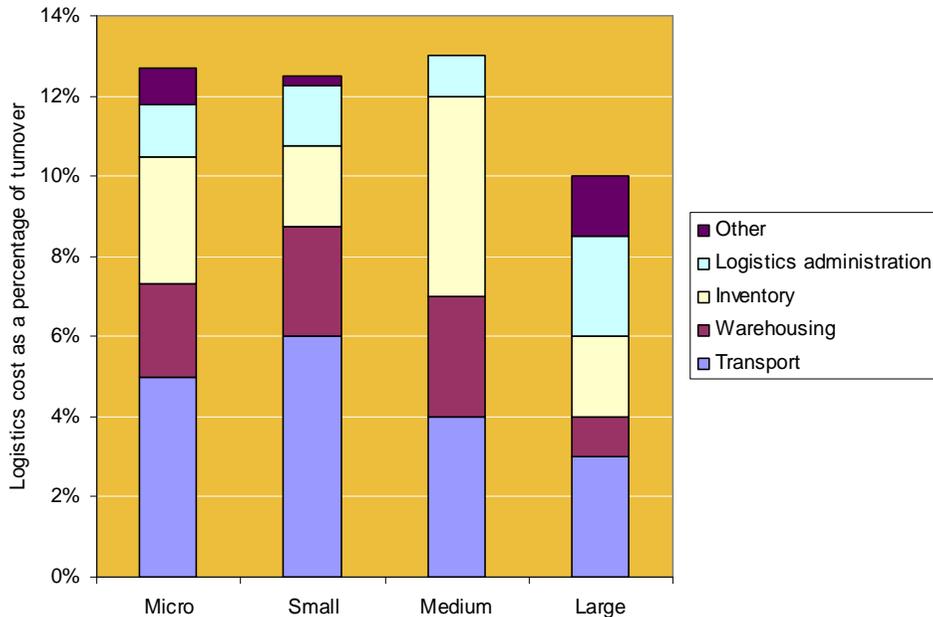


Figure 5 Logistics costs as a percentage of turnover in manufacturing companies

The distribution of logistics costs, however, depends more on the company size. For instance, large companies seem to have their cost advantages mainly in transport and particularly warehousing costs, whereas administration costs are higher for them. One reason could be that logistics departments in SMEs are relatively small and hence easy to manage. From a certain size of a company onwards, the need for coordination and administration increases.

When considering the current cost situation of companies, it is also interesting to examine the expectation about cost changes in the near future. Looking at figure 6, it can be said that the majority of companies anticipate an increase in costs for three out of five cost categories. Only very few companies believe costs will decrease.

70% of the respondents expect an increase in transportation costs, which make up the largest part of costs for companies from all size categories. The remaining 30% expect neither a decrease nor an increase. There are several reasons for the estimated rise in transportation costs. The increasing oil price is the main reason why transport costs may go up, as the main factor influencing the price of fuel is the cost of crude oil. Taxes such as the petroleum tax are another uncertain cost factor. In addition, the development of highway toll systems

makes transport more expensive in Europe. In Germany, the toll was introduced for trucks in 2005 and is expected to be increased during the next years.

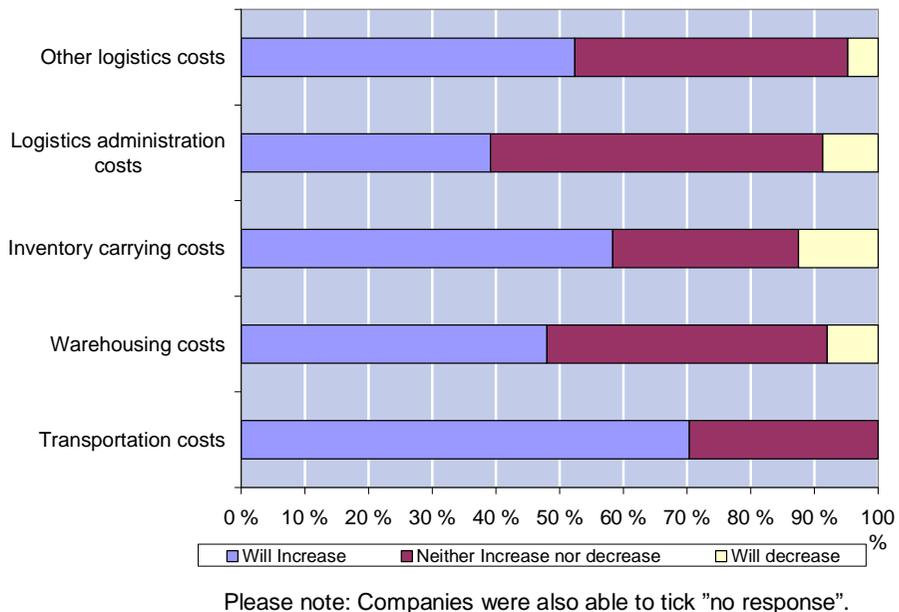


Figure 6 Estimate of the development of logistics costs, manufacturing companies

A rather operational reason for higher logistics costs are more customer-oriented approaches to logistics involving higher flexibility, smaller batch sizes and more frequent shipping of goods. These also attribute to higher inventory carrying costs in the future, although companies try to reduce logistics costs with lean management methods. These methods as well as outsourcing lead to higher risks in the supply chains and therefore a greater urgency about disruption management systems. The implementation of these systems may in turn lead to a decrease in inventory carrying costs which is anticipated by more than 10% of the responding companies.

3.1.2 Logistics costs trade

The logistics costs in trade seem to depend significantly on company size (see figure 7). According to the responses, overall logistics costs vary from slightly over 8% of the turnover in medium-sized companies to more

than 18% in small companies. Thus, there is no general correlation between company size and the level of costs. One reason could be that the medium-sized companies who answered the survey are mainly from an industrial sector that requires less expenditure, e.g. because the goods are easy to handle.

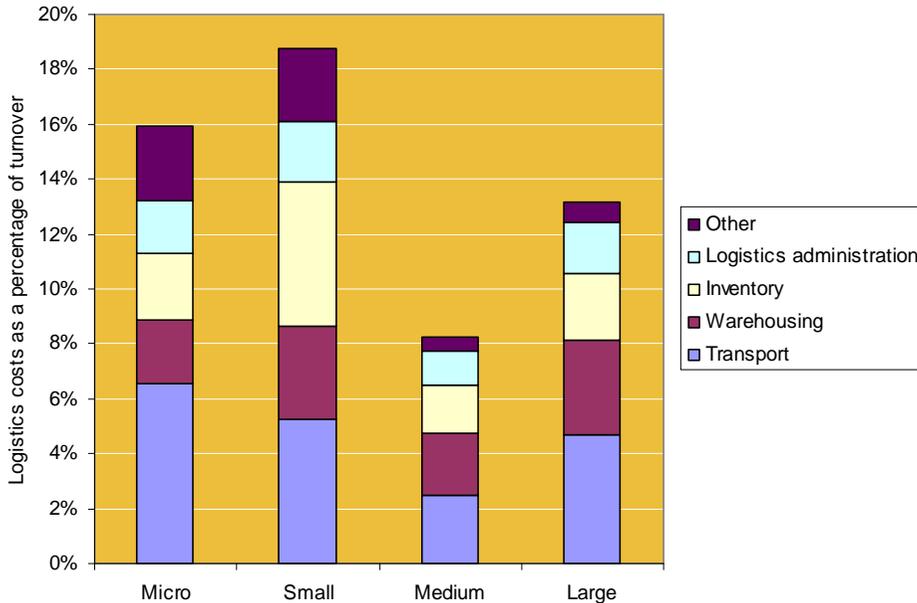


Figure 7 Logistics costs as a percentage of turnover, trading companies

Regarding the structure of the costs, trading companies consider transport costs as the biggest part of their logistics costs, similar to the manufacturing industry. Medium and large companies estimate their warehousing costs as almost equally important as transport costs, whereas for small companies, inventory costs seem to be higher.

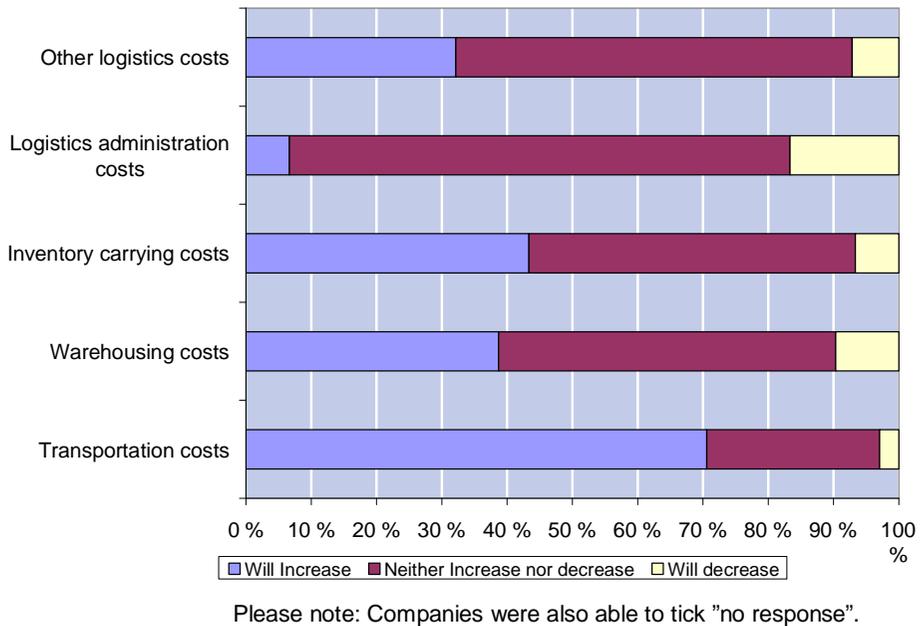


Figure 8 The estimate of the development of logistics costs, trading companies

Compared with manufacturing companies, trading companies are slightly more optimistic (see figure 8). In general, the fraction of trading companies expecting the costs to remain steady is similar to the fraction of companies expecting an increase. Transportation costs and administration costs are the two exceptions. A major difference to manufacturing companies is that administration costs are expected to remain stable or will even decrease for nearly 94% of the trading companies (see chapter 3.1.1).

3.2 Logistics competence

In the next part of the survey, companies were asked to assess concerns regarding staff development. Manufacturing and trading companies hold different views on this issue. The question was designed in such a way that the participants could only choose one area where they see the most important development need.

As figure 9 shows, manufacturing companies have different opinions on the fields where competence should be gained. While basic concepts linked to supply chain management and business strategy as well as innovation and change management rank very high, there are other areas

that were not mentioned: language proficiency, warehouse management and procurement and purchasing. Compared to the other areas it can only be stated that development needs are not as urgent, but because of the response opportunities, no absolute statement can be made.

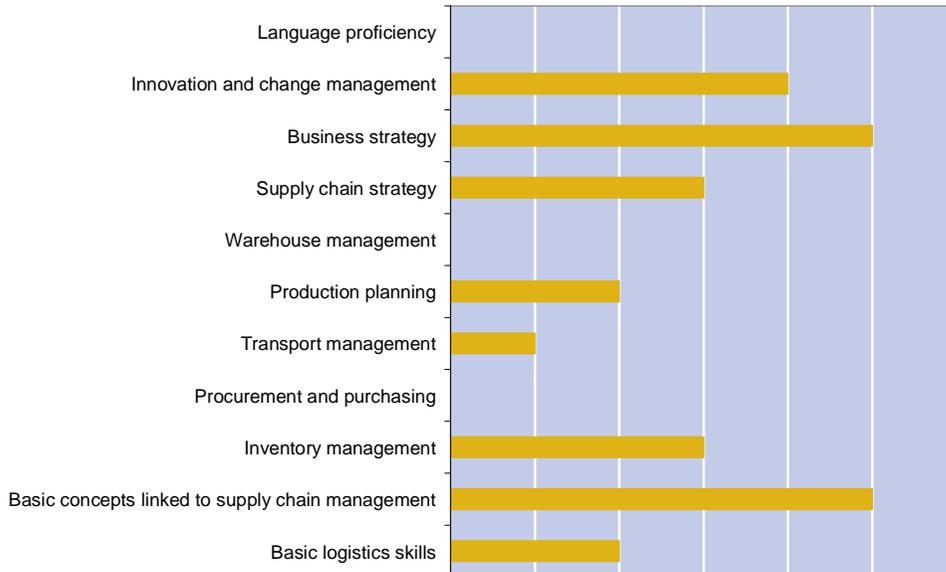


Figure 9 The development needs of personnel competence, manufacturing companies

Concerning language proficiency, the internationally accepted business language is English. In Germany, English is the first foreign language pupils have to learn at school. Therefore nearly every person with a high school graduation has basic English knowledge which helps to successfully conduct negotiations and to control international business activities.

