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Transport and Telecommunication Institute, Lomonosova 1, Riga, LV-1019, Latvia

A STATISTICAL SAMPLE ANALYSIS OF LATVIAN LOGISTICS SERVICES

Gennady Gromov

Transport and Telecommunication Institute
Lomonosova Str. 1, Riga, LV-1019, Latvia
E-mail: gromov@tsi.lv

In the analysis are represented collected data, poll opinions and their interpretation of Latvian logistics service. The focus was made for three groups of companies: manufacturing/construction companies, trading companies, logistics service providers. In research mainly analyzed micro, small and medium size enterprises. The important Latvian logistics costs (transportation, warehousing, administration) and their trends are compared with similar US logistics characteristics. The results are used in LogOn Baltic project

Keywords: logistics, costs, indicators

In 2006-2007 in the framework of LogOn Baltic project [1, 2] were collected and analysed some poll opinions and statistics of logistics service in Latvia. Three versions of the survey have been used, focusing on the following three types of companies: manufacturing/construction companies, trading companies, logistics service providers. The questionnaires consisted of two parts: one part with general questions (being the same for the three types of companies), and another part with specific questions concerning the type of companies mentioned above.

According to the purposes of researches (fig. 1), the attention was mostly drawn to medium and small businesses, and this fact is confirmed with their shares in the sample: small companies (including micro) – ~84%, medium size companies – ~13% and their sum – ~ 97% total. This fact also reflects the general economic situation in Latvia. As stated by the Lursoft company (http://www.lursoft.lv/?a=16&v=en) at the end of the year 2006 in the Latvian National Enterprise Register there were near 210 thousands registered companies. Near 50 thousands of registered companies are active (really working, unsleeping) companies. The micro, small and medium size companies are near 99% of the mentioned above active companies. The Latvian small and medium size enterprises (SMEs) do more than 65% of gross domestic product (GDP) and have about 75% of all the employed persons. The number of Latvian companies per a thousand of Latvian inhabitants is about 20 and it is near two times less than the same average number in European Union.

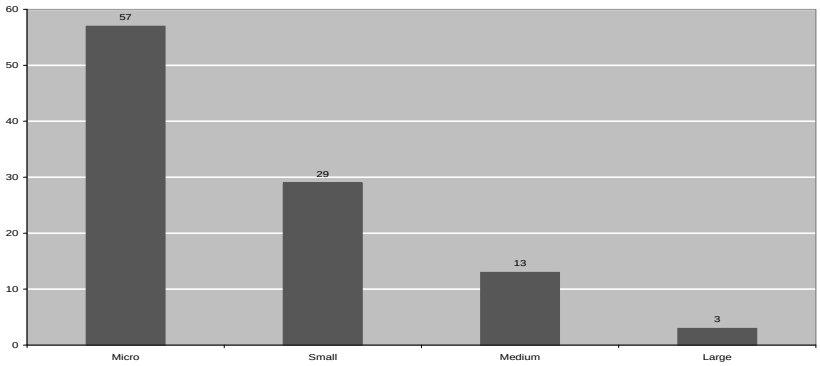

Figure 1. Number of respondents according to company size

Businesses in the sample are also classified by their main activities according to the targets of researches: ~38% are logistic providers, ~34% – trade companies and ~28% - manufacture companies (fig.2). This time this way of enterprises distribution is typical for Latvia to some extent, because during the last years the logo and slogan of Latvian business and government circles and the one of main Latvian economical directions is “Latvia is the country of transit and the West – East (gateway) bridge”. This kind of companies distribution can be supported indirectly by statistical data from the 2006 Statistical

Yearbook of Latvia. The year 2005 gross domestic product indices of Manufacturing, Trade and Transport are 106.3%, 117.4%, 116.2% accordingly (see table N2-6, p.19). It is required to take into account that in the mentioned above official Latvian source the data are given in accordance with the EU used Statistical Classification of Economic Activities (NACE Rev. 1.1). As the Head of Economic Board of Riga City Council, Mr I. Graurs said on TransBaltica 2007 (June 15, 2007) conference the 2006 year distribution of economic segments in Riga is following: trade – nearly 21%, transport and logistics – nearly 19% and manufacture – nearly 18%. It is additional support of right data structure of the survey.

