PRACTICE OF USING THE FI-TL METHODOLOGY WHILE CONDUCTING THE RESEARCH OF THE TRANSPORT AND LOGISTICS SERVICES MARKET IN RUSSIA, THE OIL PRODUCTS MARKET BEING THE CASE

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THE FI-TL METHODOLOGY FOR DETERMINING THE LOGISTICS SERVICES MARKET BY PRODUCT SEGMENTS IS OF A CALCULATED NATURE AND IS BASED ON TARIFFS AND AVERAGE TRANSPORTATION LEGS OF THE BASIC PRODUCT GROUPS IN ACCORDANCE WITH THE CURRENT LOGISTICS SCHEMES FOR THEIR DELIVERY FROM THE PRODUCER (IMPORTER) TO THE FINAL CONSUMER (RETAIL TRADE NETWORK). THE METHODOLOGY HAS BEEN DEVELOPED AND SUCCESSFULLY USED BY THE MARKET GUIDE AGENCY SINCE 2015.

THE LOGISTICS MARKET IN RUSSIA IN FIGURES AND FACTS

The Russian transport and logistics services market, which mainly offers transportation and forwarding services, as well as warehousing, is represented by many small and medium-sized businesses. In the segment of complex logistics services – 3PL, both large Russian and leading international companies operate. The main demand for 3PL services in Russia is connected with the service of import cargo flows, Fresh products, FMCG products for retail chains and Express delivery services. In Russia 3PL-operators do not traditionally work with raw materials. Demand for 4PL-services in Russia is not expressed and is provided at the expense of transnational companies already operating in their domestic markets under this concept, as well as by large Russian companies paying special attention to the effectiveness of management (fig. 1).

Despite the current problems in the economy and the sanctions pressure, for players of all segments of the logistics market in the framework of strategies development, problems such as holding market positions, deeper exploration of the market and searching for new promising segments of the logistics market are relevant. The desire of logistics operators to form an effective strategy and to develop new market niches is justified: trends in the development of the logistics market give the opportunity to look into the future with some optimism.

Until 2015, the logistics services market was one of the most dynamic and rapidly developing, with an annual growth rate varying, according to various estimates, from 15 to 30%. After the introduction of sanctions and economic recession, its growth has slowed significantly,

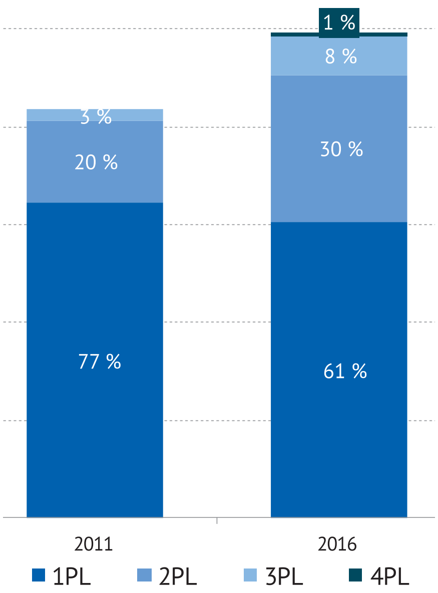

Figure 1. Estimated structure of the Russian transport and logistics services market by logistic services types, %
Source: Market Guide Agency

but unlike other service markets, where there is a stagnation and a decline in demand, the growth of the logistics market in the short term will be about 5% per year. In addition, at present, the share of outsourcing in the Russian transport and logistics services market is estimated at 32%. Experts predict that by 2020 the outsourcing share in the total logistics market structure in Russia may grow up to 40–45%. At this stage the growth of the contract logistics share is hampered by the reduced demand from commercial and industrial companies in the regions. In addition to objective reasons, the low demand is explained by the fact that the managers of regional companies do not understand the advantages in transferring logistics functions to specialized companies, and it should be mentioned, that the cargo owners demonstrate reluctance to use the services of the outside organizations.

