ABSTRACT

Chartering is the part of international shipping business which broadly deals with the proper matching of cargoes' transport needs and vessels' commercial trading. Different charterers have different transportation needs. They do not all require the same sea transport service and not all charterers charter a particular vessel for the same reasons. Therefore, this paper intends to present how the charter market may be structured in response to trade's needs and charterers' requirements. The main objective of this paper is to constitute an overview of the shipping market segmentation into the various market segments. The analysis is based on the behavioural segmentation approach. This paper discusses mainly the conditions of charter market segmentation through relevant theories, reviews and some real cases analyses. Segmentation involves homogeneous buying behaviour of charterers within a segment but heterogeneous buying behaviour between segments. In respect of the trade's needs, emphasis is given on charterers' requirements in bulk market (dry and liquid) and on shippers' requirements in liner market. Furthermore, the paper examines how the shipping companies should respond to their clients' demands. Shipping enterprises have unique capabilities concerning the means, the resources and...
The management abilities for their ships. The matching of the shipping enterprise capabilities with the needs and the desires of its clients is fundamental for the provision of the desired transport services, the satisfaction and retention of charterers and thus the commercial success of the enterprise. Main objective of charter market segmentation is to assist the company focus its efforts to the most promising opportunities.

Keywords: Charter market segments; shipping market segmentation; shipping marketing; trade’s needs; charterer’s requirements; shipper’s requirements; charterer’s buying behaviour; chartering policy.

1. INTRODUCTION

Different charterers have different transportation needs. They do not all require the same sea transport service and not all charterers will charter a particular vessel for the same reasons.

The charter market segmentation is the process of subdividing the shipping market into distinct segments of charterers that have same chartering policy and similar transportation needs. Segmentation involves homogeneous charterers’ buying behaviour within a segment but heterogeneous buying behaviour between charter market segments.

The shipping enterprise should target on the best possible segment or segments of the market and select the target – market(s). A necessary precondition for the commercial success of a shipping company is the understanding of the different needs the charterers-shippers have in the market segments. Shipping companies ought to adjust their chartering policy and marketing strategy to the clients’ transportation needs. The lack of understanding the needs of various customer groups, results in the dissatisfaction of charterers and incapability of retaining them and thus in the commercial failure of the enterprise.

2. LITERATURE REVIEW

In accordance with the target marketing policy the company divides the market into various segments and selects the most prominent ones in order to offer its services. The company targets to one or more segments, creates marketing strategies adapted to the segments’ needs and offers the appropriate services. Each segment may conceivably be chosen as a market target to be reached with a distinct marketing strategy. Market segmentation is the categorisation of customers by aspects of similarity. Emphasis is given on the examination of the similarities and differences in customers’ needs and requirements [1]. The purpose of segmentation is the company to tailor its services to its target market segment(s).

Target market analysis provides useful information to an organization for prospective customers. In addition, it helps management determine the most efficient way of serving the targeted group. A target segment strategy involves the market research conduct, the definition of segmentation parameters, the evaluation of the potential for each segment and the positioning to the selected segments. The segmentation approaches are the following [2-5]:

- Geographical segmentation, which is based on geographical criteria, as is the location and size of cities, the density of population and the climate of every region.
- Demographic segmentation, which is based on demographic characteristics such as age, gender, sex, nationality, income and social grade of the customers.
- Psychographic segmentation, which is based on the lifestyle, personality and self-concept of the customers.
- Temporal segmentation (or over time segmentation), which is based on the life cycle of the product/service.
- Behavioural segmentation, which is based on the behaviour of the buyers and on their stand against the product/service.
- Organizational market segmentation, which is based on organizational characteristics that are similar to consumer demographics, except that the population is composed of organizations, not individuals.

According to Berry and Linoff [6] customer segments have traditionally been based on market research and demographics. Creating customer profiles and understanding behavioural characteristics are major focuses of any
marketing research project. Determining why consumers behave as they do becomes the critical interaction between marketing research and program development. Johnson, et al. [7] adds that the understanding of what customers value and how an organisation and its competitors are positioned to meet these needs is a critical element in understanding strategic capability.