However, basic concepts linked to supply chain management and business strategy are very important needs of personnel competence since they serve as preconditions for the operations of manufacturing companies. Nowadays environmental changes force manufacturing companies to adapt new concepts, new organisational structures and modern technologies, hence requiring knowledge of innovation and change management.

Figure 10 for the trading industry looks different from the one for the manufacturing industry. In general, the distribution of answers was split more evenly between the individual areas. In contrast to manufacturing

companies, procurement and purchasing is thought to be the main area for improvement in trading companies.



Figure 10 The development needs of personnel competence, trading companies

Being the intermediary between the end customers and the manufacturers, trading companies have a buffering function to match the demand and the supply side. Thus, inventory management can be called one of the core functions of trading companies. Procurement and purchasing represents another core function. It is surprising that development needs for inventory management are ranked on a lower level than those for procurement and purchasing.

Basic concepts linked to supply chain management and business strategies rank second in the development needs. In contrast to manufacturing companies, trading companies give little importance to innovation and change management, to production management and to basic logistics skills.

This first question regarding outsourcing deals with the current situation of outsourcing. The companies were asked up to which percentage they outsource different functions to external companies (see figure 11). The answers were grouped into three categories: 0%, 1%-75% and over 75%.

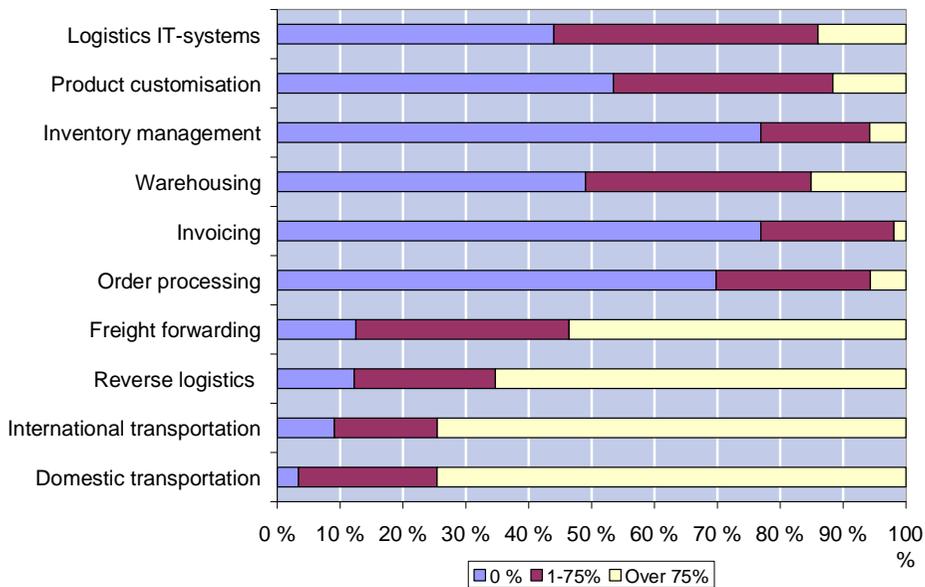
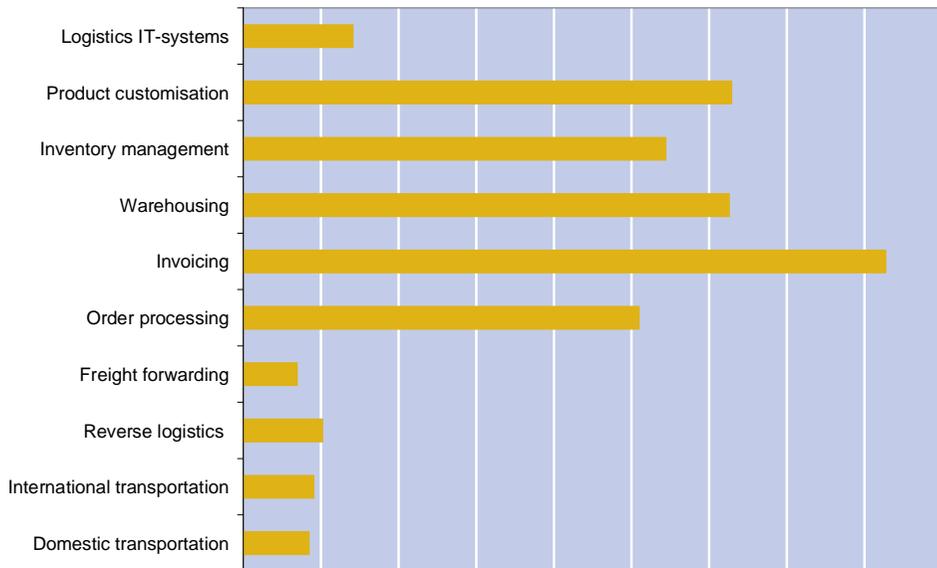


Figure 11 Outsourcing of different logistics functions, manufacturing and trading companies

Transport, reverse logistics and freight forwarding are the most commonly outsourced logistics operations in the companies surveyed. On average, about 75% of the companies said that more than 75% of their domestic as well as international transportation are handled by an external service provider. About 20% of the companies stated they would outsource 1%-75% of their domestic transport (15% of the companies for international transport respectively). In these areas, manufacturing companies generally do not see their core competence and thus they do not lose any know-how when outsourcing them. In addition, transportation, freight forwarding, and reverse logistics are areas that have a long history of expertise in the world of logistics service providers (LSP). These companies offer an excellent service at a much lower cost than trading and manufacturing companies because LSPs can achieve scale economies. Since the main criteria for outsourcing decisions are usually cost factors, these functions are outsourced to third parties.

The survey shows that companies spend a relatively small amount on third party warehousing, preferring to keep control of their own operations in this respect. There is also no big tendency for outsourcing inventory management, invoicing and order processing. These functions are either not outsourced at all or to a lower percentage.



Please note: Companies were also able to tick "no response".

Figure 12 The relative trend of outsourcing

Figure 12 displays outsourcing trends in manufacturing and trading companies. Invoicing is outsourced the most. However, in the fields of warehousing, product customisation and inventory management outsourcing also seems to become more interesting in the future. This makes sense especially for functions that are currently outsourced to a low degree and which can be performed much more cost efficiently by companies with a larger know-how. Inventory management would be an example. Freight forwarding, reverse logistics, international and domestic transportation are already outsourced to a very high percentage.

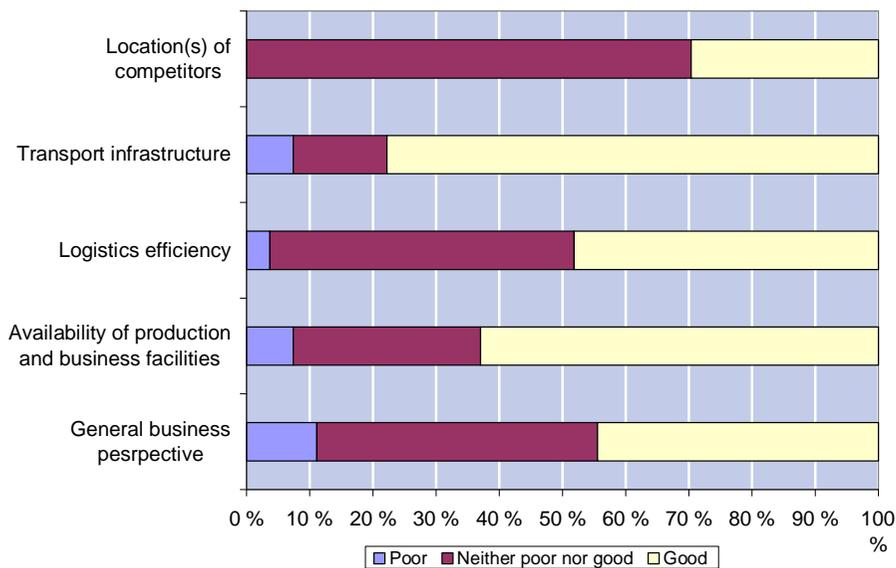
3.3 Operating environment

In the next part of the survey, companies were asked to rate the operating conditions of the area in which they are based from the general business' point of view, concerning the location of competitors, the transport infrastructure, the logistics efficiency, and the availability of production and business facilities.

The companies assessed their operating environment in the following five categories: "very poor", "poor", "neither poor nor good", "good", "very good". These choices were grouped into three categories. "Very poor"

and “poor” were subsumed under the category “poor”, while the category “good” embraced “very good” and “good”.

In general, it can be said that the majority of manufacturing companies is of the opinion that the operating environment in the Southern Metropolitan Region of Hamburg is either “good” or “neither good nor bad” (cp. figure 12). There is no company considering itself in a disadvantageous position compared to the location of competitors; about one third of the companies believe their location is better than that of their competitors. Rating for location in respect of competitors provides important information on companies regarding their global competitiveness.



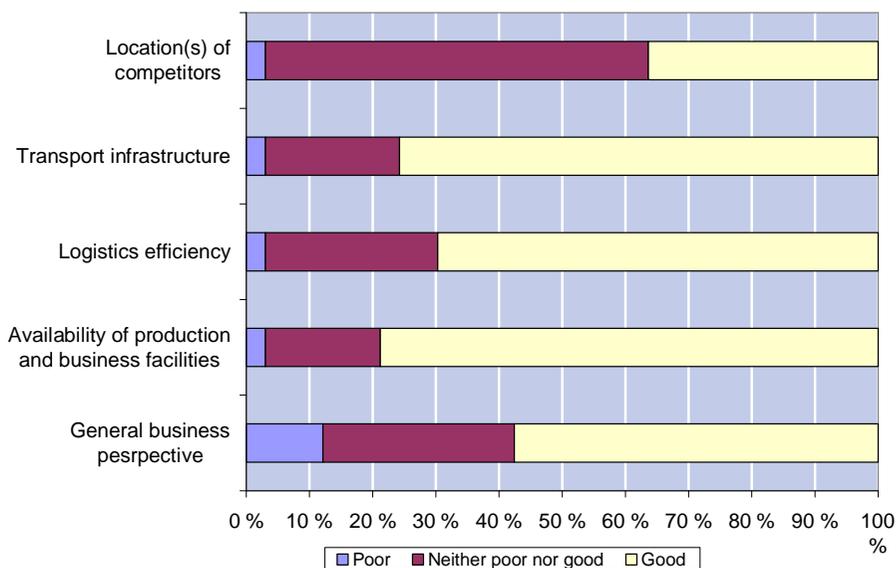
Please note: Companies were also able to tick “no response”.

Figure 13 Manufacturing companies’ opinions about their operating environment

The aspect companies are most satisfied with is the current transport infrastructure. Hamburg has an excellent transport infrastructure including an international hub-port. Manufacturers appreciate this and reflect it in their answers. Goods can be distributed quickly to other continents or countries. More than 75% of the respondents estimated the transport infrastructure in their operating environment as good or very good.

As figure 14 shows, trading companies are generally more satisfied with their business environment in almost all aspects. More than 75% of the trading companies consider transport infrastructure and the

availability of production and business facilities as good or very good. A minority of trading companies considered the location of their competitors as “poor”. The reason for that is certainly that Hamburg is a large city as well as a logistics hub and therefore many companies and hence competitors want to settle.



Please note: Companies were also able to tick "no response".