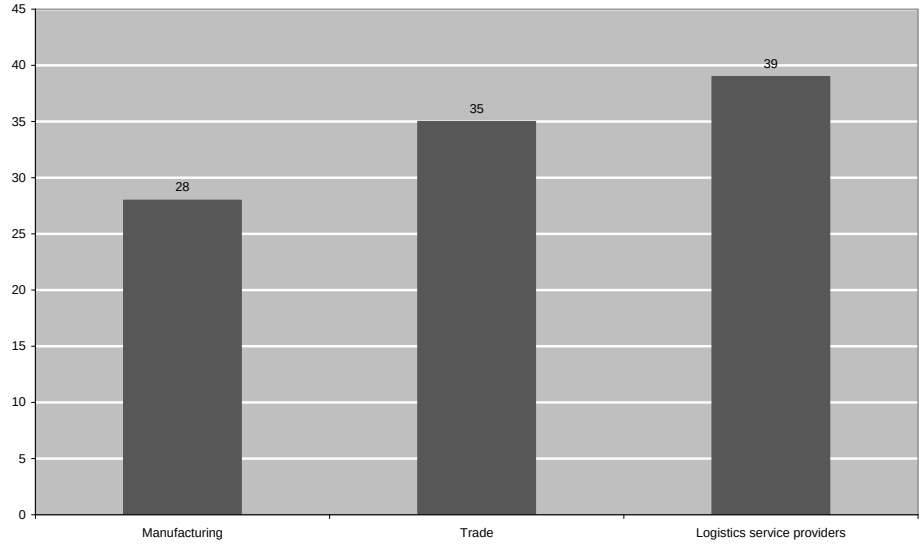

Figure 1. Number of respondents according to main industry

Manufacturing companies (fig. 3) that have incoming and outgoing material flows believe that the price of transport and warehouse services will increase (more than 80% of respondents' answers). Other logistic services will become more expensive as well – more than 50% of people interrogated agree with that. Only the category of expenses, which is connected with stock, in 50:50 percentage means both insignificant growth and insignificant reduction of stock expenses. This reflects the global tendencies that are connected with the use of Just-In-Time - technology, improvement of planning and respective reduction of stock.

First of all these conclusions of Latvian respondents based on the real fact of constant world oil price growth during the last ten years. In Latvia, for example (http://www.nra.lv/index.php?rid=52283), during last eight years petrol price increase is about 100%, exactly 97%. The last year increased prices of all energy resources (petrol, gas, electric energy). The survey answers reflect this situation.

