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EVALUATION OF DISTRIBUTION AND CUSTOMER SERVICE IN THE LOGISTICS SYSTEMS OF MANUFACTURING COMPANIES IN BULGARIA

The article reveals the characteristics and problems of distribution and customer service in manufacturing companies in Bulgaria and outlines the prospects for their improvement. An analysis is carried out of different dimensions of these areas using indicators calculated on the basis of empirical data. The impact of company size on distribution and customer service is examined and those practices that are positively related to competitiveness are brought out. The study finds out that manufacturing companies in Bulgaria generally apply the world practices in distribution and customer service but there is some lag in definite areas. It is necessary for small and medium companies to make improvements directed towards the development of a logistics strategy consistent with products and markets, the formulation and implementation of a distribution policy offering differentiated service for different groups of customers with the aim to optimize costs.

JEL: M110; M190

Logistics is of growing importance in the contemporary dynamic and globalizing world. It contributes to the increase of competitiveness through the effective and efficient management of material and information flows. Bearing in mind the successional movement of material flows from the point of view of a manufacturing company, an important element of the logistics system is distribution, which follows manufacturing operations and procurement. As a final stage of this movement distribution contributes greatly to customers' satisfaction in relation to their requirements for delivery speed, reliability and flexibility, and to the reduction of total logistics costs as well. Customer service is the outcome of performed logistics activities in distribution, not disregarding their role in procurement and operations. The article aims at revealing the characteristics of distribution and customer service in manufacturing companies in Bulgaria, studying the impact of company size on applied practices and bringing out those practices that are positively related to competitiveness in order to outline the prospects for improvement.

The role and place of distribution and logistics customer service in company management

Research works on processes directly related to customers are prevailingly focused on *distribution*. They provide evidence for the importance of this stage of the logistics cycle for customer satisfaction and company performance (Stewart, 1995). As a final stage of the movement of material flows it is a key strategic variable in the management of the company logistics system and has an increasing potential for achieving a competitive advantage. Every mistake in its management is a prerequisite for deteriorating the links between manufacturing and markets, for increasing costs and decreasing revenues. Distribution management is generally defined as providing

reliable and efficient flow and storage of products to fulfill customer requirements (Bowersox, Closs and Cooper, 2007, p. 22). Its main goal is to establish a link between the internal manufacturing operations of enterprises and their customers (Williamson, Spitzer and Bloomberg, 1990), i.e. the basic focus of distribution is the management of the outbound material flows and the flows related to them.

One of the key management areas in distribution is the choice of distribution channels which are formed of companies or individuals that perform the products distribution from the point of production to the point of consumption. Regarding the performed activities, distribution channels can be divided into sales channels (frequently referred in literature as trading, marketing, transaction, management channels) and physical distribution channels. The sales channel concerns the non-physical aspects of products distribution from the manufacturer to the consumer such as negotiating, buying and selling, transferring ownership in the distribution system (Rushton, Croucher and Baker, 2010, p. 50). The term "physical distribution channels" is used to describe the methods and means by which a product or a group of products are physically transferred from the point of production to the point at which their availability is provided to the final customer - retail outlet, factory, the customer's house.

The design of physical distribution channels that comply with the expectations of customers should conform to three criteria: rapid response, product choice and service (Heizer and Render, 2014, p. 483). Two types of decisions that determine the structure of distribution channels stand out in literature (Robinson and Satterfield, 1990; Dimitrov, et al., 2010). The first one relates to the distribution network (number and location of warehouses, distribution centers), and the second one – to transportation (mode, private/public transport, etc.). These two types of decisions demonstrate that important key aspects of physical distribution are warehousing and transportation management which are focused on the activities related to the effective and efficient storage and movement of products. Products availability at the right place and at the right time is provided through the right location of network nodes and the proper management of inventories and transportation links. However, the role of other activities should not be neglected and these are order management, packaging and labeling, products handling among others. A number of authors have researched in details these activities and have shown evidence for their positive influence on company performance (see, for example, Williamson et al., 1990; Baker, 2008).

One of the important management questions that arise both in physical and sales channels is weather to transfer the products directly to customers or to use intermediaries. The variety of intermediaries engaged in servicing the distribution process suggests a number of advantages concerning their specialization, good knowledge of markets and customer behavior. Researchers express a high opinion of the indirect physical distribution channels with intermediate nodes for storage and cross-docking and point out that they lead to improved customer service. Coyle et al. (2013, p. 466) define some of their other roles as:

- overcoming challenges (for example, balancing supply and demand of seasonal products, protecting against uncertainty and risk situations);

- supporting other processes (for example, if a manufacturing operation needs to increase production runs and reduce manufacturing costs);
- realizing economies of scale (transportation economies through full utilization of the capacity of vehicles or containers).

Other substantial advantages of the usage of intermediaries are associated with time and costs reduction for carrying out non-typical activities and concentration on key company competences.

Intermediaries with high specialization in providing logistics services can be used in performing the functions of physical distribution. Due to increased logistics costs as a result of business globalization, a number of companies take the decision to outsource some of their logistics activities (mostly transportation and warehousing) (Copacino, 1997). Thus the transition from insourced to outsourced logistics activities has become an important trend that has a significant effect on logistics systems configuration including the structure of distribution channels.

Despite the above-mentioned advantages, including intermediaries in the distribution channels has some disadvantages: loss of control over distribution; poor communication with intermediaries and lack of knowledge about customer requirements; risk of decreasing customer service levels; risk of increasing costs when they are not managed together with the intermediary. Therefore, one of the contemporary problems in distribution is the management of relationships with intermediaries which are usually direct customers of manufactures. According to Williamson et al. (1990) customer relationships are part of the company outbound logistics which includes the physical distribution of finished products. Scientists are not unanimous in their understanding of the different forms of interactions with customers. This is reflected in the popular concept of customer relationship management (CRM), which is viewed in different ways in literature – as a process, a strategy, a philosophy, a capability and a technological tool (Zablah et al., 2004). It is difficult for organizations to implement CRM in practice mainly due to the fact that it is perceived by managers as a technological tool. Thus the strategic aspect of customer relationship management in the organizational context is neglected (Rigby et al., 2002). In this way, there is a risk to maintain short-term relationships that lead to unstable distribution channels, poor channel coordination and lack of integration to achieve common goals.