Figure 14 Trading companies' opinions about their operating environment

Traditional ways of sending messages such as letters, telephone, and fax (combined nearly 100%) are still the most common methods for communication. E-mail - a rather new way of communication - has almost caught up with these traditional methods (cp. figure 15). Web-based portals represent a communication system that is extremely useful and Hamburg companies seem to be using it quite a lot. Increases in this area are unlikely, however, because despite being productive, such systems are cumbersome and often technology-intensive. Large companies with complex supply chains will use them and will continue using them but for small companies, traditional methods of communication will get the job done. The same is true for EDI, Barcodes and ERP systems.

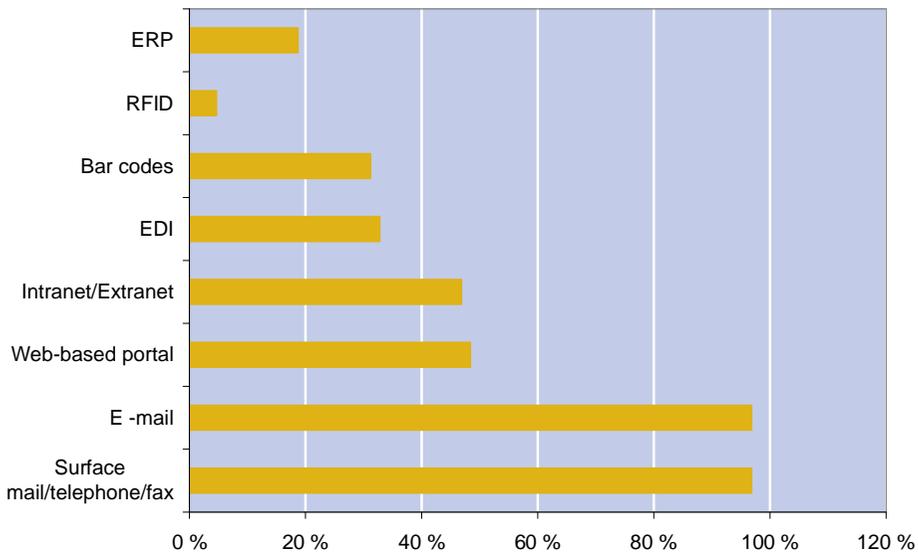


Figure 15 The usage of different ICT-systems, manufacturing and trading companies

The use of RFID is limited to less than 10% of the companies. It is thought among the respondents that RFID will become a common means of identifying pallets and unit loads quickly in the near future. Nevertheless, the breakthrough's impact on individual consignments is expected to take a longer time.

3.4 Self assessment of the companies

In this question, manufacturing and trading companies were asked to assess six logistics performance indicators on a scale comprising five categories. The right column means that the companies consider themselves "much better" than their competitors with respect to the specific indicator. The number of answers for each category can be obtained from table 3. The other columns can be interpreted respectively. Respondents feel mainly positive about transparency and performance in the supply chain. There are only very few companies ranking their performance worse than their competitors and no companies assessing themselves as much worse. Of course, it is possible that companies do not want to admit a poor performance and rather do not give an answer instead.

Table 3 Companies' self assessment of their supply chain performance relative to their competitors

	Much worse	Worse	Neither worse nor better	Better	Much better
My firm has been able to reduce the time between order receipt and customer delivery to as close to zero as possible.	0	5	16	24	14
My firm is able to meet the quoted or anticipated delivery dates and quantities on a consistent basis.	0	3	19	27	10
My firm is able to respond to the needs and wants of key customers.	0	0	6	25	28
My firm is able to notify customers in advance of delivery delays or product shortages.	0	3	22	24	10
My firm is able to modify order size, volume or composition during logistics operations.	0	1	14	26	18
My firm is able to accommodate delivery times for specific customers.	0	0	17	30	12

Please note: Companies were also able to tick "no response".

It is also obvious that for most indicators, "better" was the most-used answer. Only with respect to fulfilling the expectations of needs and wants of their key customers, the majority of companies ranked themselves much better. A vast amount of literature in today's supply chain journals propagates the idea of focusing on the customer. Many companies concentrate on the latter and feel that they can always improve.

In the following, companies were asked to what extent they agree with given statements. The statements in table 4 cover performance evaluation measures.

Table 4 Companies' views on performance evaluation measures

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
We regularly monitor and evaluate our logistics costs and performance internally.	1	3	10	26	21
We regularly monitor and evaluate logistics costs and performance with selected suppliers and/or customers.	2	8	19	19	10
We regularly benchmark logistics performance metrics against our competitors.	7	17	22	10	3
Regular monitoring and evaluation of logistics benefits our firm.	4	10	16	21	8
We regularly monitor the environmental effects of our logistics operations.	4	11	22	17	6

Please note: Companies were also able to tick "no response".

Companies seem to approach the complex and risky world of supply chains by focusing internally first. 47 out of 61 companies responded that they agree or strongly agree with regularly monitoring and evaluating their logistics costs and performance internally. For external monitoring and evaluation, this is only true for 29 companies. Although benefits such as more customer oriented performance measures would be significant to companies, disadvantages and risks seem to overcompensate them. Risks could be, for instance, a lack of trust and transparency in the supply chain so that the companies do not want to provide confidential information which put suppliers and/or customers in a stronger negotiation position. Benchmarks with competitors are even used by only 13 companies. Although benchmarks can offer great value to the participating companies, competitive thinking still seems to prevail.

These answers are not surprising when considering the agreement with the fourth statement: Only 29 companies agree or strongly agree that regular monitoring and evaluation is beneficial to them. There might be two main reasons for that: Either companies do not monitor and evaluate their performance, so they have not experienced any advantages. Or they do monitor and evaluate but their logistics have not been successful so far and thus there is room for improvements, for instance in the methods they use. The share of companies monitoring the environmental effects of

their logistics operations is not as large as for the monitoring and evaluation of logistics benefits. Especially for SMEs the registration of environmental effects can be cumbersome and the costs may be high while the benefits need not necessarily be obvious.

In general, companies see logistics as a major factor in their operations (see table 5). The customer aspect is particularly emphasised in the responses. It is strongly agreed that logistics has a major impact on the companies' customer service level. Interestingly, companies do not feel that logistics is a key factor for their profitability and main source of competitive advantage for them as much as they consider it important for their customer service level. However, good service standards can nowadays be one of the most important sources for the customers' buying decisions and thus would also mean a competitive advantage.

Table 5 Companies' self assessment on the importance of logistics in their operations

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Logistics has a major impact on our profitability.	2	7	9	22	20
Logistics has a major impact on our customer service level.	0	0	6	13	41
Logistics is a key source of competitive advantage for our firm.	1	2	10	20	27
Logistics is a top management priority in our firm.	3	3	19	19	15

Please note: Companies were also able to tick "no response".

Given its relatively high impact on customer service level, it is astonishing that logistics has not top management priority in a number of firms.

The survey showed that companies typically share operational information in their firms in an effective way (cp. table 6). Consequently, most participants also stated that their firm is well prepared for disruptions and irregularities. This also includes good information systems providing the right information for such cases. According to the respondents,

individual functions and departments also work together for facilitating strategic planning and in order to set targets.

Table 6 Companies' self assessment on internal collaboration in logistics operations

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
We effectively share operational information within our firm.	0	3	10	26	20
We are well prepared for internal disturbances and irregularities in our operations.	0	4	14	31	11
Our information systems provide operational managers with sufficient and timely information to manage logistics activities.	0	5	11	28	17
Strategic planning and target setting is done in collaboration between functions/departments.	1	5	11	17	24

Please note: Companies were also able to tick "no response".

The picture with respect to external collaboration is very similar to that of internal collaboration. The participants share operational information with selected suppliers or customers effectively which is also supported by information systems, although there still seems to be room for improvements (cp. table 7).

Table 7 Companies' self assessment on external collaboration in logistics operations

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
We effectively share operational information with selected suppliers and/or customers.	1	3	13	31	11
We are well prepared for external disturbances and irregularities in our operations.	1	10	14	28	7
Our information systems support the sharing of operational information with selected suppliers and/or customers.	2	5	18	19	14
We effectively collaborate with selected suppliers and/or customers to facilitate operational planning and to improve forecasting.	2	4	11	27	14

Please note: Companies were also able to tick "no response".

These good business connections are also used for facilitating operational planning and improving forecasts. They help to be prepared for external disturbances and irregularities in the companies' operations. The mostly positive responses when confronted with the question of external collaboration in their companies may point to the fact that companies are increasingly becoming involved in supply networks. Instead of supply side or demand side logistics, the new paradigm calls for the back-and-forth movement of information and goods in networks rather than traditional supply chains where each company could optimize its processes and operations individually.

Last, manufacturing companies were asked which will be the most important development needs in the future from their perspective. Companies could choose one area from a list of eight possibilities.

Improving customer service was named as the most important area for development by far (see figure 16). Ranked second is cutting logistics costs. More than two thirds of all companies listed one of these two fields. The other areas such as the selection of logistics service providers, increasing transparency in the supply chain as well as developing the logistics competence of the personnel and developing information

systems are considered to be less important. Utilising mobile solutions was not mentioned at all.

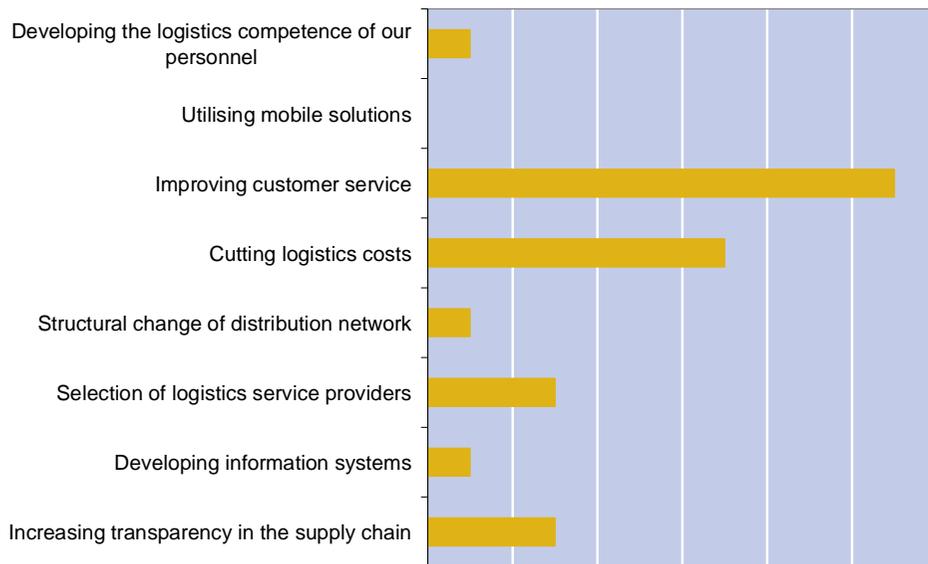


Figure 16 The most important future development needs of manufacturing companies

Most companies have realized the impact of logistics on their customer service level (see table 5 and figure 16), therefore they are aware that it makes sense to invest in this area in order to have high quality logistics and hence to get new customers and to bind the existing customer base.

In order to be able to meet customer demand at moderate costs and with today's common distribution methods like e-commerce/e-business, restructuring has to take place in the companies. That's why it is surprising that the structural change of the distribution network seems to be a less important development need of manufacturing companies.

Due to global sourcing and selling, outsourcing and smaller lot sizes, logistics costs have been increasing over the last years. Cutting logistics costs is important for manufacturers because they may see these costs as almost completely unnecessary and non-value adding for their products. They are mostly focused on the products and see the logistics costs involved in the procurement of raw materials and other parts as an additional burden that needs to be avoided.

4 FINDINGS FROM LOGISTICS SERVICE PROVIDERS

The following subchapters concern logistics service providers and analyse the findings regarding the client structure and market development, logistics competence, development needs and threats of the future, operating environment, and self assessment of the companies.

4.1 Client structure and market development

In this part of the survey, logistics service providers were asked to estimate the distribution of the turnover for different types of services for the years 2006 and 2010.