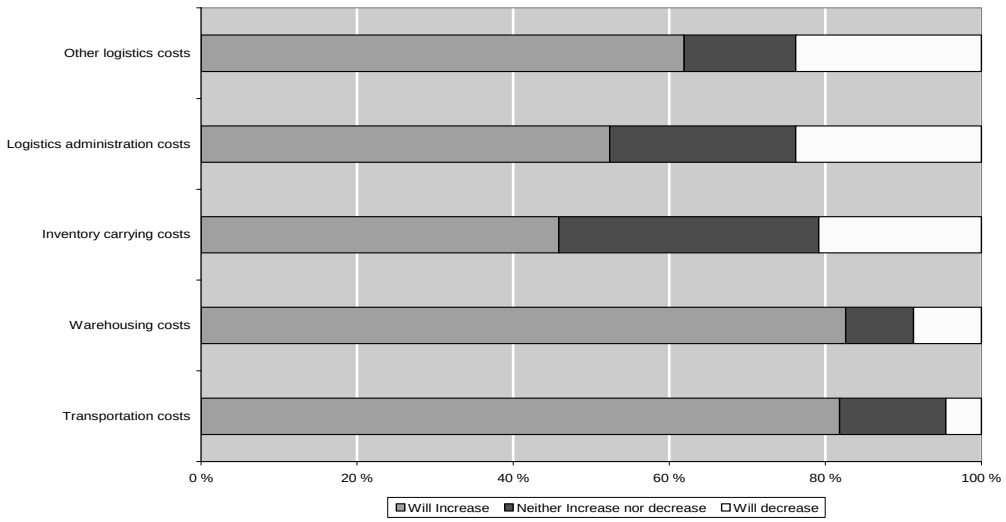

Figure 3. Estimate of the development of logistics costs, manufacturing companies

There is a high level of agreement among the trading businesses (fig. 4). More than 50% of respondents suppose that all types of logistic expenses will rise, and more than 90% of companies think that transport costs will grow. Unlike manufacturing companies, trading companies consider that stock expenses will also grow, which can be explained by the specific character of this sphere.

The explanation of the costs increase trend opinion of Latvian trade companies is the same as for Latvian manufacturing companies. The inventory cost growth can be also explained as the result of competition (fighting for clients) between small trade, supermarkets and electronic trade (E-commerce).

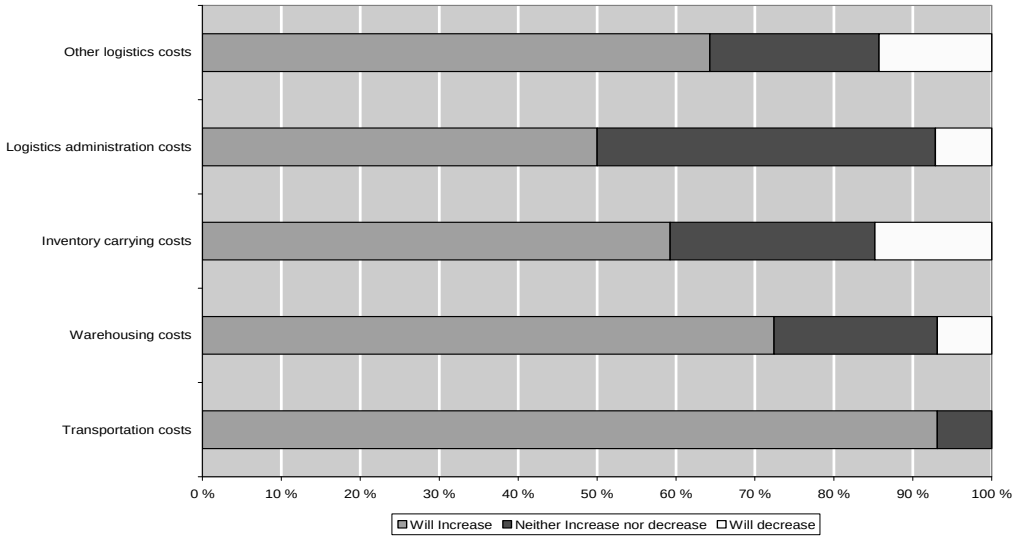

Figure 4. The estimate of the development of logistics costs, trading companies

Such inferences and trends are supported by more then 30-years US logistics statistics [3-6] (fig.5). Practically the same data and relations are true for European Logistics too [7].