Limitation and / or deliberate decision not to use the services of a logistics operator is the result of several reasons:

1) a small number of reliable 3PL companies covering the entire country in the market;

2) reluctance to change the technological chain;

3) the fear to admit the logistics operator to commercially sensitive information;

4) high cost of services of transport and logistics companies.

Earlier, among the reasons for the low level of outsourcing was that the cargo owners' work was performed according to the principle: "I drive / load / unload /etc. everything, I have, by myself", which was especially frequent among the regional companies. Today, a significant reason for refusing to outsource the logistics service is its high cost.

STRATEGIC ISSUES OF THE LOGISTICS MARKET

To create an effective development strategy, transport and logistics companies need in answers to the following questions:

Which segments of the market are the most capacious and grow at high rates?

– In what segments is the lower consolidation seen[1]?

– In which segments is the logistics service more marginal?

– What is the market structure by types of services: transportation, warehousing services, customs brokerage services, management logistics?

– How is the demand for logistics services divided into separate groups of consumers: manufacturers, retailers, distributors?

– What is the capacity of the transport and logistics services market by individual links of delivery: "first mile", "inter-terminal", "last mile"?

Obtaining objective answers to these strategic issues significantly is complicated by the lack of state and departmental statistical information, as well as the closedness of the transport and logistics market in Russia: the parameters of the activities of logistics companies are not available for general use.

Thus, without conducting special marketing research, it is rather difficult to obtain objective information about the current situation in various segments of the transport and logistics services market for the short and medium term.

CAPACITY IS THE MOST IMPORTANT INDICATOR OF THE LOGISTICS MARKET

In the process of marketing research, first of all, it is necessary to determine the capacity of the target segments of the transport and logistics services market. Currently the most important segments from the point of view of the interest of transport and logistics companies are:

Table 2. Methods of marketing research: cost, reliability, timing

Method of marketing research	Cost, EUR	Degree of the research results reliability, %	Timing, calendar months
Secondary marketing research (Desk-research)	Up to 5,000	Up to 50%	Up to 1.5
Primary marketing research (Field Work Research): expert and in-depth Face-to-Face interviews	3,000–30,000	75–80%	1.5–2.0
Combined marketing research: simultaneous application of primary and secondary research methods	From 30,000	More 85%	2.5–4.5

[1] In this sentence consolidation is to be understood as the market share held by the top 5 leading players.

– the market of less truck load (LTL);

– the market for the transport of goods requiring a temperature regime (Fresh, Farma, etc.);

– the market for the transport of dangerous goods;

– the international freight market рынок;

– the freight market for e-commerce.

Various approaches to the evaluation of product segments of the logistics market are known. As a rule, the average share of logistics costs from the total turnover of the sub-segment in question is taken as the basis to determine the capacity of a sub-segment of the logistics market.

Here is a simple example of estimating the capacity of the transport and logistics services market in the food segment (Ep) [6].

SOURCE DATA:

1. Turnover of the retail trade in Russia (V) – 26.12 trillion rubles.

2. The share of food products, including beverages and tobacco, in retail trade in Russia – P) – 47%, or 12.30 trillion rubles.

3. The share of logistics costs (F) in the total turnover of food products constitutes 10% on average.

According to Rosstat, the market capacity for transport and logistics services in the food segment can be estimated at 1.22 trillion rubles.

As it is easy to see, the above approach to capacity assessment gives a general understanding of the volume of the logistics market for food products, but does not allow to answer the strategically important questions listed above.

SECONDARY AND PRIMARY RESEARCH IS THE NECESSARY MINIMUM

In order to receive answers, in the practice of carrying out the research of the transport and logistics services market, both secondary and primary methods for collecting and analyzing information are used. Secondary research (Desk-research) is a "desk" method to collect and process secondary data on the logistics services market. The sources of secondary data include:

Federal State Statistics Service (Rosstat), including territorial offices;

– database of the Federal Customs Service of the Russian Federation (FCS);

– information of the Ministry of Transport of the Russian Federation;

– information of the Ministry of Energy of the Russian Federation;

– Mass-Media: newspapers, magazines, newsletters;

– resources of the Internet information network;

– databases of JSC Russian Railways for railway transportation of goods;

– results of previous studies on logistics services markets and freight flows in Russia;

– the results of previously implemented projects, including investment ones in the development of transport and logistics centers in Russia.