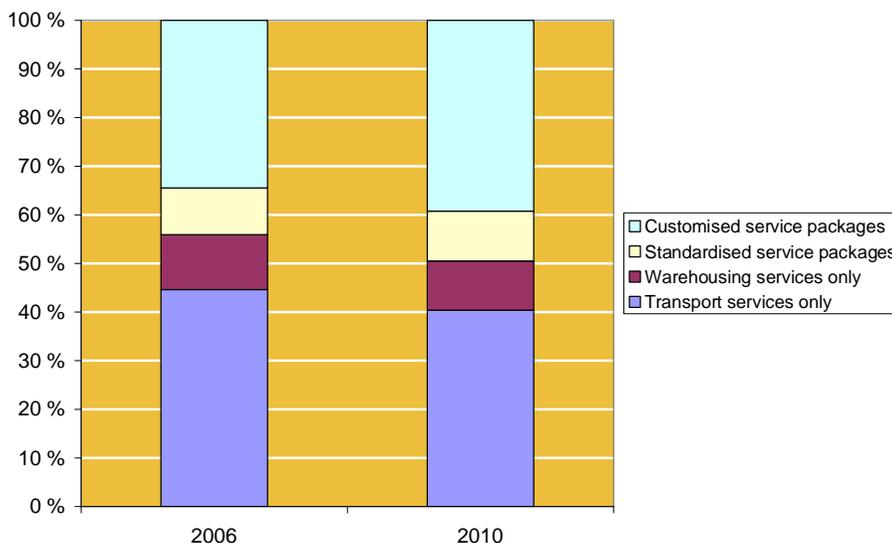


Figure 17 Distribution of turnover in logistic services companies for different types of services 2006 and 2010 (estimate)

As figure 17 shows, currently more than 40% of the turnover is gained from transport services only; however, another 34% of the turnover is

generated by customised service packages. Warehousing services and standardized service packages only contribute to roughly 10% each.

For 2010, a similar distribution of turnover is predicted, meaning only a small trend away from transportation services to customized services and therefore more complex solutions, since manufacturing and trading companies aim at saving costs in order to remain globally competitive. There are no significant changes in warehousing and standardized service packages. There may be two reasons why the proportions are very similar for 2006 and 2010. It could be that these companies have already decided on their long-run strategy and do not foresee any major changes in technology or market structure that will influence their turnover in a big way. It could also be that changes in the LSP market are so frequent that it is very hard to predict the future. Therefore companies simply respond with the same numbers because they cannot justify any changes.

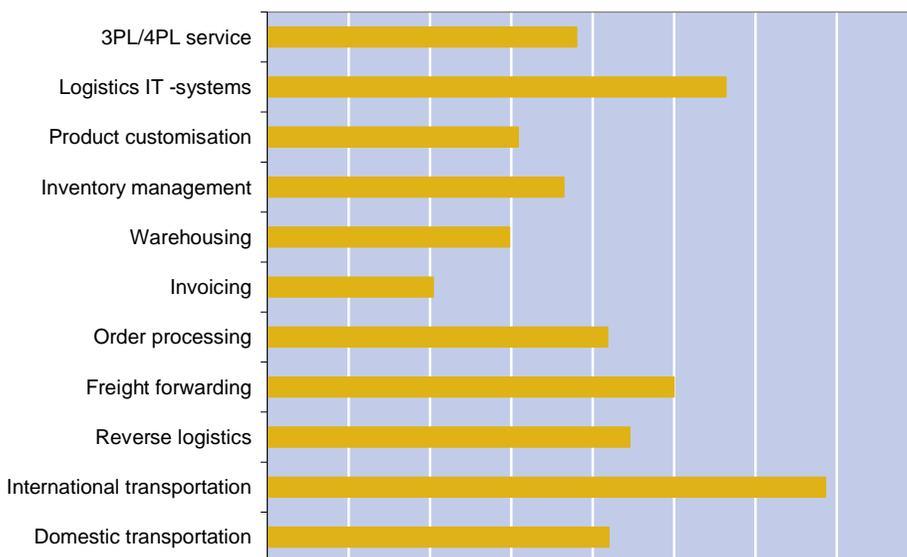


Figure 18 Increase in demand by 2010, logistics service providers

The respondents were asked to estimate the increases in demand for certain services by 2010. Figure 18 corresponds with the one in the manufacturers and traders section where they were asked to specify the areas that are being outsourced the most - transportation, freight forwarding, and reverse logistics. However, manufacturing and trading companies do not see a further trend for these areas in the next years. As the logistics service providers see an increasing demand here until 2010,

there might be a mismatch between supply and demand if all companies use these expectations as a basis for planning.

Logistics service providers also consider order processing and particularly logistics IT-systems as one main area for outsourcing. For the field of IT-systems, however, manufacturing and trading companies do not expect a bit outsourcing trend.

4.2 Logistics competence

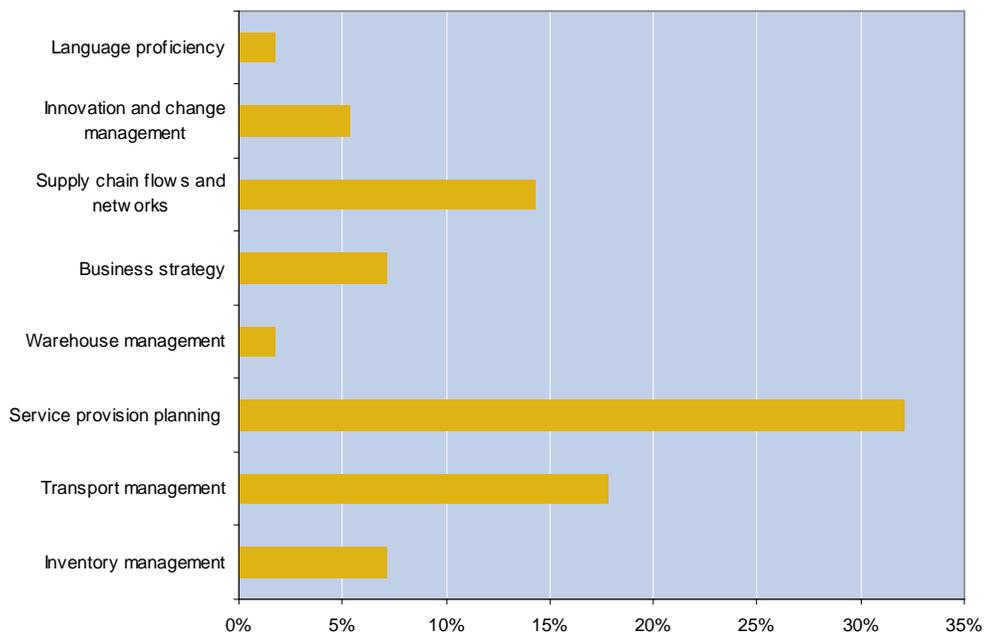


Figure 19 The most important development needs of personnel competence, logistics service providers

Next, logistics service providers were asked to assess the main staff development areas in the future. The respondents believe that the greatest need for the development of personnel competence is in the area of service provision planning, followed by transport management and supply chain flows and networks (see figure 19). The three main areas mentioned show that the recent boom in the LSP market has caused LSPs to think carefully about what core strategies to follow. In order to be competitive they need to excel at their core-competencies and to outsource activities that are more generic by nature or that do not fall

within their realm of expertise. LSPs need personnel who can help them achieve their goals and make important distinctions.

In contrast, the least importance is given to warehouse management and language proficiency. Language skills among international companies could be already at a high level, however, in practice it can be observed that language problems are still an issue. The reason why companies do not give big importance to warehouse management could be that the companies work more customer-oriented and do not see warehouse management as a key source of turnover, neither currently nor in the future (see figure 18).

4.3 Development needs and threats of the future

Increases in the costs of service provision and decreases in the demand for services are the largest threats to their business in the perspective of logistics service providers (see figure 20).

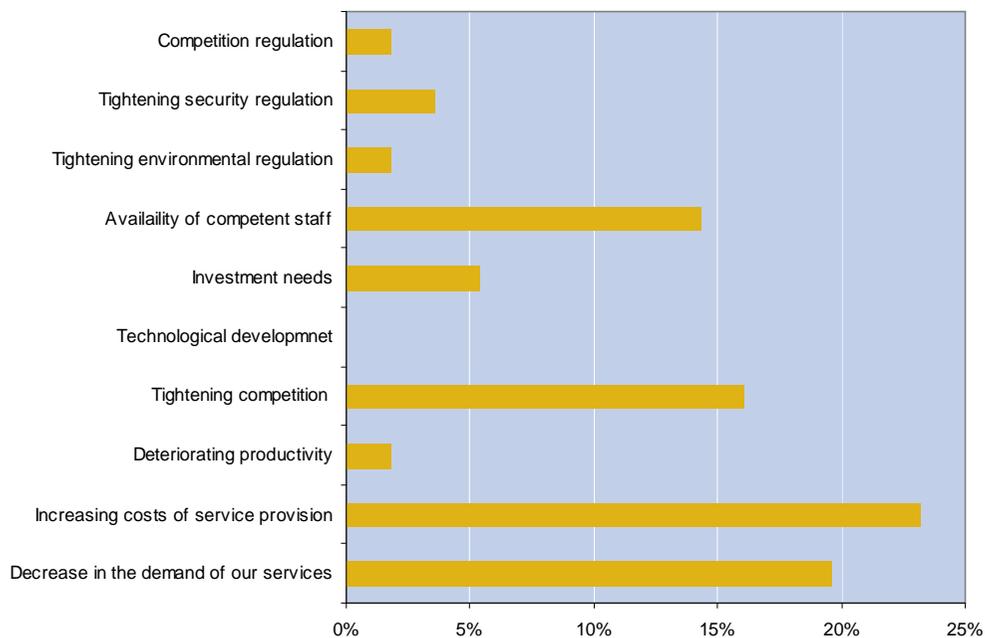


Figure 20 Largest threats to business, logistics service providers

The main reason why manufacturers and traders outsource certain logistics activities to LSPs is that they can achieve savings in logistics costs by doing so. Furthermore, costs are an important criterion for

choosing a service provider. That is why LSPs are so concerned with increasing costs. Tightening competition was also considered as a threat, which can be a direct consequence from less demand on the one hand and cost pressure on the other hand. Another issue might be the fear of new competitors which come into the market as a consequence of the EU enlargement and globalisation. Tightening competition in practice makes it harder to pass costs on to customers.

Companies also noted that the availability of skilled personnel could be a problem. This is an issue already obvious in today's business. It was estimated that productivity deterioration and tightening environmental regulations do not have a big negative influence on business. Although tighter safety and security regulations have attracted a lot of attention globally, respondents do not appear to perceive them as threats.