The distribution of the outbound material flows is related to *customer service.* If distribution does not function effectively as an element of the logistics system, it leads to a loss of customers and difficulty in attracting new ones. Service and its quality are studied by many authors. A significant contribution in this area is the conceptual model suggested by Parasuraman et al. (1985). However, service in physical distribution is different from that in the service industries (for example, in banks and insurance companies). It concerns products, not people, and the organization that provides it is physically remote from the customers (Bienstock et al., 1997). Furthermore, in contrast to other services, logistics service is somehow tangible, since it is expressed in the products condition and time of delivery. It is the final output of logistics system.

Studies on logistics customer service are far less than those on the service sector. Nevertheless, they show an evolution of the understanding of this issue. In the 1970s and 1980s logistics customer service had a reactive role (as a reaction to customer complaints), but at the end of this period scientists are unified around the idea of the value added. Christopher (1992, p. 16) defines it as the provision of time and place utility which adds value to the core product and thus considerable differentiation of the total offering can be achieved. Apparently the characteristics of the physical product are not enough to retain customer loyalty and of paramount importance is the whole product package that includes logistics customer service (Kumar and Sharman, 1992). Li and Lee (1994) prove that, other things being equal for two competitive companies, the one that provides better service has a larger market share. This leads to the conclusion that increasing customer service levels brings higher company revenues. However, even during this period the stress is laid on the establishment of internally defined standards on the basis of company capabilities and not of customer requirements.

Since the end of the 1990s researchers and managers recognize that anticipating and exceeding customers' expectations in a way that adds value is the approach to establish lasting competitiveness. Mentzer, Flint, and Hult (2001) define logistics customer service as a reflection of customer expectations on the different dimensions of service and as an achievement of high satisfaction as a result. The authors claim that service is created in two stages of the order fulfillment process. Firstly, when giving an order, the customer appreciates the personnel contact quality, products availability, information quality and order procedures. Secondly, during the stage of order receipt the main factors that influence customer satisfaction are order accuracy, order condition, order quality and timeliness.

After 2010 logistics customer service is perceived as a valuable resource through which the company can differentiate itself and thus compete more effectively (Hartmann & Grahl, 2011; Yazdanparast, Manuj & Swartz, 2010). Some authors recognize the versatile nature of service and view it in three aspects (Coyle, et al., 2013, p. 283): as a set of activities performed before, during and after the transaction (for example, providing information, order processing, products substitution, postsale support, dealing with complaints, etc.); as performance measures, and as a philosophy that concerns all aspect of a business.

Regardless of understanding customer service as an activity, performance measure, resource or philosophy, researchers share the same opinion that it has different dimensions and most of them attempt to define and classify them (see, for example, Christopher, 1992; Bookbinder and Lynch, 1997; Bowersox and Closs, 2007). Typical dimensions are most often associated with the order cycle, such as lead time and reliability, but flexibility and communications are of high significance as well (Emerson and Grimm, 1996). This classification is useful, although there is some overlap and interdependence between the dimensions (for example, between time and communication, since the last includes the time for information provision).

In order to develop an effective customer service policy, it is important to define measures of its different dimensions. Frequently, the most important customer service element that is measured (order completion, order accuracy, inventory levels) is product availability (Collins et al., 2001). Order cycle time is of the same importance too. Figueiredo et al. (2003) provide evidences that late deliveries provoke the greatest customer dissatisfaction. Considering the fact that improving this customer service element necessitates increasing investments in inventory close to customers, authors conclude that it represents a good opportunity for differentiation from competitors by satisfying customer expectations.

The widest acknowledgement and application in practice receive the measures included in the SCOR model (Supply Chain Operations Reference Model) of the Supply Chain Council (now part of APICS). The model consists of more than 150 standard supply chain performance measures, most of which refer to the provided customer service levels. The values of the service measures are useful to make comparisons with historical data and with these measures' values for leading companies. For example, the value of the measure "order fill rate" for a typical firm from the consumer packaged goods industry is 71%, while for a benchmark firm it is 98% (Heizer and Render, 2014, p. 487). Firms from different industries usually know the typical customer service levels for their industry. It is important to define not only the proper customer service measures, but their target values as well, that should be achieved through the logistics activities. In practice standards are often defined as minimums – for example, 90% on-time deliveries, or as industry target values – for example, 97% respectively (see Fawcett and Fawcett, 2014, p. 17).

However, it is necessary to point out that different customer service elements are not equally important for all customers (Collins et al., 2001). Since customers have different requirements, they should not receive one and the same service. That is why, a number of studies reveal that an important first step in achieving high customer service levels at optimal costs is the segmentation of customers (Chen and Bell, 2012; Godsell et al., 2011). The importance of such segmentation stems from the fact that there are often opportunities for creating differentiated service for specific segments (Christopher, 1992, p. 5). Thus customer service requirements determine the logistics systems structure including the structure of the distribution channels and plants location.

The significant role of distribution and logistics customer service for company management is expressed in many research works in the area of logistics and supply chain management. Distribution directly influences competitiveness through its effect on costs and customer satisfaction. Distribution costs are high and can reach up to 20% of manufacturing costs (Chopra and Meindl, 2010). Meanwhile, many researchers prove that service resulting from distribution increases competitiveness (see, for example, Daugherty et al., 1998). The reason is that better logistics service provided by suppliers improves the performance of customer operations (Heskett, 1994). Therefore, it can become a powerful differentiating factor for suppliers in conditions of highly competitive markets (Bookbinder and Lynch, 1997).

As a summary of the literature review it can be concluded that the diverse customers' expectations suppose the establishment of different distribution channels frequently including a number of intermediate points for redistributing material flows to customers, especially in the case of consumer goods. That insists on locating more warehouses close to customers, providing many product choices and using logistics service providers or direct deliveries to larger customers. The distribution channels' structure depends on the defined goals and the achievement of a balance between costs and benefits. The effective distribution management results in shorter and more reliable delivery time, increased product availability and decreased distribution costs, all of which influence customer satisfaction. Studies prove that in highly competitive markets these capabilities improve company competitive position which determines the considerable role of distribution and customer service for company management.