Hollensen [8] argues that in both B2C and B2B markets, the customer decision-making process forms the basis for the segmentation of the two markets. Customer decision making is essentially a problem-solving process. Furthermore, Hollensen S. asserts that most customers go through similar mental processes in deciding which products or services to buy.

May [9] argues that the way people behave affects the way they make decisions. This kind of market segmentation involves looking at:

- How often a person plans on using the product / service.
- How loyal a person is to a particular brand / company.
- How ready a person is to make a purchase
- Whether a person has already purchased the product / service before.

For established businesses, segmenting based on behaviour has many benefits, especially if they focus on brand loyalty. Some customers will like a particular aspect of a brand and continue to purchase its products/services. This kind of brand loyalty should be nurtured and rewarded. Since satisfaction drives loyalty and loyalty drives profitability then once acquired it is necessary to work on retaining the customer [9].

Coe [10] supports that the more marketers know about the factors affecting the customers’ decision process (and their buying behaviour), the greater their ability to design strategic marketing programmes to fit the specific concerns and desires of these segments of clients. Therefore, to be effective, the company has to capture the actual customer’s behaviour and then respond to it appropriately [11].

There are two possibilities for strategy based on segmentation [12]:

- Focus – On a single segment; Focus strategy is based on identification of a market segment with distinct characteristics and selecting a strategy that matches those characteristics.
- Multifocus – Focus on a number of segments (a variation of the same generic strategy will be used in each segment of the market to match its characteristics).

Stonehouse, et al. [12] state that a focus strategy is most suitable for a business that is not large enough to target the whole market, so that targeting only one segment is the most viable possibility. It is also appropriate in markets where distinct segments can be clearly identified. This makes it possible to minimize costs and to achieve differentiation.

The main prerequisite for any successful segmentation process is the collection of the appropriate information regarding the market’s developments and the customers’ needs. Furthermore, the correct data may be gathered by the properly trained personnel. In his book, ‘Enhancement of Productivity Through IT Tools and Process Management’ Angelos Menelaou reports that the main symptoms of low administrative productivity within shipping companies are associated with in-house workflow process and the lack of integration between IT applications and relevant working procedures. He suggests that the traditional accounting journal entry screen recording shipping economic data is reformed and developed as a central source of information enhanced with business rules, links to operational modules and other functions. These new characteristics will not only improve synergies and enable the accountant to autonomously handle source documents such as invoices and disbursements more efficiently, but more importantly, it will also improve the availability of big data and provide improved managerial reporting. The author also suggests that employees’ multidiscipline knowledge will enhance traditional ship management working processes and will provide the opportunity to introduce new organizational systems and/or structures that can improve the efficiency by which the various administrative tasks are carried out. In that respect, in-house specialized training should be developed and offered to the employees [13].

3. CHARTER MARKET SEGMENTATION

The charter market segmentation is the process of subdividing the shipping market into distinct
segments of charterers that have same chartering policy or have similar transportation needs. Segmentation involves homogeneous buying behaviour within a segment but heterogeneous buying behaviour between charter market segments.

The process begins with a basis of segmentation - a transportation service - specific factor that reflects differences in charterers’ requirements or responsiveness to marketing variables (possibilities are purchase behaviour, usage, benefits sought, intentions, preference, or loyalty). Segment descriptors are then chosen based on their ability to identify segments and to suggest competitive strategy implications (examples of descriptors are geography, customer size, industry etc). To be of strategic value, the resulting segments must be measurable, accessible, sufficiently different to justify a meaningful variation in strategy, substantial, and durable.

Main objective of charter market segmentation is to help the company focus its efforts to the most promising opportunities. Shipping enterprises have unique capabilities concerning the means, the resources and the management abilities for their ships. This means that it is impossible to exploit all the chances of the shipping market with equal effectiveness. The matching of the shipping enterprise capabilities with the needs and the desires of its clients is fundamental for the provision of the desired transport services, the satisfaction and retention of charterers and thus the commercial success of the enterprise. A lot of internal company information is available for marketing research activities. If maintained and categorized properly, internal data can be used to analyze vessels’ performance, customers’ satisfaction and segmentation strategies.