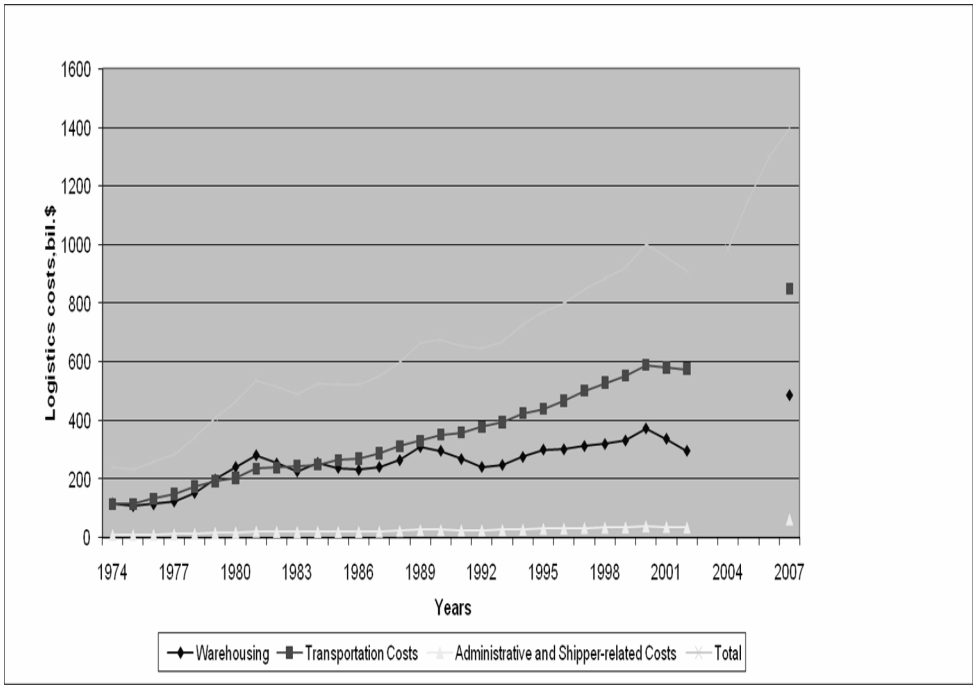

Figure 5. US Logistics costs statistics [5–7]

90% of respondents mark the necessity of the improvement of transport management. 60% indicate the necessity of basic logistic education development. 30% consider that the basic knowledge of

supply chains is necessary. 20% mark the necessity of the improvement of stock management. Special skills are specified within the 10% range (fig. 6). The necessity of language improvement and innovative management was not mentioned at all. The manufacturing companies are connected with the manufacturing schedule and the matter of sharp transport performance is extremely important for them. That should be especially noted in conditions of heavy traffic, which is typical for Riga and Riga district, as well as in the situation of systematical last two – three years traffic jams at the Latvian – Russian border, that is European Union – Russian Federation border. That is why the experienced logistic workers, who deal with transport issues correctly and secure the accuracy of production, are important for the businesses mentioned above.