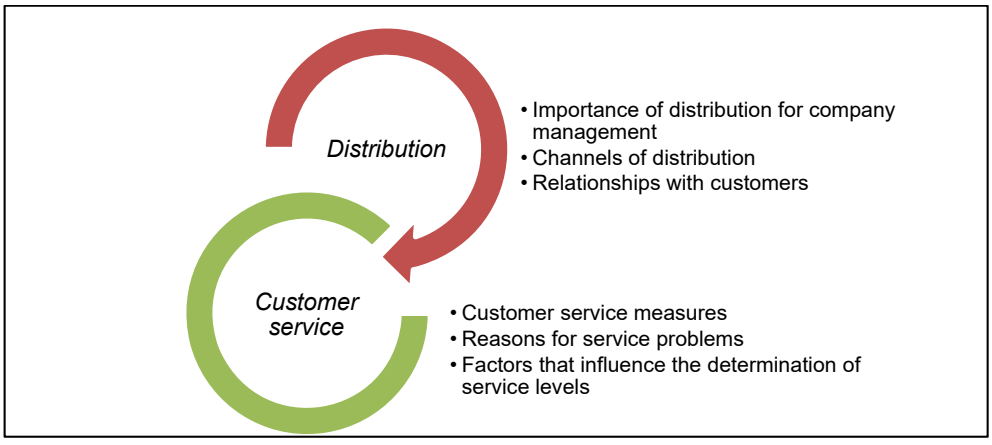
However, studies are focused either on distribution, or on customer service, on specific industries and products or on specific aspects of competitiveness. No research was found on the impact that different distribution practices and customer service factors have on competitiveness as a whole. In compliance with this, the purpose of the article is to analyze the characteristics of distribution and customer service in Bulgarian manufacturing enterprises and to test the hypotheses that these areas influence their competitiveness and that the size of the enterprises has an effect on the applied practices. It is assumed that companies that differ in size have different resources, including knowledge, skills and capabilities, which contribute to the existence of significant differences.

A methodology of the research on distribution and customer service in Bulgarian manufacturing companies

The methodology includes an evaluation of different distribution and customer service dimensions discussed in the literature review (Figure 1).

Figure 1

Studied dimensions of distribution management and customer service



Distribution

● *Importance of distribution for company management.* It is evaluated through the analysis of company areas that need urgent improvement. Along with distribution, other important for company competitiveness areas are included too, such as marketing and sales, procurement, manufacturing operations, finance and accounting, product design, transportation, warehousing, etc.

● *Channels of distribution.* Through more detailed examination of the distribution channels it can be determined what part of the products manufacturing companies distribute on their own, and what part – through intermediaries. Attention is focused on the factors that most often influence this decision on a management level. Concerning the physical distribution, the usage of warehouses as intermediate nodes is clarified, and the extent of usage of public and private transport as well.

●*Relationships with customers.* They are evaluated through studying customers' incentives to choose company products and the duration of the relationships with them. Longer is the period of business relationships, greater is the customer satisfaction from the provided products.

Customer service

●*Customer service measures.* Satisfying customer requirements concerning logistics service is very difficult, because they have many aspects and are not easily measured. The study examines the measures used by companies for planning and evaluating customer service levels and the values of the most significant measure – percent of orders filled on time.

●*Reasons for service problems.* The most frequent reasons for worsening the customer service expressed in late deliveries are discussed. They can be due to the distribution process (for example, mistakes in delivery management), in the manufacturing operations (insufficient equipment capacity, production schedules mistakes), and in the materials procurement as well (lack of materials or quality problems with materials).

●*Factors that influence the determination of service levels.* Here the research is focused on the application of the policy to provide different service levels to different customers in order to optimize costs and on the impact that the following factors have on service: order volume, duration of relationships with customers, service levels provided by competitors.

Data is collected through the method of personal interview based on a questionnaire which allows the provision of information concerning different aspects of the logistics systems of manufacturing companies in Bulgaria.[1] It consists of eight sections. This research uses mainly the questions from the section "Distribution".

[1] The questionnaire is elaborated for the aims of a survey financed by the fund "Scientific Research Activity of the University of National and World Economy" with the topic „Development of logistics in Bulgarian manufacturing and trade enterprises". It is carried out during the period May 2012 - December 2014 by a team of researchers managed by Assoc. Prof. Miroslava Rakovska, PhD.

Most of them are closed containing 5-point scales, dichotomous or requiring numerical data.

Data analysis starts first with an evaluation of the distribution and customer service dimensions on the basis of descriptive statistics. Statistically significant differences between variables' means for enterprises of different sizes are examined through the usage of the nonparametric test Kruskal-Wallis 1-way ANOVA and the Mann-Whitney test. For this purpose, three groups of companies are generated: micro and small, medium and large ones. In order to assess the relationships between applied practices and competitiveness, a measure of competitiveness is set up. It is estimated as a mean of the values given on 5-point scales for the position of the company in relation to the main industry competitors concerning the dimensions of competitiveness (price, quality, flexibility and service). On the basis of this measure's mean companies are divided into two groups: companies with high and low competitiveness. Then the t-test is applied to examine differences between means for large samples (i.e. the number of respondents in each sample is bigger than or equal to 30) and as a result the means of distribution and customer service measures are compared for the two groups of companies.

The research uses data that is collected during the period May-July 2014 and is provided by one employee per company, predominantly high level managers. They occupy positions such as CEOs, sales managers, logistics managers, accountancy managers.

The number of the surveyed manufacturing companies is 78, of which 38% are micro and small (up to 49 employees and the micro enterprises are 6%), 42% - medium (50-249 employees), and 20% - large ones. Concerning ownership, 89 of the surveyed manufacturing companies are private Bulgarian ones and 9,6% are foreign owned. Almost half of the companies (45%) are established in 1990s and 16% - before 1990. Of those that are established after 2000 only 4,8% are established after 2008, which allows considering them as having management experience.

Since the type of the manufactured products influences the characteristics of the material flows and therefore the specifics of distribution and customer sevice, the companies should be examined from that point of view. Finished consumer products are most widely manufactured by companies (around 48%), followed by finnished industrial products (32%), and the rest are raw materials, materials, components, agregates. It can be concluded that regarding the position of the surveyed companies in the supply chain, the most widely represented are the manufacturers that are close to the end customers. This supposes the existence of more opportunities to react quickly to their requirements.