The shipping market and the charter market accordingly are constituted of separate segments differentiated as to the type of cargo, the type and size of ship, the trade routes, the type and duration of charter. More specifically [14]:

1. According to the type of cargo, the charter market may be broadly divided into the dry bulk cargo markets, the liquid bulk cargo markets, the specialised cargo markets and the general cargo/container markets. Moreover, according to the various kinds of commodities, the above mentioned markets are sub-divided further into sub-categories.

2. According to the type of vessel, the charter market may be broadly divided into the bulk carrier markets, the tanker markets, the gas carrier markets, the chemical carrier markets, the combined carrier markets, the containership markets, the ro/ro markets, the reefer markets, the general cargo vessel markets, the multi-purpose vessel markets, the offshore markets and the specialised vessels markets. Moreover, according to the size of vessels, the shipping and charter markets are further sub-divided into sub-categories.

3. According to the type of trade routes, the charter market may be divided geographically into many segments, for example the BlackSea – Mediterranean Sea suexmax tankers market, the Pacific or the Atlantic basin capesize market etc.

4. According to the type and duration of charter, the charter market may be generally divided into the voyage charter or spot market, the time charter market, the bareboat charter market, as well as other hybrid charter forms such as the contract of affreightment, the trip time charter and the consecutive voyages markets.

The type of ship and the type of cargo could be named as the fundamental criteria of charter (freight) market segmentation because ship and cargo are the “major players” in every commercial sea transport. Trade routes and types of charter could be defined as the complementary or secondary or determinative criteria of charter (freight) market segmentation as their meaning is explanatory, constituting the basis for sub-apportionment of every main market segment ensued from the fundamental criteria. For example, if someone refers to the Mediterranean market, this by itself is not sufficient to lend meaning and to determine a market section with common characteristics. A meaning may be obtained only if the secondary distinction is referred to as determinative factor for some of the sections ensuing from the fundamental distinctions, for example the Med Sea feeder containership market.

At this point, it should be noted that the two fundamental criteria do not operate cumulatively in forming the market segments. What happens in practice is that a group of cargoes is transported by one or some categories of ships, or vice versa, it may also be said that a ship market usually services one or some cargo
markets. Within each charter market segment the transportation requirements of charterers and shippers, as well as the vessel particulars, present common or similar characteristics. Furthermore, each market segment has different interested parties (shipowners, charterers, shippers, brokers, agents, etc.) and thus separate networks or channels of information. Contact and interchange among the different markets may be more or less extensive depending on the type and size of ships (how specialised or versatile they are), the commodities involved, the distance of transportation and the type of vessel’s employment. All types of charter and all types of trading may apply to all types of vessels and cargoes without any limitation. In every market segment the transportation needs, requirements and behaviours of charterers and shippers present some common characteristics [15]. A necessary precondition for the commercial success of a shipping company is the understanding of the different needs the charterers-shippers have in the market segments. Shipping companies ought to adjust their chartering policy and marketing strategy to the clients’ transportation needs.

4. CHARTER MARKET SEGMENTS’ EVALUATION

The next stage of market segmentation process concerns the evaluation of the segments. The shipping enterprise has to evaluate the segments of the shipping market, by examining the following evaluation criteria [16]:

- **Size of a Segment:** The shipping enterprise should examine if a specific segment has the right size. The appropriate size of a segment is relative, because large shipping enterprises usually prefer segments with large volume of charters and often they avoid small segments, whereas small companies avoid large segments because they demand many resources.

- **Development of a Segment:** The development of a segment is desirable in the degree the companies wish to increase charters. However, there is a risk that competitors enter quickly into the developing segments and limit the company’s profitability.