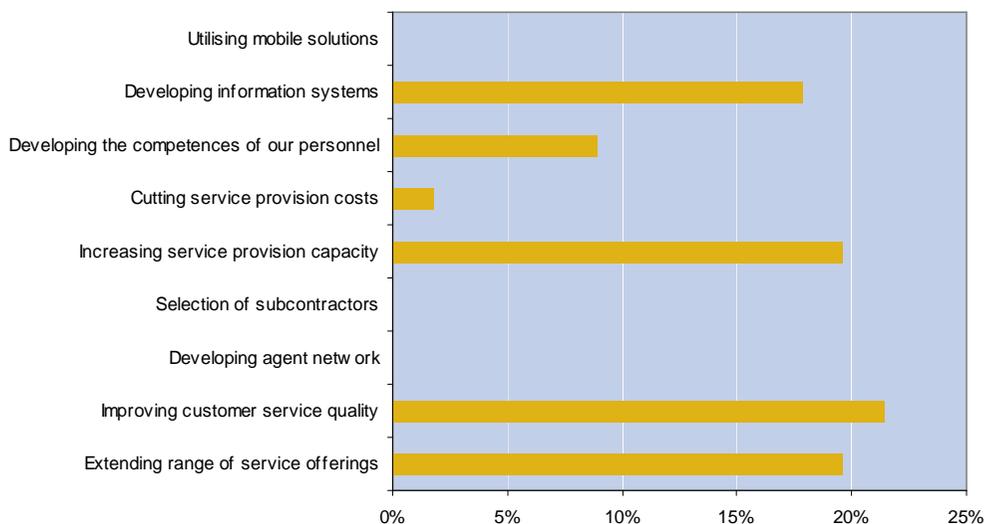


Figure 21 The most important development needs of the future, logistics service providers

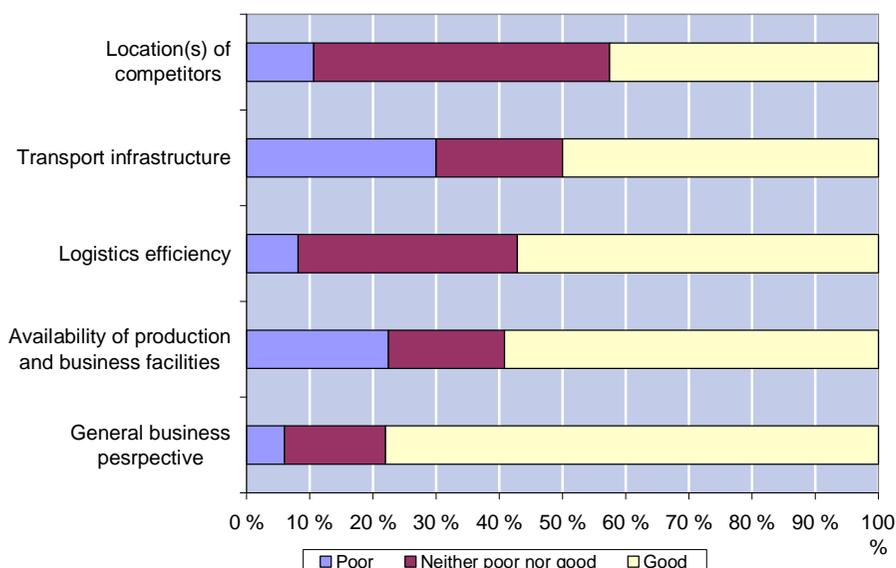
In this part of the survey, the companies were asked to rate the most important development needs of their company for the future. The direct focus on customer service and satisfaction becomes clear in figure 21. LSPs are concerned about developing their range of services and about improving the customer service quality and increasing the capacity of those services. The development of information systems was the need ranked fourth after the service-oriented areas. Information systems can also be used to improve customer service, for instance tracking and tracing systems or EDI.

Taking into account that a lack of sufficiently skilled personnel was named as one of the biggest threats to the companies, it is surprising that the development of personnel competence only ranked fifth with respect to the biggest development needs (see figures 20 and 21). There seems to be a mismatch between the sense of entitlement of getting competent staff and own efforts to invest and develop staff within the company.

The choice of subcontractors and the use of mobile solutions were not regarded as significant at all. Neither did the respondents think there was any need to further develop an agent network.

4.4 Operating environment

Logistic service providers believe that their general business perspective is relatively good (cp. figure 22). Compared to manufacturing and trading companies, however, logistics service providers are less satisfied with their business environment with respect to all five categories.



Please note: Companies were also able to tick "no response".

Figure 22 Logistics service providers' opinions about their operating environment

The most important aspect for logistics service providers as their business depends on the strengths of the infrastructure - transport infrastructure - was claimed to be poor by 30% of the service providers

compared to other regions. 20% consider it neither poor nor good. The question has to be raised of whether this is proportional and appropriate taking into account Hamburg's position as a logistics hub - although not all infrastructure projects are realised or not as fast as it would be beneficial for the economy – and the infrastructure of other European regions. The availability of production and business facilities was evaluated better. Nearly 60% of the respondents consider it to be good. The relatively positive result for LSPs opinions on this field is surprising with regard to the conventional thought that Hamburg suffers from a lack of logistics space.

The aspect, which is seen very critical, is the location of competitors. Only slightly more than 40% believe their location to be better than that of their competitors.

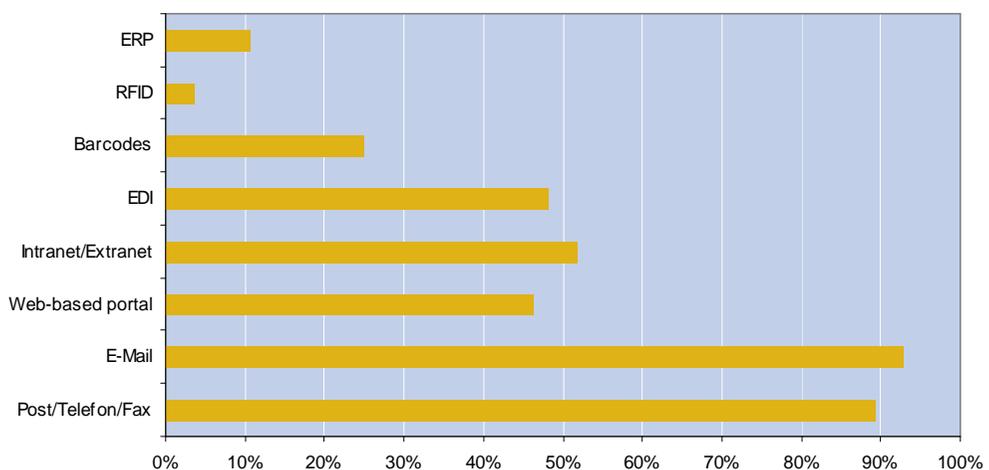


Figure 23 The usage of different ICT systems, logistics service providers

Logistics service providers mainly use traditional communication media such as mail, telephone and fax for communication (cp. figure 22). E-mail is even more important to them. The answers here were very similar to those for manufacturers and traders, although it appears that LSPs use more advanced forms of communication than manufacturing and trading companies. The reason may be that logistics is by nature a communication-intensive operation and therefore requires more sophisticated or complex ICT infrastructures than do most industrial activities of producers and merchants.

4.5 Self assessment of the companies

Logistics service providers have a similar perception of their performance compared to manufacturing and trading companies who evaluate their own performance very positive (cp. table 8).

Table 8 Companies' self assessment on their supply chain performance relative to its competitors

	Much worse	Worse	Neither worse nor better	Better	Much better
My firm has been able to reduce the time between customer order receipt and service delivery to as close to zero as possible.	0	1	8	17	18
My firm is able to meet the quoted or anticipated service delivery dates on a consistent basis.	0	1	6	26	13
My firm is able to respond to the needs and wants key customers.	0	0	2	18	27
My firm is able to notify customers in advance of service delivery delays or other complications.	0	3	11	15	16
My firm is able to modify service composition during logistics operations.	0	1	11	20	14
My firm is able to accommodate service delivery times for specific customers.	0	1	7	19	18

Please note: Companies were also able to tick "no response".

The overwhelming positive note to the answers in this table may be an indicator that LSPs increasingly adapt themselves to the pull-strategies of manufacturers and traders. As such they also join the customer service orientation. Their businesses become end customer and end demand oriented. Even special deliveries to specific customers scored highly in this question.

Table 9 Logistics service providers' views on performance evaluation measures

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
We regularly monitor and evaluate our logistics costs and performance internally.	0	0	5	16	24
We regularly monitor and evaluate logistics costs and performance with selected subcontractors and/or customers.	0	4	12	14	15
We regularly benchmark logistics performance metrics against our competitors.	1	8	16	10	7
Regular monitoring and evaluation of logistics benefits our firm.	1	5	13	13	15
We regularly monitor the environmental effects of our logistics operations.	1	6	16	11	10

Please note: Companies were also able to tick "no response".

When compared to manufacturing and trading companies, logistics service providers generally seem to use more performance evaluation measures (see table 9). Internal measures of costs and performance and monitoring with customers/suppliers are used more often in particular according to the results. Correspondingly, the perception of monitoring and evaluation measures is slightly better when it comes to the question of how beneficial these measures are for the companies. Similar to manufacturing and trading companies, benchmarks with competitors seem to be viewed very critical. Environmental aspects are also taken into account; however, these will probably become a more important issue in the future.

Table 10 Companies' self assessment on internal collaboration in logistics operations

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
We effectively share operational information within our firm.	1	1	5	14	26
We are well prepared for internal disturbances and irregularities in our operations.	1	3	4	17	22
Our information systems provide operational managers with sufficient and timely information to manage logistics activities.	0	6	6	16	19
Strategic planning and target setting is done in collaboration between functions/departments.	1	3	4	12	24

Please note: Companies were also able to tick "no response".

The majority of companies is satisfied with their current state of internal collaboration (see table 10). Around 85% of logistics service providers answering this question agree or strongly agree that they effectively share their operational information within the firm and are also well prepared for internal disturbances and irregularities in their operations. In this respect, logistics service providers are more optimistic than manufacturing and trading companies. Good information systems support logistics activities and also provide information in case of irregularities or disruptions in three quarters of the companies. Another strong positive reaction was to the question about strategic planning and target setting. This shows that although LSPs might see the future as very uncertain, they take steps in order to try and predict it and to prepare themselves for different possible scenarios that could endanger their businesses.

Table 11 Companies' self assessment on external collaboration in logistics operations

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
We effectively share operational information with selected subcontractors and/or customers.	0	2	3	14	28
We are well prepared for external disturbances and irregularities in our operations.	0	2	4	22	19
Our information systems support the sharing of operational information with selected subcontractors and/or customers.	0	5	10	17	15
We effectively collaborate with selected subcontractors and/or customers to facilitate operational planning and to improve forecasting.	0	3	12	12	21

Please note: Companies were also able to tick "no response".

Logistics service providers also have a very positive perception of their external collaboration (see table 11). Around 89% of the companies answering this question agree or strongly agree that they effectively share operational information with selected subcontractors and/or customers. They also have precautions for external disturbances in their operations and seem to realize that together with their partners they can better deal with new and existing risks. More than 65% of the logistics service providers responding to these statements use information systems for sharing operational information with selected subcontractors and/or customers. A higher degree of transparency makes them feel safer because they think that it encourages others to also create more transparency increasing the overall level of readiness for unexpected events. Furthermore, they collaborate with subcontractors and/or customers to facilitate operational planning and to improve forecasting.

5 SUMMARY AND CONCLUSIONS

The purpose of this report within the framework of the EU-funded project LogOn Baltic was to present the first results of the logistics survey conducted in the Southern Metropolitan Region of Hamburg from December 2006 until February 2007. Different topic areas were covered in the survey, ranging from logistics costs and outsourcing to performance evaluation and logistics competence.

119 respondents took part in the survey, two thirds of which represent SMEs. This supports the objective of the LogOn Baltic project to evaluate the needs and to strengthen the competitiveness of mainly SMEs. Regarding the participating industries, 24% of the respondents represent the manufacturing industry, 29% belong to the trading industry and 46% are logistics service providers. Thus, all main industries where logistics plays an important role are covered.

Next to general company data, the first main bloc concerns manufacturing and trading companies. The first question in the bloc covers logistics costs. It turned out that transport costs are the highest costs followed by inventory and warehousing costs for all company sizes for both, manufacturing and trading companies. Looking at the sum of costs incurred by manufacturing companies, large enterprises had the lowest costs with 10% of their turnover while there was no significant difference between micro, small and medium-sized companies with 12-13%. For trading companies, the sum of costs ranged from 8% for medium-sized companies to nearly 19% for small companies. Most companies expect an increase in three out of five cost categories in the next years with trading companies being slightly more optimistic than manufacturers.

The next topic covered logistics competence. It can be said that manufacturers mainly consider basic logistics skills and supply chain strategy as the main areas for development needs of their personnel, while trading companies prioritise inventory management, which is usually one of their core competences.

The following questions targeted on outsourcing. International and domestic transport, reverse logistics and freight forwarding are considered as the most commonly outsourced logistics operations in manufacturing and trading companies. In contrast, manufacturing and

trading companies prefer to keep control of their own operations with respect to functions such as inventory management, invoicing and order processing. Companies seem to be willing to outsource more of these functions, looking at the trend for outsourcing in the next years. Transport, freight forwarding and reverse logistics will not be outsourced to a much greater extent than today, probably mainly because these services are already outsourced to a large extent.

Another important aspect of the survey was the companies' opinion about their operating environment. While trading companies were generally more satisfied with respect to all points interrogated in the survey, the majority (90-95%) of both manufacturing and trading companies consider their operating environment as "good" or "neither good nor poor" with respect to all points.