An evaluation of distribution and customer service in manufacturing companies in Bulgaria

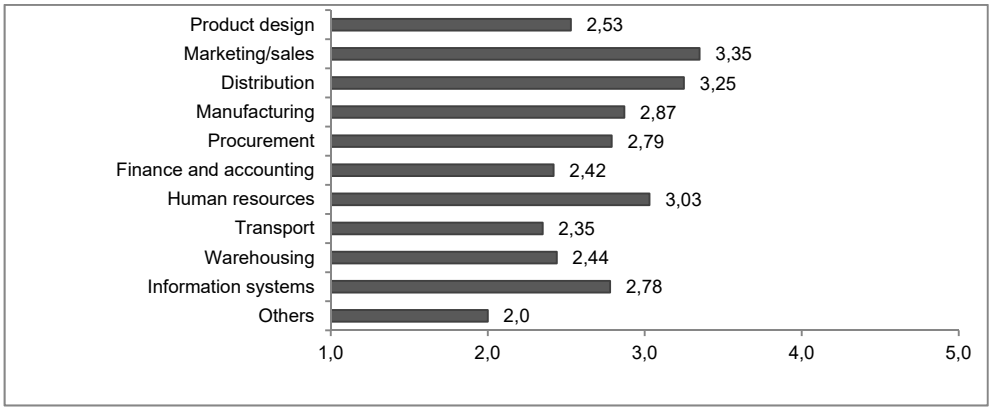
Importance of distribution for company management

Distribution ranks second out of 10 company management areas requiring urgent improvement. It is immediately after marketing and sales (Figure 2). The next

important areas are human resources, manufacturing, procurement and information systems. The high estmates of the necessity to improve distribution together with marketing and sales show that manufacturing companies consider these areas as important for competitiveness, since they directly interact with customers.

Figure 2

Areas that need urgent improvement

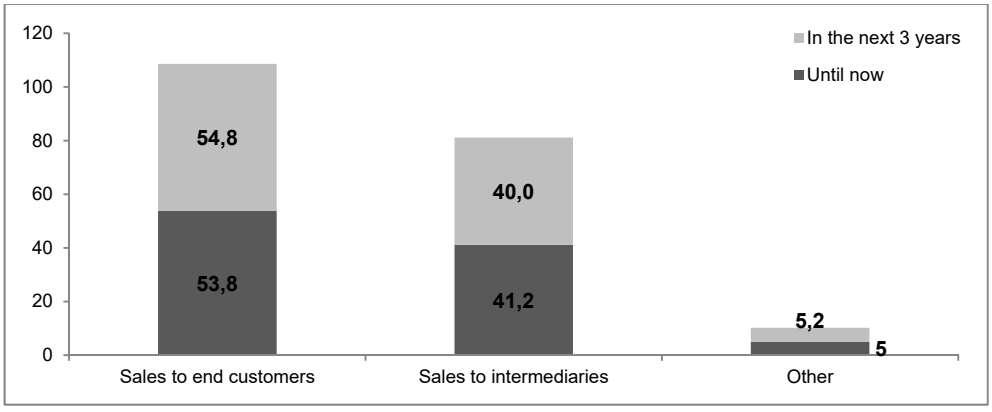


Channels of distribution

About 54% of the manufactured products are distributed through direct sales to end customers and 41% - through intermediaries (Figure 3). The fact that a larger part of the companies do not use intermediaries for products distribution shows that they perform non-typical functions. Meanwhile, direct channels provide more opportunities for inter-firm integration, better control over distribution and easier feedback provision from customers.

Figure 3

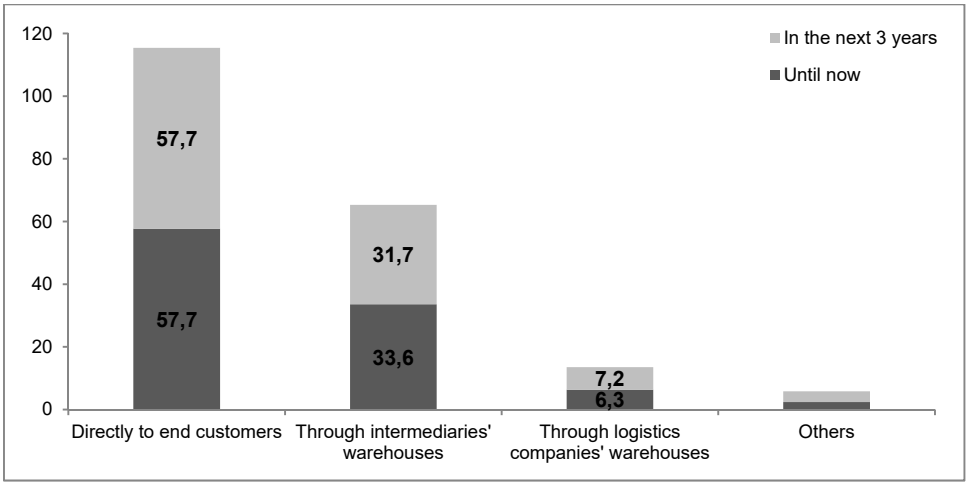
Percentage distribution of products placement



Concerning the products physical movement, nearly 58% of products are directly delivered to customers, 34% of them pass through intermediaries' warehouses and only 6,3% - through logistics companies' warehouses (Figure 4). Obviously , manufacturers that have chosen to distribute their products on their own have the resources to perform the physical distribution as well. Direct delivery to end customers of a small part of products – 3,9%, is carried out together with sales to intermediaries. In this way sales channels and physical distribution channels are separated. However, it should be pointed out that outsourcing physical distribution is an opportunity that should be taken in mind when designing new distribution channels and evaluating the existing ones. Considerable changes are not expected in the next 3 years.

Figure 4

Percentage distribution of products physical movement to customers



Companies use private transport for half of the products. The options for public transport or the one provided by customers receive nearly equal percentages – 29 and 21. Comparing the results from the previous analysis, it can be asserted that, if companies use logistics service providers, in most cases they outsource the transport and to a lesser extent – the warehousing. Here again companies do not see anything to be changed in the next 3 years. Increased demand for logistics services and logistics outsourcing is a world trend. Thus, a conclusion can be made that Bulgarian companies are still far from global trends where companies try to increase logistics service levels and to decrease costs through outsourcing a set of logistics activities (transport, warehousing, packaging, handling, etc.)