Primary research (Field Work Research) assumes expert and in-depth personal interviews (Face-to-Face method) with players in the logistics services market, that is, current and potential consumers of logistics services, logistics operators, market experts, etc.

Table. 1 shows the dependence of methods of conducting marketing research on the cost, reliability of results and timing.

As can be seen from the data given in table 1, the degree of reliability of the results of marketing research is an important parameter that depends on the applied research methods, which, in turn, have different cost and timing. As a result, the chosen methods determine the error of the results and, as a consequence, the level of risks in making decisions regarding the start of work in the segment of the transport and logistics services market in question.

In practice, the degree of reliability of the marketing research results cannot be 100%, as far as there are no guaranteed sources of information. The highest degree of reliability (over 85%) is achieved under the combined use of secondary and primary research methods, when the analysis of statistical data, namely: Rosstat databases, freight databases of Russian Railways, the Federal Customs Service of the Russian Federation, profile Internet resources, etc. is supplemented by the results of expert and in-depth interviews with the market players (logistics companies) and consumers of logistics services, as well as, if necessary, by the data of target measurements of volumes and cargo flows structure.

The use of primary and secondary sources of information in the process of identification, analysis and validation of the market parameters makes it possible to achieve 10–15% error in the assessment of the market capacity, the need for logistics services and the necessary elements of the logistics infrastructure, which is to be considered as an acceptable statistical norm. According to the

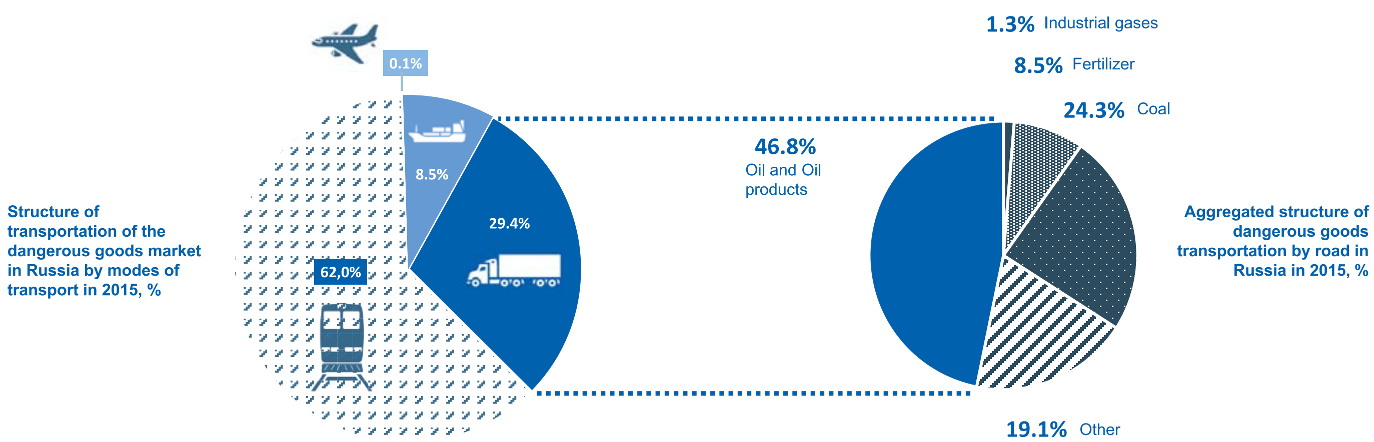

Figure 2. Russian market of transport and logistics services. "Dangerous goods" segment
Source: Market Guide Agency