Companies were then asked to assess themselves. Most companies use internal and on a limited scale also external monitoring and performance evaluation measures realizing the benefits of logistics on their profitability and customer service. However, logistics does not always have top management priority which would be useful sometimes. The majority of companies also considers themselves as better or much better when it comes to logistics performance, particularly with respect to customer orientation. Internal and external collaboration and information sharing also seem to be an important aspect in the companies' business; although practice shows that there is often a number of deficits.

Last, manufacturers were asked what the most important future logistics development need is from their perspective. The answers point out that cutting logistics costs is still the main issue.

The second main part concerns logistics companies. Companies were asked to estimate the distribution of their turnover in order to get an overview of the business of the participating logistics service providers. The main part of the turnover in 2005 was generated by transport services only (more than 40%); another 34% is generated by customised service packages. For the future, companies estimate an increase in demand especially in transportation, reverse logistics, freight forwarding and logistics IT-systems.

In the area of competence, the companies regard service provision planning, transport management and supply chain flows and networks as the main fields for developing competence of personnel. The most important development needs for their business were seen in customer-oriented aspects such as improving customer service quality, extending the range of services and increasing service provision capacity.

Increasing costs, decreasing demand and tightening competition were seen as the largest threats to their business.

Just like manufacturing and trading companies, logistics service providers evaluated their business environment. Logistics service providers were the most critical company group, although at least 50% of the LSPs evaluated their business environment as good. 30% of them, however, also ranked transport infrastructure as poor.

With respect to ICT systems, it became obvious that there is still room for improvement for a lot of modern technologies. The traditional communication methods mail, telephone and fax together with email are the most widely used methods. In contrast, ERP and RFID still seem to have very few users.

The last part of the survey was the self assessment of LSPs. Compared to manufacturing and trading companies evaluating their own performance very positive, LSPs have a similar perception of their performance, following a very customer-oriented approach. Correspondingly, performance evaluation measures are frequently used with the exception of benchmarking whose benefits do not seem to have been fully realized so far. Internal and external collaboration and information sharing is also used as a tool to create more transparency and better coordinated processes.

While the aim of this report was to present the first results of the logistics survey in the Southern Metropolitan region of Hamburg, further research on this topic will be done in the future. Interpretations of the results will mainly concern two main areas. The first is a more detailed analysis of the Hamburg results, meaning for instance a causal analysis with company size or other background variables. An even more important aspect is the comparison of these results with the results of other regions in the Baltic Sea Region.

REFERENCES

- European Commission (2003): *Commission recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises*, in: Official Journal of the European Union L 124/36, http://europa.eu/eurlex/pri/en/oj/dat/2003/l_124/l_12420030520en00360041.pdf, as of 23/05/2007.
- Statistisches Bundesamt Deutschland (2006): Unternehmen, Unternehmensregister: Unternehmensregister – Unternehmen nach Umsatzgrößenklassen, <http://www.destatis.de/jetspeed/portal/cms/Sites/destatis-Internet/DE/Content/Statistiken/UnternehmenGewerbeInsolvenzen/Unternehmensregister/Tabellen/Content75/UnternehmenUmsatzgroessenklassen,templateld=renderPrint.psm1>, as of 11/06/2007.

APPENDIX

Appendix 1 Interview guideline

[General Questions for all respondents]

G1. Background information

- a) Company name / Name of business unit: [Open field]
- b) Postal code: [Open field]
- c) Email address (required only if you wish to receive the customised survey report): [Open field]
- d) Respondent's position in the firm:

[Drop-down menu]

Senior management

Middle management

Operational staff

Expert

Other

G2. Please choose whether you wish to respond on behalf of the whole firm or a group of companies OR an individual business unit.

Both options are hereon referred to as "your firm".

[Drop-down menu]

I wish to respond on behalf of the whole firm or a group of companies.

I wish to respond on behalf of an individual business unit.

G3. Please indicate the number of employees in your firm at the end of 2005.

[Drop-down menu]

1-9

10-49

50-249

250-499

500-999

1000-1999

2000-4999
5000-10000
Over 10000

G4. Please indicate the turnover of your firm in 2005.

[Drop-down menu]

0-2 M EUR
2.1-5 M EUR
5.1-10 M EUR
10.1-25 M EUR
25.1-50 M EUR
50.1-100 M EUR
100.1-500 M EUR
500.1-1000 M EUR
1.1-5 billion EUR
over 5 billion EUR

[NOTE: this is a general scale used by Eurostat for EU statistics; please, provide us the corresponding national scales that conform to this in your national currency for Sweden, Estonia, Latvia, Lithuania and Poland!]

G5. Please choose the main sector that your firm represents.

[Drop-down menu]

Manufacturing and construction
Trading
Logistics services

[General scales and terms that need to be translated]

Will decrease significantly
Will decrease somewhat
Neither decrease nor increase
Will decrease somewhat
Will increase significantly

No response

Internally
With customers

With suppliers

With logistics providers

Much worse

Somewhat worse

Neither worse nor better

Somewhat better

Much better

Strongly disagree

Disagree

Neither disagree nor agree

Agree

Strongly agree

Very poor

Poor

Neither poor nor good

Good

Very good

[Questions for manufacturing firms]

M6. Please choose the industry that best fits your firm's field of business.

[Drop-down menu]

Manufacturing of food products, beverages and tobacco

Manufacturing of textiles and textile products

Manufacturing of leather and leather products

Manufacturing of wood and wood products

Manufacturing of pulp, paper and paper products

Publishing and printing

Manufacturing of coke, refined petroleum products, and nuclear fuel

Manufacturing of chemicals, chemical products, and man-made fibres

Manufacturing of rubber and plastic products

Manufacturing of other non-metallic mineral products

Manufacturing of basic metals and fabricated metal products

Manufacturing of machinery and equipment

Manufacturing of electrical and optical equipment

Manufacturing of transport equipment
 Other manufacturing
 Construction

M7. Please choose the option that best describes production in your firm.

[Drop-down menu]

Products are made to stock (MTS).
 Products are assembled to order (ATO).
 Products are made to order (MTO).
 Customer specific products are engineered to order (ETO – including project-driven businesses).
 Our business focuses on selling the manufacturing capacity of other firms to customers (capacity selling, CS).

M8. Please choose the option that best describes your firm's position in the production chain (see figure).

[Drop-down menu OR tick box, where only one option can be chosen]

Provider of raw materials
 Provider of semi-finished products
 Manufacturer / assembler of final products

M9. Please estimate how many percent of your firm's PRODUCTION CAPACITY was located in each of the following geographical areas in 2005.

NOTE! The total should add up to 100%.

[Drop-down menus (0; 1-100% range under each in 5% intervals)]

- a) In the domestic market
- b) Outside the domestic market but within the EU (incl. Norway, Iceland and Switzerland)
- c) Outside the EU but within Europe
- d) In the rest of the world

M10. Please estimate how many percent of your firm's SALES were generated in each of the following geographical areas in 2005.

NOTE! The total should add up to 100%.

[Drop-down menus (0; 1-100% range under each in 5% intervals)]

- a) In the domestic market
- b) Outside the domestic market but within the EU (incl. Norway, Iceland and Switzerland)
- c) Outside the EU but within Europe
- d) In the rest of the world

M11. Please estimate how many percent of your firm's PURCHASES originated from each of the following geographical areas in 2005.

NOTE! The total should add up to 100%.

[Drop-down menus (0; 1-100% range under each in 5% intervals)]

- a) From the domestic market
- b) From outside the domestic market but from the EU (incl. Norway, Iceland and Switzerland)
- c) From outside the EU but from Europe
- d) From the rest of the world

M12. Please estimate the following logistics costs of your firm expressed as percentages of firm turnover in 2005. [Drop-down menus (0-40% range under each in 1% intervals)]

NOTE! The total should NOT add up to 100%.

Direct logistics costs

- a) Transportation and cargo handling (incl. transport packaging)
- b) Warehousing (cost of running own warehouse or buying the service)

Indirect logistics costs

- c) Inventory carrying cost (incl. cost of capital tied in inventory)
- d) Logistics administration (costs from functions indirectly related to logistics)

Other direct and indirect logistics costs

- e) All other logistics costs

M13. Please estimate how the relative share of the following logistics costs will develop by 2010 in your firm compared to firm turnover.

[5-point scale under each (Will decrease significantly...Will increase significantly) + "No response"]

Direct logistics costs

- f) Transportation and cargo handling (incl. transport packaging)
- g) Warehousing (cost of running own warehouse or buying the service)

Indirect logistics costs

- h) Inventory carrying cost (incl. cost of capital tied in inventory)
- i) Logistics administration (costs from functions indirectly related to logistics)

Other direct and indirect logistics costs

- j) All other logistics costs

M14. Please estimate how many percent of the following logistics operations are and will be managed by an external service provider in your firm.

[5-point scale under each (0%; 1-25%; 26-50%; 51-75%; Over 75%) + "No response"]

M14.1. At the moment

- a) Domestic transportation
- b) International transportation

- a) Reverse logistics
- b) Freight forwarding
- c) Order processing
- d) Invoicing
- e) Warehousing
- f) Inventory management
- g) Product customisation/finalisation
- h) Logistics IT systems

M14.1. In year 2010

- a) Domestic transportation
- b) International transportation
- c) Reverse logistics
- d) Freight forwarding
- e) Order processing
- f) Invoicing
- g) Warehousing
- h) Inventory management
- i) Product customisation/finalisation
- j) Logistics IT systems

M15. Which of the following methods are used on a weekly basis in your firm for managing the order-delivery process?

[Separate tick box under each]

- a) Surface mail / telephone / fax
- b) Email
- c) Web-based portal, e.g. Internet marketplace
- d) Intranet/Extranet
- e) Electronic Data Interchange (EDI)
- f) Bar Codes
- g) RFID (Radio Frequency Identification)
- h) Enterprise Resource Planning system (ERP)
- i) Other

M16. Please estimate your firm's logistics performance in terms of the following key figures.

[Open fields under each, which accept numbers only]

- a) How many % of your customer orders are delivered by the requested day and time in complete and perfect condition including all documentation (perfect order fulfilment %)?
- b) How many **days** is your average customer order fulfilment cycle time (i.e. average number of days required from customer order receipt to order delivery)?

- a) How many **days** of end-product inventory does your firm hold in stock on average?
- b) What is the average number of **days** of sales outstanding in your firm (i.e. average number of days between customer order delivery to receipt of customer payment)?
- c) What is the average number of **days** of payables outstanding in your firm (i.e. average number of days between supplier order receipt to order payment)?

M17. Please assess the logistics performance of your firm relative to its major competitors.

[5-point scale under each (Much worse...Much better) + "No response"]

- a) My firm has been able to reduce the time between order receipt and customer delivery to as close to zero as possible.
- b) My firm is able to meet the quoted or anticipated delivery dates and quantities on a consistent basis.
- c) My firm is able to respond to the needs and wants of key customers.
- d) My firm is able to notify customers in advance of delivery delays and product shortages.
- e) My firm is able to modify order size, volume or composition during logistics operations.
- f) My firm is able to accommodate delivery times for specific customers.

M18. Please indicate the extent to which you agree or disagree with the following statements regarding *logistics performance evaluation* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We regularly monitor and evaluate our logistics costs and performance internally.
- b) We regularly monitor and evaluate logistics costs and performance with selected suppliers and/or customers.
- c) We regularly benchmark logistics performance metrics against our competitors.
- d) Regular monitoring and evaluation of logistics benefits our firm.
- e) We regularly monitor the environmental effects of our logistics operations.

M19. Please indicate the extent to which you agree or disagree with the following statements regarding the *importance of logistics* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) Logistics has a major impact on our profitability.
- b) Logistics has a major impact on our customer service level.
- c) Logistics is a key source of competitive advantage for our firm.
- d) Logistics is a top management priority in our firm.

M20. Please indicate the extent to which you agree or disagree with the following statements regarding *internal collaboration in logistics operations* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We effectively share operational information within our firm.