Figure 5

Factors that influence the decision for direct distribution or usage of intermediaries (means, 1 – has no influence; 5 –influences very often)

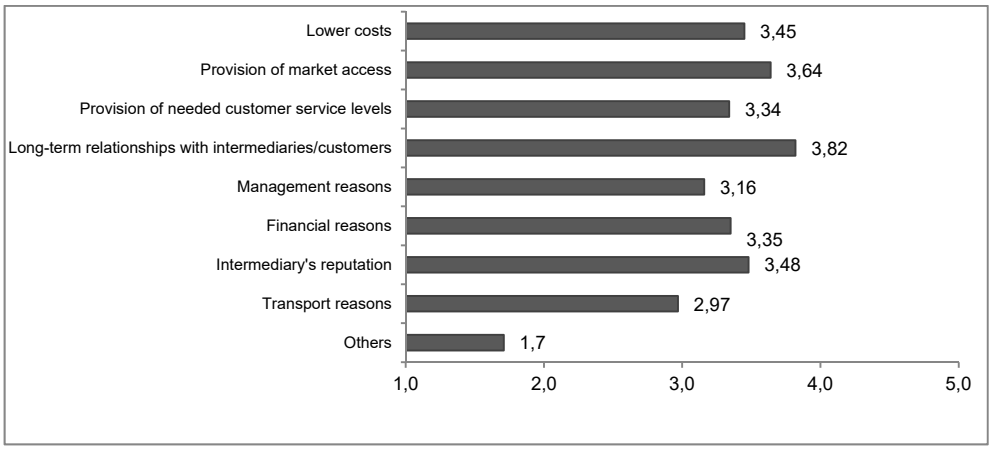


Figure 5 shows that among the factors that influence company decision for direct distribution or usage of intermediaries long-term relations with intermediaries/ customers rank first with a mean of 3,8, and the provision of market access by intermediaries ranks second (3,6). Intermediary's reputation, lower costs, financial reasons and the provision of needed customer service levels have approximately one and the same means - from 3,34 to 3,48. The small differences between means justify the inference that these factors have equal importance and complex influence on the decision to ousource products distribution.

Relationships with customers

The evaluation of customers' incentives to choose company products and services (Figure 6) shows that incentives, closely related to company logistics activities, are ranked very high with means above 4. Delivery reliability is indicated as a leading incentive by 87% of the interviewed companies, short time for order fulfillment - by 81%, and service flexibility – by 71%. The conclusion is that for every 4 out of 5 companies achieving high customer service levels turns out to be a key factor for competitive success even if it results in higher costs. The fact that the leading incentives are product quality (4,5), delivery reliability, company reputation, short delivery time and long-term relationships with the company, and that the traditionally important factor "low prices" is ranked last but one, leads to the conclusion that most of the researched manufacturing companies are oriented towards differentiation strategy and that many of them use logistics as a main competitive weapon. Actually, logistics has such a role especially in coditions of high market competition which apparantely concerns the reasearched companies.

It is confirmed by the fact, that the factor, which defines the company as the only one providing specific products/services, is ranked last.

Figure 6

Customers' incentives to buy company products
(means, 1 – not at all an incentive, 5 – an incentive to a high extent)

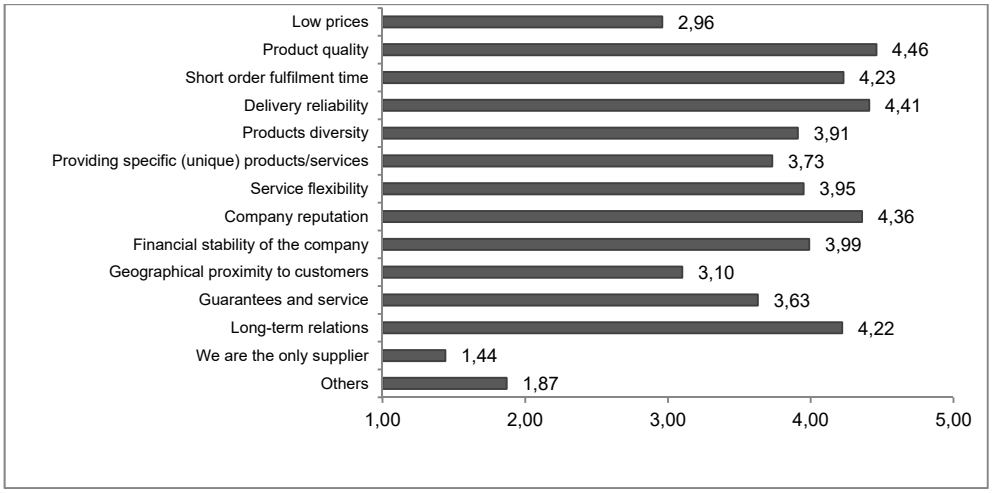
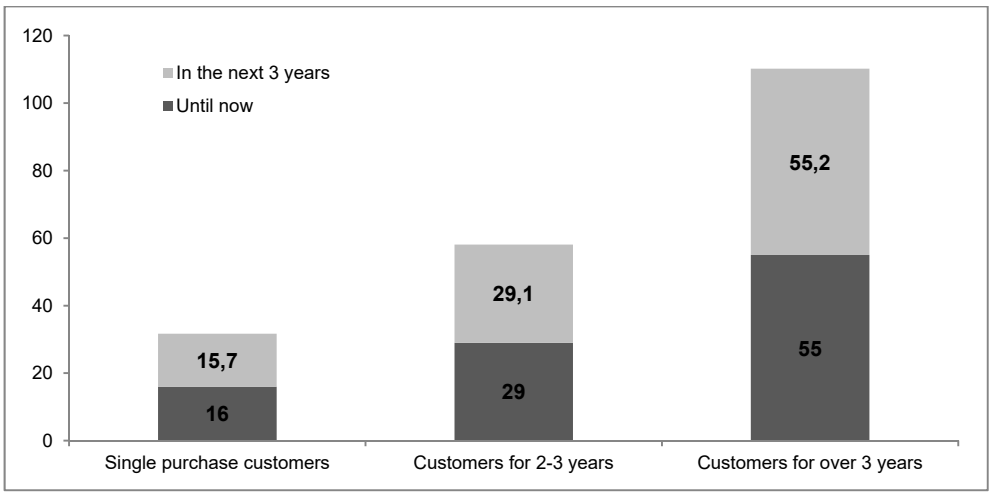