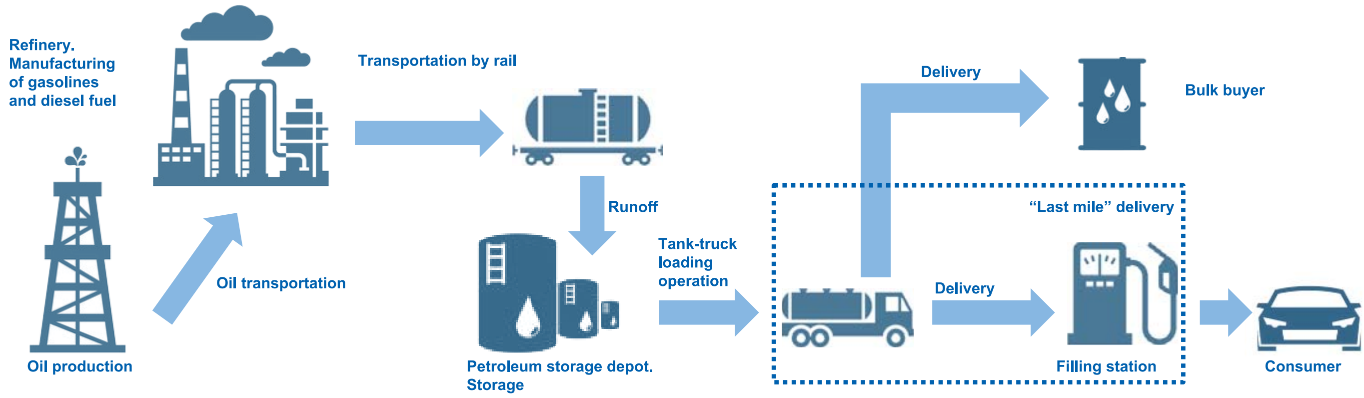

Figure 3. Scheme of delivery of petroleum products (gasoline, diesel fuel) to the filling stations
Source: Market Guide Agency

statistics of the research carried out by Market Guide Agency in 2010–2017, in order to achieve the greatest degree of reliability of the results, the sample during expert surveys with players of the logistics services market had to contain at least 150–200 interviews.

PROBLEMS OF THE MARKET RESEARCH IN THE LOGISTICS MARKET

In the process of conducting and interpreting the results of the market research of transport and logistics services, there are a number of methodological features that have to be taken into account in the collection and analysis of the marketing data.

1. Bias of government and departmental statistics.

In the most general case, the formula (1) is used to estimate the market capacity in physical or value terms, for which three parameters are necessary: the volu me of production of goods or services rendered, the volumes of exports and imports:

$$E = Pr + Imp - Exp, \quad (1)$$

where E is the market capacity; Pr – the volume of goods produced or services provided; Imp – volume of imported goods or services provided; Exp –volume of goods exported or services rendered.

It is well-known fact that the data of the Federal State Statistics Service (Rosstat) does not fully reflect the real picture of the production and sale of goods and services. According to the current legislation, only large companies that are public joint-stock companies are obligated to report on the volume of work or services performed. Speaking about the market of transport and logistics services, the overwhelming number of market participants are limited liability companies, therefore, they may not provide data on the volume of services rendered to Rosstat, which leads to underestimation of the market.

In the database of FCS of Russia (field code G31_1) and the base of JSC "RZD" it's quite often in the description of goods supplied, both for imports and exports, there is no detailed description of goods, which makes it difficult to assess the structure and nomenclature of goods transported. The situation is complicated by the fact that for one of the most popular modes of transport, road transport, statistical information is simply not available.

Thus, it is difficult to objectively assess the parameters of the market of transport and logistics services on the basis of the state and departmental statistics, as well as on the information from public sources. The maximum degree of reliability, which is achieved in the analysis of secondary data in Russia, does not exceed 50%. Primary methods for collecting and analyzing marketing data should also be used to improve reliability.