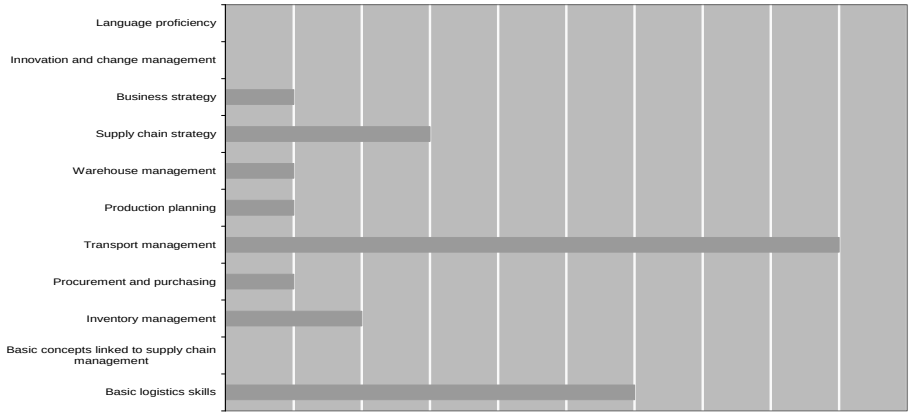

Figure 6. The development needs of personnel competence, manufacturing companies

There is a totally different situation in trade. The majority of respondents agree that it is necessary to develop almost all types of logistic competence (the preference is given to basic knowledge of logistics (60%), business strategy (50%), planning (50%), inventory management (40%) and supply chain management (40%) (fig.7). If there are no answers about transport management, it usually means that companies generally do not have own cargo transport. Transport for them is usually *outsourcing*. The trade companies also take care of personnel language proficiency (20%) and innovation and change management (10%). Partly or indirectly the fact of mentioned above logistic competence necessities can be confirmed by some changing tendencies in Latvian Education System. The main part of universities and Higher Education Institutes and colleges (state and private) has developed special Logistics educational programs. During last two–three years it was prepared the total about one thousand professionals in the sphere of Logistics. Some of them in addition to knowledge of native language know one or two foreign languages.

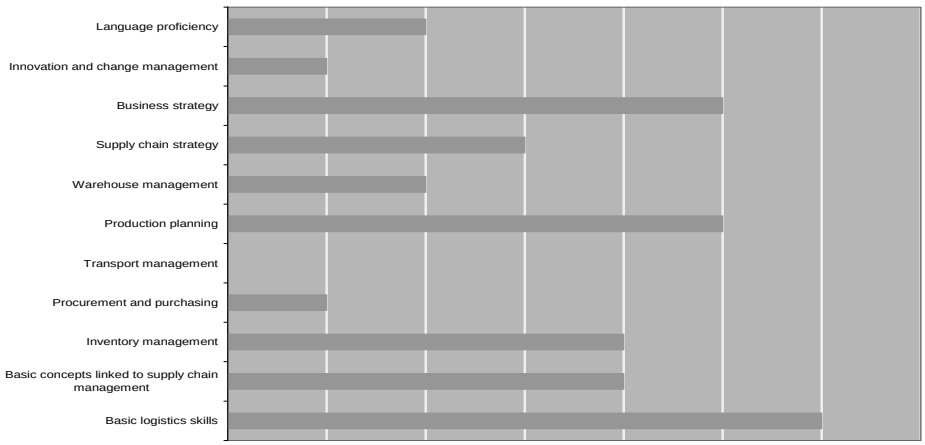

Figure 7. The development needs of personnel competence, trading companies

The share of the companies that use international and local transport as *outsourcing* is up to 90%, while warehouse and forwarding facilities – up to 70% (fig.8). Near to 30% of companies use order

processing, invoicing, inventory management and product customization as outsourcing procedures. In the sphere of logistic information technologies – up to 10%. The volume or extent of using is different. It varies from 1% to 100% in different companies. Approximately the same outsourcing logistics operations statistics was discussed on the International Federation of Warehousing Logistics Association Annual Convention 2006 "Eastern Europe – New Logistics Resources", that was in Riga on May–June 2006. All these results could be interpreted from three points of view:

a) the main part of companies in the sample are small and micro size and for this reason they do not have enough financial resources for outsourcing;

b) outsourcing operations in Latvia especially for application to service small size firms do not develop their service in relevant manner.

c) it is possible that potential clients do not understand the real value and profit of using represented and advertised on Latvian market outsourcing logistics services.