Figure 7

Percentage distribution of customers according to the duration of business relationships



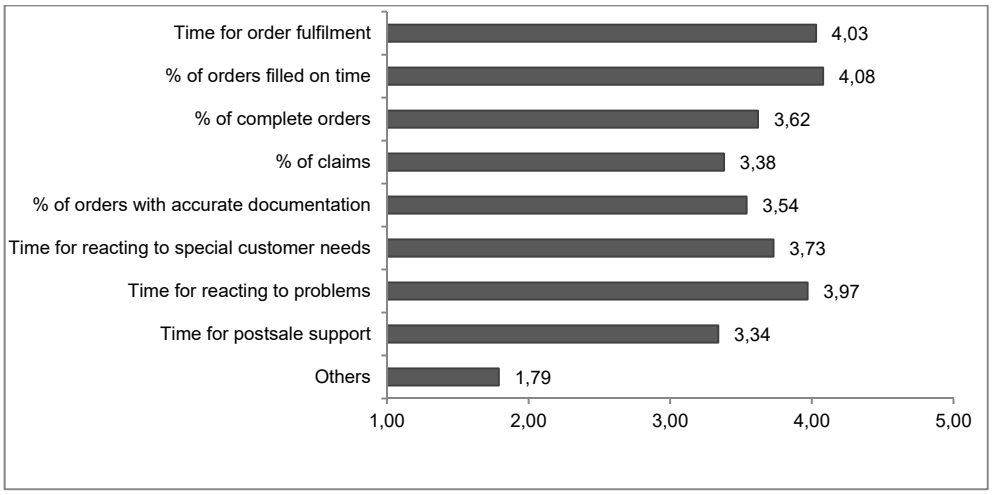
Data in Figure 7 reveals a comparatively large share of customers, with which companieas have been mainataining business relationships for over 3 years (55%). This obviously speaks for the existence of prerequisites to develop effective partnerships in distribution channels. This is the way to strenghen the positions of the present-day companies seeking for long-term successful strategies and not for short-term profits. What is embarrassing here is that companies do not expect considerable enlargement of the share of durable busines relationships in the next 3 years, which is expressed in the minimum differences in percentages. Perhaps, it is due to the uncertainty that companies still perceive as a result of the long economic crisis.

Customer service measures

The most widely used measure by companies is "% of orders filled on time" with a mean of 4,08, followed by "time for order fulfillment" (Figure 8). The high means of these time related measures show ones again that time is of great importance for customers as a factor. Very close to 4 are the means for "time for reacting to problems", "time for reacting to special customer needs" and "% of complete orders". The first two measure the company flexibility when reacting to customer needs, which are leading in the distribution channel, and the third one – delivery reliability. The low mean of "others" gives the reason to assert that the listed 8 measures are mostly used by companies.

Figure 8

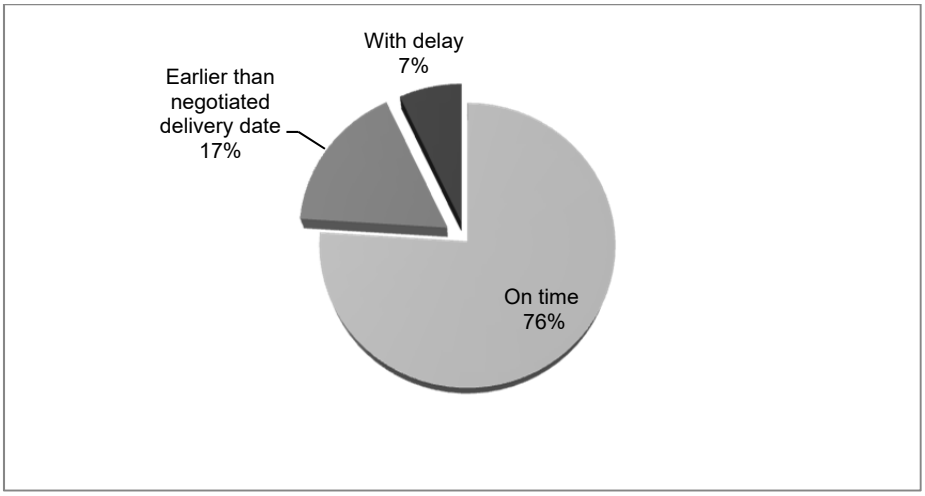
Usage of measures for planning and evaluating customer service levels
(means, 1 – not at all used, 5 – used in high extent)



The high mean for the usage of "% of orders filled on time" prompts the detailed analysis of this measure's values (Figure 9). 76% of the surveyed manufacturing companies fill the received orders on time, 17% - fill them earlier than the negotiated delivery dates and 7% - with delay, i.e. the service level concerning the timeliness of order fulfillment is 93%. This level is comparatively lower than the one achieved by leading companies - 97-98% with the aim to reach 100%. It should be kept in mind that earlier delivery (17%), although not leading to stock-outs, raises customer's costs, namely - inventory carrying costs.