- a) We are well prepared for internal disturbances and irregularities in our operations.
- b) Our information systems provide operational managers with sufficient and timely information to manage logistics activities.
- c) Strategic planning and target setting is done in collaboration between functions/departments.

M21. Please indicate the extent to which you agree or disagree with the following statements regarding external collaboration in logistics operations from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We effectively share operational information with selected suppliers and/or customers.
- b) We are well prepared for external disturbances and irregularities in our operations.
- c) Our information systems support the sharing of operational information with selected suppliers and/or customers.
- d) We effectively collaborate with selected suppliers and/or customers to facilitate operational planning and to improve forecasting.

M22. Please choose the most important future development need of your firm in terms of logistics operations.

[Drop-down menu]

- Increasing transparency in the supply chain
- Developing information systems
- Selection of logistics service providers
- Structural change of distribution network
- Cutting logistics costs
- Improving customer service
- Utilising mobile solutions
- Developing the logistics competence of our personnel

M23. Please indicate the competence area of your personnel the development of which would most benefit your firm.

[Drop-down menu]

- Basic logistics skills
- Basic concepts linked to supply chain management
- Inventory management
- Procurement and purchasing
- Transport management
- Production planning
- Warehouse management
- Supply chain strategy
- Business strategy

Innovation and change management

Language proficiency

M24. Please rate the external operational conditions that your firm faces in its domestic location(s) in terms of...

[5-point scale under each (Very poor...Very good) + "No response"]

- a) General business perspective
- b) Availability of production and business facilities
- c) Logistics efficiency
- d) Transport infrastructure
- e) Location(s) of our competitors

[Questions for trading firms]

T6. Please choose the industry that best fits your firm's field of business.

[Drop-down menu]

Retail: Food, beverages and tobacco

Retail: Other

Wholesale: Food, beverages and tobacco

Wholesale: Other

Agency

Sales of motor vehicles and motor vehicle parts

Sales of automotive fuel

T7. Please estimate how many percent of your firm's SALES were generated in each of the following geographical areas in 2005.

NOTE! The total should add up to 100%.

[Drop-down menus (0; 1-100% range under each in 5% intervals)]

- a) In the domestic market
- b) Outside the domestic market but within the EU (incl. Norway, Iceland and Switzerland)
- c) Outside the EU but within Europe
- d) In the rest of the world

T8. Please estimate how many percent of your firm's PURCHASES originated from each of the following geographical areas in 2005.

NOTE! The total should add up to 100%.

[Drop-down menus (0; 1-100% range under each in 5% intervals) OR open fields, which accept numbers only]

- a) From the domestic market
- b) From outside the domestic market but from the EU (incl. Norway, Iceland and Switzerland)
- c) From outside the EU but from Europe
- d) From the rest of the world

T9. Please estimate the following logistics costs of your firm expressed as percentages of firm turnover in 2005.

NOTE! The total should NOT add up to 100%.

[Drop-down menus (0-40% range under each in 1% intervals) OR open fields, which accept numbers only]

Direct logistics costs

- a) Transportation and cargo handling (incl. transport packaging)
- b) Warehousing (cost of running own warehouse or buying the service)

Indirect logistics costs

- c) Inventory carrying cost (incl. cost of capital tied in inventory)
- d) Logistics administration (costs from functions indirectly related to logistics)

Other direct and indirect logistics costs

- e) All other logistics costs

T10. Please estimate how the relative share of the following logistics costs will change by 2010 in your firm compared to firm turnover.

[5-point scale under each (Will decrease significantly...Will increase significantly) + "No response"]

Direct logistics costs

- a) Transportation and cargo handling (incl. transport packaging)
- b) Warehousing (cost of running own warehouse or buying the service)

Indirect logistics costs

- c) Inventory carrying cost (incl. cost of capital tied in inventory)
- d) Logistics administration (costs from functions indirectly related to logistics)

Other direct and indirect logistics costs

- e) All other logistics costs

T11. Please estimate how many percent of the following logistics operations are and will be managed by an external service provider in your firm.

[5-point scale under each (0%; 1-25%; 26-50%; 51-75%; Over 75%) + "No response"]

T11.1. At the moment

- a) Domestic transportation
- b) International transportation
- c) Reverse logistics
- d) Freight forwarding

- a) Order processing
- b) Invoicing
- c) Warehousing
- d) Inventory management
- e) Product customisation/finalisation
- f) Logistics IT systems

T14.1. In year 2010

- a) Domestic transportation
- b) International transportation
- c) Reverse logistics
- d) Freight forwarding
- e) Order processing
- f) Invoicing
- g) Warehousing
- h) Inventory management
- i) Product customisation/finalisation
- j) Logistics IT systems

T12. Which of the following methods are used on a regular basis in your firm for managing the order-delivery process?

[Separate tick box under each]

- a) Surface mail / telephone / fax
- b) Email
- c) Web-based portal, e.g. Internet marketplace
- d) Intranet/Extranet
- e) Electronic Data Interchange (EDI)
- f) Bar Codes
- g) RFID (Radio Frequency Identification)
- h) Enterprise Resource Planning system (ERP)
- i) Other

T13. Please estimate your firm's logistics performance in terms of the following key figures.

[Open fields under each, which accept numbers only]

- a) How many % of your customer orders are delivered by the requested day and time in complete and perfect condition including all documentation (perfect order fulfilment %)?
- b) How many **days** is your average customer order fulfilment cycle time (i.e. average number of days required from customer order receipt to order delivery)?
- c) How many **days** of end-product inventory does your firm hold in stock on average?

- a) What is the average number of **days** of sales outstanding in your firm (i.e. average number of days between customer order delivery to receipt of customer payment)?
- b) What is the average number of **days** of payables outstanding in your firm (i.e. average number of days between supplier order receipt to order payment)?

T14. Please assess the logistics performance of your firm relative to its major competitors.

[5-point scale under each (Much worse...Much better) + "No response"]

- a) My firm has been able to reduce the time between order receipt and customer delivery to as close to zero as possible.
- b) My firm is able to meet the quoted or anticipated delivery dates and quantities on a consistent basis.
- c) My firm is able to respond to the needs and wants of key customers.
- d) My firm is able to notify customers in advance of delivery delays or product shortages.
- e) My firm is able to modify order size, volume or composition during logistics operations.
- f) My firm is able to accommodate delivery times for specific customers.

T15. Please indicate the extent to which you agree or disagree with the following statements regarding *logistics performance evaluation* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We regularly monitor and evaluate our logistics costs and performance internally.
- b) We regularly monitor and evaluate logistics costs and performance with selected suppliers and/or customers.
- c) We regularly benchmark logistics performance metrics against our competitors.
- d) Regular monitoring and evaluation of logistics benefits our firm.
- e) We regularly monitor the environmental effects of our logistics operations.

T16. Please indicate the extent to which you agree or disagree with the following statements regarding the *importance of logistics* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) Logistics has a major impact on our profitability.
- b) Logistics has a major impact on our customer service level.
- c) Logistics is a key source of competitive advantage for our firm.
- d) Logistics is a top management priority in our firm.

T17. Please indicate the extent to which you agree or disagree with the following statements regarding *internal collaboration in logistics operations* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We effectively share operational information within our firm.
- b) We are well prepared for internal disturbances and irregularities in our operations.

- a) Our information systems provide operational managers with sufficient and timely information to manage logistics activities.
- b) Strategic planning and target setting is done in collaboration between functions/departments.

T18. Please indicate the extent to which you agree or disagree with the following statements regarding *external collaboration in logistics operations* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We effectively share operational information with selected suppliers and/or customers.
- b) We are well prepared for external disturbances and irregularities in our operations.
- c) Our information systems support the sharing of operational information with selected suppliers and/or customers.
- d) We effectively collaborate with selected suppliers and/or customers to facilitate operational planning and to improve forecasting.

T19. Please choose the most important future development need of your firm in terms of logistics operations.

[Drop-down menu]

- Increasing transparency in the supply chain
- Developing information systems
- Selection of logistics service providers
- Structural change of distribution network
- Cutting logistics costs
- Improving customer service
- Utilising mobile solutions
- Developing the logistics competence of our personnel

T20. Please indicate the competence area of your personnel the development of which would most benefit your firm.

[Drop-down menu]

- Basic logistics skills
- Basic concepts linked to supply chain management
- Inventory management
- Procurement and purchasing
- Transport management
- Production planning
- Warehouse management
- Supply chain strategy
- Business strategy
- Innovation and change management

Language proficiency

T21. Please rate the external operational conditions that your firm faces in its domestic location(s) in terms of...

[5-point scale under each (Very poor...Very good) + "No response"]

- a) General business climate
- b) Availability of production and business facilities
- c) Logistics efficiency(availability of good quality logistics services)
- d) Transport infrastructure
- e) Location(s) of our competitors

[Questions for logistics service providers]

L6. Please choose the industry that best fits your firm's field of business.

[Drop-down menu]

- Road transport
- Rail transport
- Water transport
- Air transport
- Stevedoring and storage
- Supporting and auxiliary transport activities
- Postal activities
- Courier activities
- Management of logistics information and logistics information systems
- Other logistics services

L7. Please choose the *main* type cargo that your firm typically handles.

[Drop-down menu OR tick box, where only one option can be chosen]

- Solid bulk
- Liquid bulk
- Unit cargo
- General cargo
- Valuables
- Express cargo
- Other

L8. Which part of the production chain does your firm *primarily* serve?

[Drop-down menu OR tick box, where only one option can be chosen]

- Providers of raw materials
- Providers of semi-finished products
- Manufacturers / assemblers of final products
- First tier distributors (e.g. wholesalers)
- Second tier distributors (e.g. retailers)

L9. Please estimate how many percent of your firm's turnover was generated in each of the following geographical areas in 2005.

[Drop-down menus (0; 1-100% range under each in 5% intervals) OR open fields, which accept numbers only]

- a) In the domestic market
- b) Outside the domestic market but within the EU (incl. Norway, Iceland and Switzerland)
- c) Outside the EU but within Europe
- d) In the rest of the world

L10. Please estimate how many percent of your firm's turnover was generated in 2005 from...

[Drop-down menus (1-100% range under each in 5% intervals)]

- a) Sales to your largest customer?
- b) Sales to your 5 largest customers?

L11. Please estimate how many percent of your firm's turnover was generated in 2005 from...

[Drop-down menus (0; 1-100% range under each in 5% intervals)]

- a) Pure transportation services?
- b) Pure warehousing services?
- c) Standardised logistics service packages?
- d) Customised logistics service packages?

L12. Please estimate how many percent of your firm's turnover will be generated in 2010 from...

[Drop-down menus (0; 1-100% range under each in 5% intervals)]

- a) Pure transportation services?
- b) Pure warehousing services?
- c) Standardised logistics service packages?
- d) Customised logistics service packages?

L13. Please estimate how the demand of the following logistics services will develop by 2010.

[5-point scale under each (Will decrease significantly...Will increase significantly)]

- a) Domestic transportation
- b) International transportation
- c) Reverse logistics

- a) Freight forwarding
- b) Order processing
- c) Invoicing
- d) Warehousing
- e) Inventory management
- f) Product customisation/finalisation
- g) Logistics IT systems
- h) 3PL/4PL service [Third Partly / Fourth Party Logistics service]

L14. Which of the following methods are used on a regular basis in your firm for managing the customer service process?

[Separate tick box under each]

- a) Surface mail / telephone / fax
- b) Email
- c) Web-based portal, e.g. Internet marketplace
- d) Intranet/Extranet
- e) Electronic Data Interchange (EDI)
- f) Bar Codes
- g) RFID (Radio Frequency Identification)
- h) Enterprise Resource Planning system (ERP)
- i) Other

L15. Please assess the level overall logistics competence...

[5-point scale under each (Very low ... Very high) + "No response"]

- a) Of your firm.
- b) Of your customers.
- c) Of your suppliers
- d) Of your competitors

L16. Please assess the performance of your firm relative to its major competitors.

[5-point scale under each (Much worse...Much better) + "No response"]

- a) My firm has been able to reduce the time between customer order receipt and service delivery to as close to zero as possible.
- b) My firm is able to meet the quoted or anticipated service delivery dates on a consistent basis.
- c) My firm is able to respond to the needs and wants key customers.
- d) My firm is able to notify customers in advance of service delivery delays or other complications.
- e) My firm is able to modify service composition during logistics operations.
- f) My firm is able to accommodate service delivery times for specific customers.