- **Structured Attractiveness of a Segment:** A segment may have the desired size and development, but not be attractive in view of profitability. The company should evaluate possible consequences of the forces, which determine the long-term attractiveness of a market and the long-term profitability of the segment. Such forces are the competitive shipping enterprises, the possible new shipping enterprises entering the market, the substitutes of sea transport services (such as air transport), the economic and technological factors, the barriers to entry or barriers to exit, the structure of competition and substitution threats, the bargaining power of charterers and suppliers etc.

- **Company Objectives and Resources:** Even if a segment has the appropriate size and development and from structural point of view is good, the shipping enterprise must take into account the objectives and resources it possesses in relation to this segment. Some attractive segments may be rejected because they do not help the company achieve its goals in the long-term.

5. SELECTION OF TARGET MARKET SEGMENT(S)

The shipping enterprise should target on the best possible segment or segments of the market and select the target – market(s). The target - market is the sum of shippers – charterers that have the same transportation needs, they express eagerness in buying the transport services and they show a high degree of buying force. A substantial precondition for the recognition of a segment as target - market is its financial viability, in order to justify the drawing up of marketing programmes for attracting it. The shipping enterprise has to apply one of the following selection models of the target market [16]:

- **Segmental Concentration,** where the enterprise selects to offer transport services to one and only one market segment. According to concentrated marketing, the business focuses on only one segment with the intention of capturing a large share of this segment. An example of concentrated marketing is the “Star Reefers” which is a leading global owner and operator of refrigerated vessels. “Star Reefers” owns and manages 14 reefers (www.star-reefers.com). The company is
predominantly involved in the fruit trade. Through concentrating marketing, an enterprise achieves a strong position in the market segment due to the better knowledge of the segment’s needs and the specific gravity it lends itself. If the enterprise achieves a good position in the segment, it may ensure high performance for its investments. However, concentrating marketing is pregnant with danger, due to the possibility of many competitors entering the market or due to the decrease of the demand for sea transport services.

- Selective Specialization, where the enterprise selects to offer its transport services to a number of market segments, which are promising and match the enterprise’s resources. There might be minimum or no cooperation between the segments. The selective specialization is based on differentiated marketing, in which the business operates in several segments of the market with offerings and market strategies tailored to each segment. An example of company, which implements selective specialization, is the “Bergesen” (BW Group). BW Group (www.bw-group.com) is one of the world’s leading maritime groups in the tanker, gas and offshore segments. The company owns and operates a fleet of liquefied natural carriers, liquefied petroleum carriers, product tankers and offshore floating production vessels. The strategy of this multi-segmental coverage has an advantage over the segmental concentration concerning the differentiation of the business risk. Even if some segment cease to be beneficial, the enterprise can be profitable in the remaining segments.

- Service Specialization, where the enterprise focuses its attention to the production of a specific type of transport service, which it offers to many segments. An example of company, which implements service specialization, is the “Costamare Inc. S.A.” (www.costamare.com), which is one of the world’s leading owners and providers of containerships for charter. The company owns a fleet of 75 containerships, with a total capacity of approximately 538,000 TEU. Through this strategy, the enterprise achieves a good reputation in the specialization services sector. However, the service specialization gestates risks emanating from due to the reduction of demand for the specific type of ships in case of their replacement by another type of more enhanced technology.

- Market Specialization, where the enterprise focuses its attention in servicing many needs of a specific group of charterers and/or shippers. An example of company, which implements market specialization is the “Oldendorff Carriers”, which carries each year about 320 million tons of bulk and unitised cargo around the world, it performs 14,000 port calls in 125 countries and on average it operates 700 chartered and owned ships at any one time (www.oldendorff.com). The enterprise achieves reputation due to the fact that it is specialized in servicing a specific group of charterers in the dry bulk market. However, the market specialization policy gestates risks, resulting from a possible entry of new competitors in the market.