2. Methodical unreadiness of consumers and players of the transport and logistics services market to use detailed tools for expert interviews.

In the practice of research there is different methodological readiness of the market participants to conduct detailed market research. It is determined by the ability to successfully use complex and detailed tools (questionnaires) in the study, allowing to receive from the respondents massive and detailed data, which after statistical processing[2] make it possible to obtain a fairly objective picture of the volume and structure of demand, the level of competition, price elasticity of demand, etc.

In conducting studies of a number of industries, which may be attributed to, for example, the coatings industry, as well as other branches of the chemical complex, respondents usually have no difficulty in using scale questions, rating, creating interest structures, open questions, etc. When interviewing participants of the transport and logistics services market, especially if the questions are aimed at studying current and future demand, operating and forecast tariffs, it is very difficult to obtain information expressed quantitatively.

In this connection, in the study of the regional transport and logistics services markets, a simple toolkit is effective. Nevertheless, the minimum questionnaire, which is required for interviewing consumers of logistics services, includes issues that allow to determine:

1) nomenclature and average annual volume of cargo transported by the company: food products, household chemicals, timber, chemicals and petrochemicals, etc.;

2) the share of goods to be stored / wharehoused / transshipped in the total volume of freight;

3) current tariffs for all types of logistics services that the company uses: car-

[2] When processing and analyzing primary research data, the SPSS Statistics package is used (abbreviation from Statistical package for the social sciences) – software for statistical data processing intended for carrying out applied socio-economic research.