Figure 9

Percentage distribution of orders according to timeliness of their fulfillment



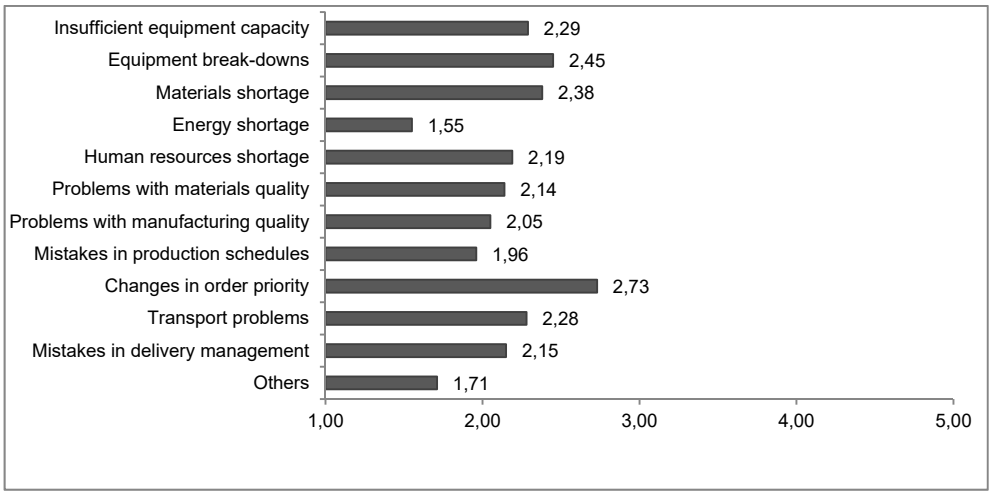
Reasons for service problems

It is interesting that, when answering the question "What are the reasons for late deliveries?", the respondents do not emphasize on neither of the listed reasons as frequently manifested – all of the means are below 3 (Figure 10). It indicates a high degree of confidence in company capabilities for providing on time deliveries and negligence of the problem areas that lead to cases of late deliveries. Anyway, the main reasons for late deliveries are changes in order priority, equipment break-downs and materials shortage. All of them appear often or very often in nearly 30% of companies. An obvious problem for these companieas is the provision of compliance between real demand on one hand, and manufacturing and procurement capability, on the other. For about 1/5 of the companies late deliveries are due to insufficient equipment capacity and transport problems. It should be pointed out that the first

reason is rooted in the phase that precedes distribution, namely production. All of that is evidence of poor coordination between the three phases of the material flows movement – procurement, production and distribution. These reasons are internal for companies and are due to inappropriate planning of existing resources and organisation of activities especially in situations of emergency and of receipts of additional orders.

Figure 10

Reasons for late deliveries to customers
(means, 1 – never is a reason, 5 – very often is a reason)



Factors that influence the determination of service levels

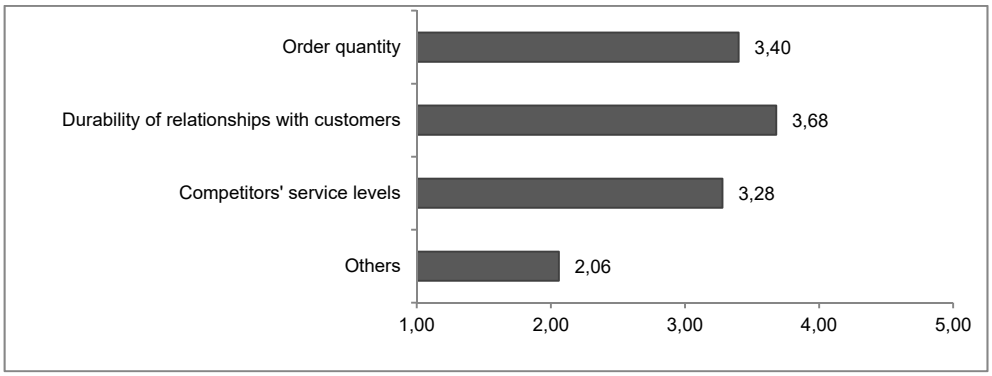
Not all of the customers can be serviced in one and the same way because their requirements are different. This requires the collection and analysis of data concerning demand, customers' reactions and requirements and the usage of the consequent results in managing different service levels. Only 46,2% of the interviewed companies have answered positively to the question whether they provide different service to different customers. These are mainly medium and large companies with products sold on diverse markets, including foreign ones. The rest of the companies (more than a half of them) provide one and the same service level to all of their customers and markets. This inevitably leads either to deteriorated service for more demanding customers, or to increased costs in cases when equally high service levels are provided to all customers.

Among the factors that influence the determination of service levels (Figure 11), durability of relationships with customers has the highest score (3,68), followed by

order quantity (3,4) and competitors' service levels (3,28). All scores are above 3, which means that all of the listed factors are taken into consideration moderately in the determination of customer service levels.

Figure 11

Degree of considering the factors when determining the service levels



The analysis of the statistically significant differences between the levels of companies' competitiveness concerning the application of distribution and customer service practices shows the following (see the Table below):

• 10 of the 13 listed in the questionnaire incentives for customers to buy company products are positively related to competitiveness, because they correspond to criteria that make companies more competitive in their customers' eyes. It is clear that incentives with logistics characteristics (short order fulfillment time, delivery reliability, service flexibility, guarantees and service) are associated with competitiveness at very high levels of statistical significance (confidence interval - 99%). This undoubtedly provides evidence of the important role of distribution and customer service for achieving company goals.

• Regardless of the usage of direct or indirect distribution channels, long-term relationships with customers or intermediaries increase company competitiveness. That raises the importance of developing long-term collaborative relationships to manage processes in distribution channels.

• More competitive companies use to a higher extent the measures for planning and evaluating customer service levels, which shows that that they are conscious of the need to measure and control logistics processes for the purpose of their management.

• In more competitive companies delivery dates are determined by customers and that makes these companies more market oriented and reactive to customer requirements.

Table

Scores of the measures of distribution and customer service practices for the groups of companies in terms of their size and level of competitiveness

Practices	Company size				Level of competitiveness		
	Small	Medium	Large	Statistical level of significance (p)	>= 3.8 n=39	< 3.8 n=39	Statistical level of significance (p)
Customers' incentives to buy company products							
Product quality	4,2	4,5	4,6	0,04**	4,6	4,3	0,02**
Short order fulfillment time					4,6	3,9	0,001***
Delivery reliability					4,6	4,2	0,008***
Products diversity	3,6	3,9	4,4	0,09*	4,4	3,4	0,000***
Providing specific (unique) products/services					4,3	3,2	0,000***
Service flexibility					4,4	3,5	0,000***
Company reputation	4,1	4,3	4,8	0,01***	4,5	4,2	0,04**
Financial stability of the company	3,7	3,9	4,6	0,02**	4,3	3,6	0,002***
Guarantees and service					4,1	3,2	0,002***
Long-term relationships					4,5	3,9	0,008***
Channels of distribution							
Share of products which are distributed through direct sales to customers (%)	64,7	53,6	36,6	0,07*			
Share of products which are distributed through private transport (%)	46,6	59,8	18,9	0,009***			
Share of products which are distributed through public transport (%)	29	22,9	55,2	0,04**			
Long-term relationships with intermediaries/customers influence company decision whether to use intermediaries in products distribution					4,03	3,6	0,09*
Usage of the following measures for planning and evaluating customer service levels:							
Time for order fulfillment	3,6	4,4	4,5	0,001***	4,2	3,8	0,08*
% of orders filled on time	3,6	4,4	4,7	0,000***	4,3	3,8	0,03**
% of complete orders	3,4	3,8	4,1	0,08*	3,9	3,3	0,008***
% of claims					3,7	3	0,03**
% of orders with accurate documentation	3,1	3,8	4,1	0,03**	4	3,1	0,002***
Time for reacting to special customer needs					4,1	3,4	0,003***
Time for reacting to problems					4,5	3,5	0,000***
Time for postsale support					3,8	2,9	0,004***
Delivery dates are determined by customers					4	3,4	0,04**