- Full Market Coverage, where the enterprise tries to service all charterers’ groups through all type of ships possibly needed. Only the large shipping enterprises – colossuses, as is “MOL” (www.mol.co.jp), can undertake a strategy for fully covering the entire shipping market through differentiated marketing, by designing various marketing programmes and by offering various transport services in each market segment. In this case, the enterprise cannot offer a non-differentiated marketing.

6. TRADE’S NEEDS & CHARTERERS’ REQUIREMENTS

The charterers’ needs, as well as their buying behaviour are differentiated from segment to segment. In each segment, the buying behaviour of the charterers displays common characteristics. A necessary precondition of effective shipping marketing is the understanding of the different needs the charterers – shippers have in the above market segments. The inability to understand the needs these different client groups have, leads to inability forming a correct marketing plan and providing the desired transport services at acceptable freight levels. For each segment of the shipping market, appropriate marketing strategies must be designed and appropriate marketing mix must be offered.
In the tanker market there are seven categories of criteria, which play a decisive role in the charterer’s selection process of a shipowner. These criteria represent the requirements of charterers in liquid bulk (tanker) market. The criteria are classified in order of importance as follows [17]:

1. Compliance of shipping company with the international regulations for safety management. This criterion includes the following:
   - Well designed and built tankers.
   - Well maintained tankers.
   - Training and competence of crew.
   - Training and competence of employees.

2. Reputation and image of the shipowner in the shipping market. This criterion includes the following:
   - Loss and damage track record of shipping company.
   - Reputation, experience and reliability of the shipowner.

3. Low cost sea transport operations. For example:
   - Transportation solutions that reduce charterers’ costs and maximize results.

4. Appropriate (fair and unselfish) chartering negotiating process. This criterion includes the following:
   - Compliance with widely accepted chartering negotiation rules.
   - Provision of accurate and reliable information regarding the ship.
   - Co-operation and response to charterers’ requirements.

5. Provision of high quality transport services. This criterion includes the following:
   - Safe transportation of cargo to its destination. No cargo loss or damage. No claims.
   - Trade and schedule flexibility (in case of a CoA for example).
   - Appropriate voyage planning.
   - Speedy voyage execution.
   - Quick despatch. Proper loading and discharging operations without stoppages.
   - Reduction of turn-around time to the minimum.

6. Maintenance of good relationships with charterer, comprising:
   - Good master – crew – charterer relationships.
   - Good company-charterer relationships.

7. System of informing the client - charterer. This criterion includes the following:
   - Updated information system.
   - Informative nature of shipowner’s advertising programmes.

From this analysis, it is inferred that the charterers’ requirements in the tanker market – and therefore their chartering policy – are largely dictated by safety issues.

Although charterer’s selection criteria when choosing a shipowner in the dry bulk market are similar to those in the tanker market, the order of importance is different. The criteria which play a decisive role in the selection process of the shipowner by the charterer in the dry bulk market are classified in order of importance as follows [17]:

1. Low cost sea transport operations. For example:
   - Transportation solutions that reduce charterers’ costs and maximize results.

2. Appropriate (fair and unselfish) chartering negotiating process. This criterion includes the following:
   - Compliance with widely accepted chartering negotiation rules.
   - Provision of accurate and reliable information regarding the ship.
   - Co-operation and response to charterers’ requirements.

3. Compliance of shipping company with the international regulations for safety management. This criterion includes the following:
   - Well designed and built bulk carriers.
   - Well maintained bulk carriers.
   - Training and competence of crew.
   - Training and competence of employees.
4. Reputation and image of the shipowner in the shipping market. This criterion includes the following:
   - Loss and damage track record of shipping company.
   - Reputation, experience and reliability of the shipowner.

5. Provision of high quality transport services. This criterion includes the following:
   - Appropriate voyage planning.
   - Speedy voyage execution.
   - Proper loading and discharging operations without stoppages (quick dispatch).
   - Reduction of turn-around time to the minimum.
   - Safe transportation of cargo to its destination. No cargo loss or damage. No cargo claims.

6. Maintenance of good relationship with charterer, comprising:
   - Good master – crew - charterer relationship.
   - Good company - charterer relationship.