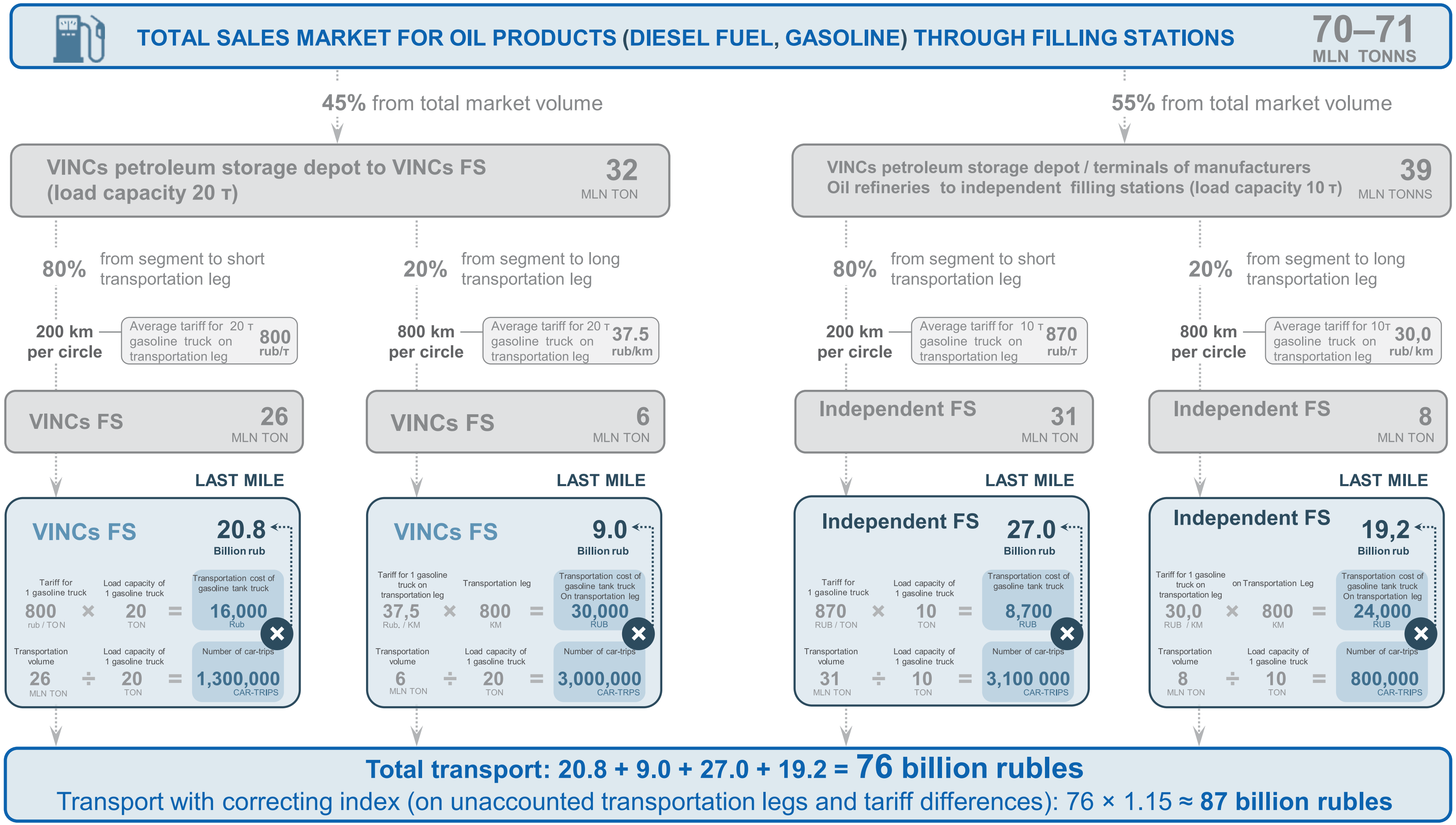

Figure 4. Calculation of the logistics scheme for the delivery of petroleum products to the filling station using the FI-TL technique
Source: Market Guide Agency

go transportation, forwarding, storage space rental, cargo consolidation, responsible storage, packing and repacking of cargo, labeling, etc.;

4) the share of imports in the company's total freight flow;

5) the main routes and modes of transport used for transporting the goods;

6) the forecast of changes in cargo flows in future up to 2025;

7) availability of their own transport and its types (carrying capacity, standard / refrigerator);

8) seasonality of changes in cargo traffic;

9) determining factors when deciding whether to use or not the services of a logistics operator: convenient location, acceptable tariffs, high level of logistics services, etc.

3. Specific features in the calculation of the parameters of the transport and logistics services market.

The volume of consumption of goods can be determined through official statistics (Rosstat) and data from the Federal Customs Service (FCS of the Russian Federation).

When calculating the consumption of goods (market capacity), it is necessary to take into account the specificity of the most demanded logistics service – cargo transportation: the volume of exports from total production and imports is not deducted, as in the traditional calculation formula (1), because exported products also fall under the "transportation" function and should be transported at least once.

FI-TL METHODOLOGY: COMPLICATED BUT OBJECTIVELY

FI-TL is an abbreviation for the first letters of the words "First mile", "Inter-Terminal", "Last mile", which was proposed by Market Guide Agency in 2015. The FI-TL methodology is of calculated character and is based on tariffs and medium-sized legs of products transportation in accordance with the current logistics schemes for their delivery from the producer (importer) to the end user. The FI-TL methodology has been repeatedly and successfully tested by the specialists of the Market Guide Agency when calculating a number of segments of the logistics market (Fresh, Farma, e-commerce, dangerous goods, FMCG goods, etc.).

> FI-TL METHODOLOGY HAS BEEN USED REPEATEDLY TO BUILD STRATEGIES OF LARGE LOGISTICS COMPANIES.