L17. Please indicate the extent to which you agree or disagree with the following statements regarding *logistics performance evaluation* from the perspective of your firm.

[5-point scale under each (Much worse...Much better) + "No response"]

- a) We regularly monitor and evaluate our logistics costs and performance internally.
- b) We regularly monitor and evaluate logistics costs and performance with selected subcontractors and/or customers.
- c) We regularly benchmark logistics performance metrics against our competitors.
- d) Regular monitoring and evaluation of logistics benefits our firm.
- e) We regularly monitor the environmental effects of our logistics operations.

L18. Please indicate the extent to which you agree or disagree with the following statements regarding *internal collaboration* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We effectively share operational information within our firm.
- b) We are well prepared for internal disturbances and irregularities in our operations.
- c) Our information systems provide operational managers with sufficient and timely information to manage logistics activities.
- d) Strategic planning and target setting is done in collaboration between functions/departments.

L19. Please indicate the extent to which you agree or disagree with the following statements regarding *external collaboration* from the perspective of your firm.

[5-point scale under each (Strongly disagree...Strongly agree) + "No response"]

- a) We effectively share operational information with selected subcontractors and/or customers.
- b) We are well prepared for external disturbances and irregularities in our operations.
- c) Our information systems support the sharing of operational information with selected subcontractors and/or customers.
- d) We effectively collaborate with selected subcontractors and/or customers to facilitate operational planning and to improve forecasting.

L20. Please indicate the most important future development need of your firm.

[Drop-down menu]

- Extending range of service offerings
- Improving customer service quality
- Developing agent network
- Selection of subcontractors
- Increasing service provision capacity
- Cutting service provision costs
- Developing the competences of our personnel
- Developing information systems

Utilising mobile solutions

L21. Please indicate the competence area of your personnel the development of which would most benefit your firm.

[Drop-down menu]

- Inventory management
- Transport management
- Service provision planning
- Warehouse management
- Business strategy
- Supply chain flows and networks
- Innovation and change management
- Language proficiency

L22. Which of the following do you consider to be the most serious threat to your firm?

[Drop-down menu]

- Decrease in the demand of our services
- Increasing costs of service provision
- Deteriorating productivity
- Tightening competition
- Technological development
- Investment needs
- Availability of competent staff
- Tightening environmental regulation
- Tightening security regulation
- Competition regulation

L23. Please rate the external operational conditions that your firm faces in its domestic location(s) in terms of...

[5-point scale under each (Very poor...Very good) + "No response"]

- a) General business perspective
- b) Availability of production and business facilities
- c) Logistics efficiency
- d) Transport infrastructure
- e) Location(s) of our competitors

Regional questions for respondents in Hamburg]

1. Please assess the competence of the Metropolregion Hamburg for the following topics.

[5-point scale under each (Very poor...Very good)]

- Logistics consulting and services provided
- Support of the logistics industry through Hamburg's politicians
- Networking of companies in the Metropolregion Hamburg
- Availability of logistics specialists
- Availability of logistics managers
- Business development with regard to the logistics industry
- Interrelation between public authorities / municipal institutions and corporations

2. Please estimate the possibilities of further education in the field of logistics in the Metropolregion Hamburg.

[5-point scale under each (Very poor...Very good)]

- Industrial – technical training
- Commercial training
- Professional training
- Tertiary education
- Higher education

LogOn Baltic Publications (as of 21.9.2007)LogOn Baltic Master reports

- 1:2007 Developing Regions through Spatial Planning and Logistics & ICT competence - Final report
Wolfgang Kersten, Mareike Böger, Meike Schröder and Carolin Singer
- 2:2007 Analytical Framework for the LogOn Baltic Project
Eric Kron, Gunnar Prause and Anatoli Beifert
- 3:2007 Aggregated logistics survey report (*working title*)
Håkan Aronsson and Naveen Kumar
- 4:2007 Aggregated ICT survey report (*working title*)
Eric Kron and Gunnar Prause
- 5:2007 Aggregated Expert interview report (*working title*)
Matti Takalokastari

LogOn Baltic Regional reports**Development Measure Impact Analysis (DEMIA)**

- 10:2007 REGIONAL DEVELOPMENT IN THE SOUTHERN METROPOLITAN REGION OF HAMBURG, GERMANY - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Janina Benecke, Jürgen Glaser and Rupert Seuthe
- 11:2007 REGIONAL DEVELOPMENT IN MECKLENBURG-VORPOMMERN, GERMANY - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Gertraud Klinkenberg
- 12:2007 REGIONAL DEVELOPMENT IN ESTONIA - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Jaak Kliimask
- 13:2007 REGIONAL DEVELOPMENT IN SOUTHWEST FINLAND - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Kaisa Alapartanen
- 14:2007 REGIONAL DEVELOPMENT IN LATVIA - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Riga City Council - Rode & Weiland Ltd.
- 15:2007 REGIONAL DEVELOPMENT IN LITHUANIA - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
NN
- 16:2007 REGIONAL DEVELOPMENT IN POMERANIA, POLAND (THE POMORSKIE VOIVODESHIP) - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Anna Trzuskawska
- 17:2007 REGIONAL DEVELOPMENT IN SAINT PETERSBURG, RUSSIA - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Mikhail Pimonenko
- 18:2007 REGIONAL DEVELOPMENT IN ÖSTERGÖTLAND, SWEDEN - Development Measure Impact Analysis (DEMIA) on regional development related to logistics and ICT
Håkan Aronsson and Staffan Eklind

ICT surveys

- 20:2007 ICT SURVEY IN THE SOUTHERN METROPOLITAN REGION OF HAMBURG, GERMANY
Wolfgang Kersten, Meike Schröder, Mareike Böger, Carolin Singer and Tomi Solakivi
- 21:2007 ICT SURVEY IN MECKLENBURG-VORPOMMERN, GERMANY
Eric Kron, Gunnar Prause and Tomi Solakivi
- 22:2007 ICT SURVEY IN ESTONIA
Seren Eilmann and Tomi Solakivi
- 23:2007 ICT SURVEY IN LATVIA
Riga City Council, Telematics and Logistics Institute Ltd. and Tomi Solakivi
- 24:2007 ICT SURVEY IN LITHUANIA

NN and Tomi Solakivi

- 25:2007 ICT SURVEY IN SOUTHWEST FINLAND
Juha Lääkkö and Tomi Solakivi
- 26:2007 ICT SURVEY IN POLAND
Anna Trzuskawska and Tomi Solakivi
- 27:2007 ICT SURVEY IN SAINT PETERSBURG, RUSSIA
Yuri Ardatov and Tomi Solakivi
- 28:2007 ICT SURVEY IN ÖSTERGOTLAND, SWEDEN
Naveen Kumar, Håkan Aronsson and Tomi Solakivi

Logistics surveys

- 30:2007 LOGISTICS SURVEY IN THE SOUTHERN METROPOLITAN REGION OF HAMBURG, GERMANY
Wolfgang Kersten, Mareike Böger, Meike Schröder, Carolin Singer and Tomi Solakivi
- 31:2007 LOGISTICS SURVEY IN MECKLENBURG-VORPOMMERN, GERMANY
Eric Kron, Gunnar Prause and Tomi Solakivi
- 32:2007 LOGISTICS SURVEY IN ESTONIA
Ain Kiisler and Tomi Solakivi
- 33:2007 LOGISTICS SURVEY IN LATVIA
Riga City Council, Telematics and Logistics Institute Ltd. and Tomi Solakivi
- 34:2007 LOGISTICS SURVEY IN LITHUANIA
NN and Tomi Solakivi
- 35:2007 LOGISTICS SURVEY IN SOUTHWEST FINLAND
Tomi Solakivi
- 36:2007 LOGISTICS SURVEY IN POLAND
Anna Trzuskawska and Tomi Solakivi
- 37:2007 LOGISTICS SURVEY IN SAINT PETERSBURG, RUSSIA
Valeri Lukinsky, Natalia Pletneva and Tomi Solakivi
- 38:2007 LOGISTICS SURVEY IN ÖSTERGÖTLAND, SWEDEN
Håkan Aronsson, Naveen Kumar and Tomi Solakivi

Expert interviews

- 40:2007 EXPERT INTERVIEWS IN THE SOUTHERN METROPOLITAN REGION OF HAMBURG, GERMANY - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
Wolfgang Kersten, Meike Schröder, Carolin Singer and Mareike Böger
- 41:2007 EXPERT INTERVIEWS IN MECKLENBURGVORPOMMERN, GERMANY - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
Gunnar Prause, Margitta Rudat, Gertraud Klinkenberg and Eric Kron
- 42:2007 EXPERT INTERVIEWS IN ESTONIA - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
Ain Kiisler and Seren Eilmann
- 43:2007 EXPERT INTERVIEWS IN SOUTHWEST FINLAND - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
Matti Takalokastari, Matias Suhonen, Petri Murto and Hilja-Maria Happonen
- 44:2007 EXPERT INTERVIEWS IN LATVIA - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
Riga City Council and Rode & Weiland Ltd.
- 45:2007 EXPERT INTERVIEWS IN LITHUANIA - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
NN
- 46:2007 EXPERT INTERVIEWS IN POMERANIA, POLAND - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
Anna Trzuskawska
- 47:2007 EXPERT INTERVIEWS IN SAINT PETERSBURG, RUSSIA - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT Russia
Natalia Ivanova

- 48:2007 EXPERT INTERVIEWS IN ÖSTERGÖTLAND, SWEDEN - Results and analysis of the intersectoral expert interviews in the field of logistics and ICT
Håkan Aronsson, Staffan Eklind and Naveen Kumar

Regional Profiles

- 50:2007 REGIONAL LOGISTICS & ICT PROFILE: THE SOUTHERN METROPOLITAN REGION OF HAMBURG, GERMANY
Wolfgang Kersten, Meike Schröder, Mareike Böger and Carolin Singer
- 51:2007 REGIONAL LOGISTICS & ICT PROFILE: MECKLENBURG-VORPOMMERN, GERMANY
Eric Kron, Gunnar Prause and Gertraud Klinkenberg
- 52:2007 REGIONAL LOGISTICS & ICT PROFILE: ESTONIA
Ain Kiisler
- 53:2007 REGIONAL LOGISTICS & ICT PROFILE: SOUTHWEST FINLAND
Jarmo Malmsten
- 54:2007 REGIONAL LOGISTICS & ICT PROFILE: LATVIA
Telematics and Logistics Institute Ltd.
- 55:2007 REGIONAL LOGISTICS & ICT PROFILE: LITHUANIA
NN
- 56:2007 REGIONAL LOGISTICS & ICT PROFILE: POMERANIA, POLAND
Anna Trzuskawska
- 57:2007 REGIONAL LOGISTICS & ICT PROFILE: SAINT PETERSBURG, RUSSIA
Elena Timofeeva
- 58:2007 REGIONAL LOGISTICS & ICT PROFILE: ÖSTERGÖTLAND, SWEDEN
Håkan Aronsson, Naveen Kumar and Staffan Eklind

LogOn Baltic Master reports

- 60:2007 STRUCTURAL CHANGES AND TRANSPORT CHALLENGES - A report about the Danish structural reform
Kent Bentzen and Michael Stie Laugesen

LogOn Baltic Regional reports

- 70(FI):2007 VARSINAIS-SUOMEN LOGISTINEN KILPAILUKYKY
Matti Takalokastari (toim.)
- 71:2007 AIR TRAFFIC SERVICE DEVELOPMENT IN TURKU REGION (*working title*)
Pekka Jaakkola
- 72:2007 ENTERPRISE ICT (*working title*)
Kalle Luhtinen

*) LogOn Baltic reports published in any other language than English language are marked with a 2-digit country ID code. E.g. publication nro. 70(FI):2007 is written in Finnish language.

Published by
LogOn Baltic
Turku School of Economics
Rehtorinpellonkatu 3, FI-20500 TURKU, Finland