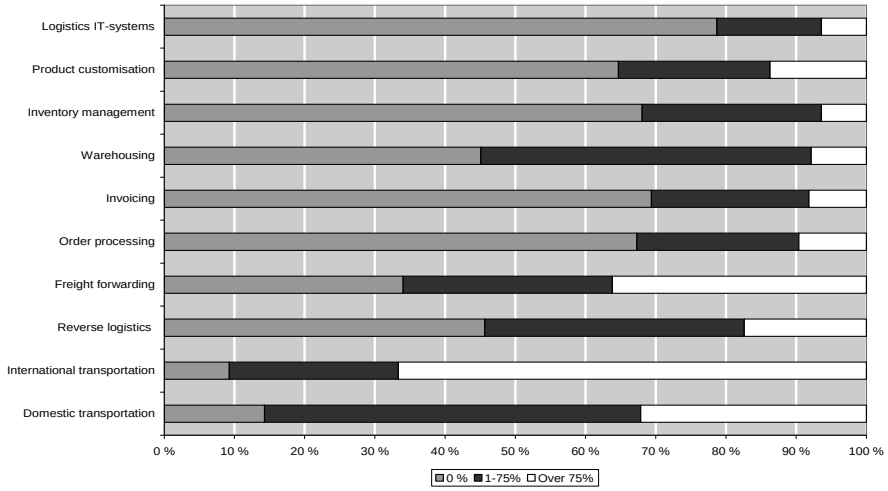

Figure 8. Outsourcing of different logistics functions, companies in Latvia

As the result of the last analysis it is possible to see (fig. 9) great positive tendencies (relative trends) in the development of *outsourcing* on the Latvian market. Opportunities are seen in the sphere of logistics information technologies – up to 80%, in order processing and product customisation – up to 30%. There are some growth reserves (up to 20%) in forwarding, inventory management, reverse logistics and warehouse facilities

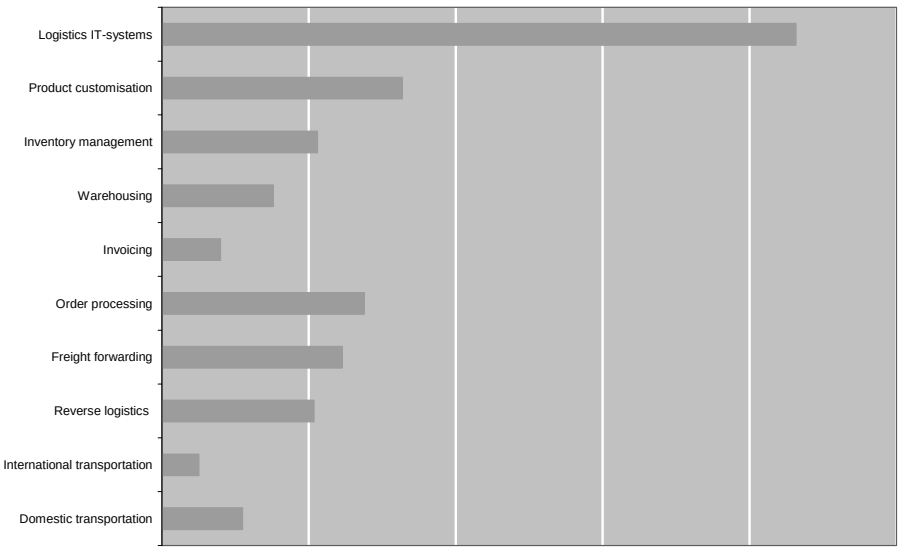

Figure 9. The relative trend of outsourcing, companies in Latvia

Some of the aspects of logistics research (logistics cost, logistics indicators a.c.) will be analysed in the future, taking in attention last events and data [8, 9].

Conclusions

The selected statistical data of the survey, which was carried out in Latvian enterprises, has been analysed. In connection with the fact that the main subject of the survey was logistics, which is practiced practically by every Latvian enterprise to certain extent, it may be supposed that the results of the survey reflect the majority of vital characteristics and problems of logistic service in Latvia.

1. The opinions of businessmen from three economy branches – production, trade and logistic service – are reflected in the survey.
2. The opinions of companies with different production output (large, medium, small and micro) are reflected in the survey as well. Medium and small (including micro) enterprises are shown more representatively in the sample. That complies with the aim of the survey and reflects common proportions of distribution of the universal set of Latvian enterprises by production output.
3. The questions were answered mostly by middle and top managers and experts, that is, managers with rather high qualification and working experience, so the answers may be considered suitable for the real situation in Latvian logistics.
4. Manufacturing and trading companies suppose that logistics expenses will grow.

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