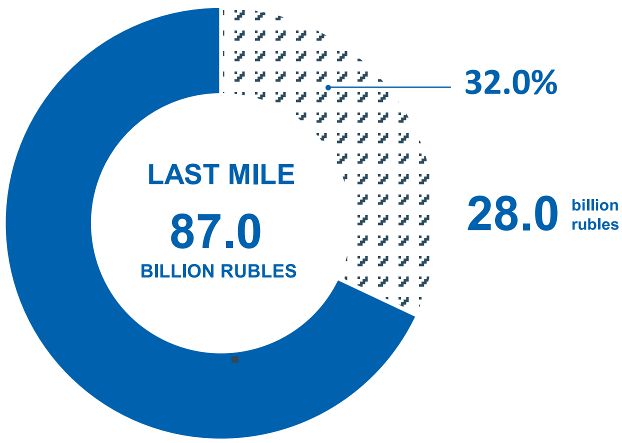

Figure 5. Share of outsourcing in the "oil products" segment on the "last mile" (taking correction coefficient into account), %
Source: Market Guide Agency

OIL TRANSPORTATION MARKET CAPACITY BY FI-TL METHOD

Approximately 800 million tons of dangerous goods are transported annually by all types of transport, except for pipelines, which accounted for about 10% of the total volume of transport in Russia in 2015. A significant part of it consists of oil and petroleum products (class 3), coal (class 4), compressed and liquefied gases (class 2), ammonia, fertilizers, acids. Oil and oil products account for more than 46% of road transport of dangerous goods (fig. 2).

Automobile transportation of petroleum products is produced by special transport (petrol tankers) by producers of petroleum products (various types of fuel) from production sites (refineries) to the network of filling stations (fig. 3). Optimal is the delivery of petroleum products by road tankers at a distance of 300–400 km. This determines the maximum distance from the tank farm to the filling station. A large part (70–80%) of such transportations to the filling stations are provided by Vertical Integrated Oil companies (VINKs) through transport companies as part of holdings or through external transport companies. Organizations that deal with wholesale supplies of petroleum products account

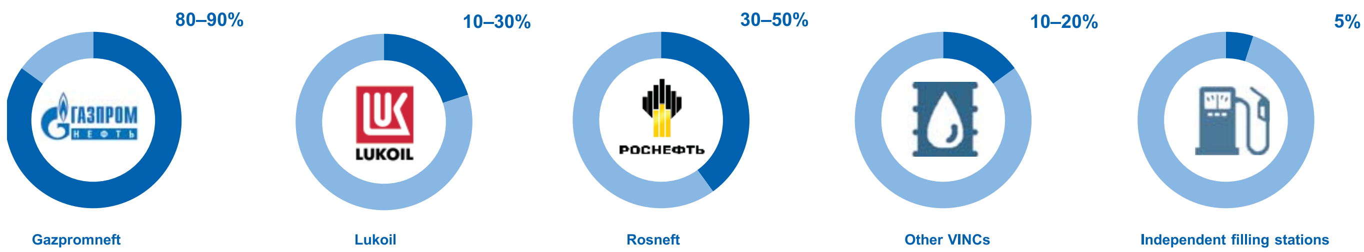

Figure 6. Share oShare of outsourcing in the "oil products" segment on the" last mile" by players, %
Source: Market Guide Agency

for 10–15% of the volume of transportation of petroleum products to the filling stations.

Calculation of the market capacity for the delivery of petroleum products (gasoline, diesel fuel) by road transport (gasoline tank trucks) to the filling station is made using the FI-TL technique (fig. 4). The following conclusions can be drawn from the calculations and diagrams:

1) the market of transport and logistics services in the segment of delivery of petroleum products (gasoline, diesel fuel) to the filling station is represented only by transport services ("last mile") in the amount of 87 billion rubles., services of a customs broker and warehouse services are not taken into consideration;

2) the share of outsourcing in the segment of petroleum products delivery (gasoline, diesel) to the gas station corresponds to the average Russian one and is 32% (fig. 5, 6);

3) Gazprom Neft company has the largest share of outsourcing in the segment of petroleum products delivery (gasoline, diesel fuel) to the filling stations, the share reaching 80–90%;

4) regional companies, limited liability companies,and sole traders operate at the" last mile "(delivery of fuel to the filling station) in the category of" oil products", sole traders being impossible to identify.

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