* p<0,1; ** p<0,05; *** p<0,01 (The group that has a statistically significant difference in comparison with the other two groups is marked in grey).

Data in the table shows that the factor "company size" influences some distribution and customer service practices as follows:

• Large companies offer higher products diversity, company reputation and financial stability. That is the reason for the higher demand for their products in comparison with the one of small and medium enterprises. More embarrassing is the fact that quality is less important as an incentive for customers to buy small companies' products. What is more, small companies lag behind larger ones in relation to all criteria, which reveal considerable potential for improvement in all aspects of competitiveness.

• The comparative evaluation of distribution channels reveals once again that, compared to small and medium companies, the large ones use less direct distribution channels and private transport – their share of deliveries with private transport is three times smaller. Meanwhile, they rely more on logistics service providers in their products' distribution, with which they successfully fit in the world trend for logistics outsourcing. Furthermore, the usage of intermediaries in sales and physical distribution enables these companies to focus on their core competences that lead to maximum competitive advantage.

• Small companies lag significantly in the usage of customer service measures especially those concerning delivery timeliness and reliability. This affects their competitiveness, since it deprives them of the opportunity to know the effect of their logistics activities in quantitative terms and to take due precautions for their improvement.

*

The research reveals the specifics of distribution and the characteristics of customer service in manufacturing companies in Bulgaria. It shows that manufacturing companies assess too highly the role of distribution for the increase of competitiveness. A little more than half of the surveyed companies prefer direct channels of sales and physical distribution. The average number of employees in them is 156, i.e. these are generally medium companies. Nevertheless, it is a global trend that manufacturing companies outsource logistics activities concerning inventory, distribution, transport, etc., but in Bulgaria this is more typical for large companies. Logistics service companies are used mainly for transportation services and to a lesser extent, for warehousing. Outsourcing transportation has its advantages, expressed basically in time and resources savings and acquisition of specialized knowledge and experience concerning deliveries, including information technology resources. Anyway, purchasing other services, such as warehousing, packaging, labeling among others, leads to economies of scale in distribution which are not feasible in a single link supplier-customer. Also, outsourcing non-core activities allows a company to focus on its strengths and their improvement. It is important to point out that partnerships with logistics service providers are effective only if they are backed up with information and communication systems that provide transparency of physical processes and support the mutual efforts to satisfy customer needs.

Generally companies use private transport when there are problems with the timeliness and reliability of the public transport services, with the carriers' readiness to change routes, or with the terms of loading and unloading. The lesser extent of logistics outsourcing for nearly half of the manufactured products in comparison with the practice in developed countries supposes additional research on the logistics sector in Bulgaria. It is of considerable interest to study the services provided by the sector, capabilities and resources that are available in logistics service providers, the service levels to their customers, and the problem areas in customer relationships.

Long-term relationships with customers/intermediaries have a stronger effect on the decision to use intermediaries than costs, especially for more competitive companies. More than half of the customers' base is built with long-term prospects, which is a prerequisite to implement practices for integrated supply chain management. Delivery reliability, short order fulfillment time and service flexibility are leading competitive criteria, which oust price as traditionally important and bring to the fore the search for ways to improve distribution and customer service.

Bulgarian manufacturing companies monitor a number of service measures corresponding to the above-mentioned criteria. It is proved that this practice leads to the increase of competitiveness, but this is less true for small companies. It is disturbing that regarding one of the most popular measures in practice - timeliness of order fulfillment, Bulgarian companies do not perform so well as the world leaders. The reason for that is the inability of manufacturing operations and procurement to react to demand changes. To settle this problem it is necessary to develop capabilities for integrated management of procurement, operations and distribution. This integration suggests synchronizing production schedules with delivery schedules and materials receipt, and coordinating logistics activities with suppliers and intermediaries in the supply chain as well. Due to the complexity of the system and the variety of logistics activities in it, such an integrated approach undoubtedly requires implementing contemporary information systems and technologies which support the management of information flows accompanying material flows. However, another research reveals that invested resources in such systems and technologies in Bulgarian companies are limited, which does not allow the benefits of integration to display. It is due to the lack of resources for systems implementation and for follow-up personnel training, as well as to the lack of knowledge of their usage advantages (Rakovska et al., 2014, p. 86).

Another reason for the insufficiently high service levels is that a large part of the companies do not have differentiated service policy for different groups of customers. This speaks for misunderstanding the diverse customer requirements. As a result, more demanding customers remain unsatisfied when the company provides one and the same service. Since better service is associated with higher costs, the main question here is whether it would justify the additional costs and provide a good return on investment. The conscious choice of speed, delivery

reliability and service flexibility as competitive weapons, the development of logistics strategy consistent with products and markets and the provision of differentiated service to different customers will l definitely result in higher service levels, achieved at optimal costs. This definitely affects the company market positions and the company financial results.

The research reveals that company size influences customers' incentives to buy company products, the structure of the distribution channels and the usage of customer service measures. It is evidenced that competitiveness is positively related to customers' incentives to buy company products, long-term relationships with customer/intermediaries, usage of measures for planning and evaluating customer service levels and minding their requirements when determining delivery dates. Future research could bring a high informative value and increase the results validity if distribution and customer service practices (including those that influence competitiveness) are studied with the simultaneous use of quantitative and qualitative methods. The method of focused groups could also lead to interesting results through provoking discussion between managers with different skills, experience and motivation.

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