7. System of informing the client - charterer. This criterion includes the following:
   - Updated information system.
   - Informative nature of advertising programmes.

From this analysis, it arises that the charterers’ requirements in the dry bulk market and therefore their chartering policy are cost oriented.

In the liner market a shipper typically follows completely different criteria in the selection process of a carrier. These criteria are classified in order of importance as follows [17]:

1. Provision of high quality transport services. Quality of service includes mainly the following:
   - Schedule flexibility and geographical coverage.
   - Directness and regularity of sailings.
   - Reduction of turn-around time to minimum.
   - On-time pickup and delivery of the cargo.
   - Appropriate cargo handling.
   - Fast and safe execution of the voyage.

2. Compliance of shipping company with international regulations of safety management. This criterion includes the following:
   - Well designed and built liner vessels.
   - Well maintained containers.
   - Training and competence of crew.
   - Training and competence of employees.

3. Reputation and image of the liner operator in the market. This criterion includes the following:
   - Loss and damage track records of the liner operator.
   - Reputation, experience and reliability of the liner operator.

4. Low cost sea transport operations. This criterion includes the following:
   - Transportation solutions that reduce shippers’ costs and maximize their results.

5. Satisfactory co-operation with carrier’s personnel and ship’s crew. This criterion includes the following:
   - Co-operation with shore personnel (liner agents’ network).
   - Master-crew-shopper relationship.
   - Liner company-shopper relationship.
   - Co-operation and response to shippers’ demands.
   - Settlement of cargo claims.
   - Efficient handling of cargo bookings.

6. Information system for shippers. This criterion includes the following:
   - Information to shippers/ Tracking communications system.
   - Informative nature of advertising programmes of liner services.

From the above analysis, it is concluded that shippers’ requirements in the liner market (and therefore their chartering policy) are more oriented to quality.

7. CONCLUSIONS

The charter market segmentation is the process of subdividing the shipping market into distinct segments of charterers that have same chartering policy (buying behaviour) and similar transportation needs. The purpose of
segmentation is the shipping company to tailor its services to its target market segment(s). The shipping enterprise should target on the best possible segment or segments of the market. A necessary precondition for the commercial success of a shipping company is the understanding of the different needs the charterers-shippers have (in the market segments) and the adjustment of its chartering policy to the clients’ transportation needs. Therefore, this paper presents how the charter market may be structured in response to trade’s needs and charterers' requirements. Furthermore, the paper includes a comparative analysis of the trade’s needs (charterers and shippers requirements) in the major market segments.

The analysis is based on the behavioural segmentation approach and proves that the liquid bulk market is safety oriented, the dry bulk market is cost oriented and the liner market is quality oriented. More specifically, in the tanker market the most important selection criteria of a shipowner by a charterer are the compliance of the company to the safety requirements concerning vessel’s construction, ship’s operation and crew management. The reputation and image of the shipowner in the market, as well as the company’s history of losses and damages play a decisive role in the selection of a shipowner by a charterer. The cost of the maritime transport service, i.e. the freight, is not the decisive factor for selecting a ship owner, though it is kept seriously in mind by the charterers.

As concerns as the liner market, the selection criteria of a carrier by a shipper are the time duration for the transportation, the frequency and the flexibility of trade routes, the reliable execution of transportation, the immediacy of routes, the quality of personnel and crew and the carrier’s reputation in the market. The freight is not the decisive selection criterion, though it is taken seriously into account by the shippers.

Finally, it must be mentioned that the decisions of the charterers in the bulk carriers market are more oriented towards freight than towards quality or safety of maritime transport services, as it happens in liner market and in tanker market correspondingly.

This analysis allows the shipping enterprise to understand the transportation needs of its clients. A misunderstanding of the needs of various customer groups and the inability of implementing the proper chartering policy may result in substandard provision of the desired transport services at non-acceptable freight levels. This in turn leads to the dissatisfaction of charterers /shippers and the incapability of retaining them, resulting in the commercial failure of the enterprise.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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