Expansion on the Domestic Market for Fresh Products
A Freight Forwarder’s Perspective
The Case of Schenker Arkas

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Abstract

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Increasing competition on a global scale is forcing companies to rethink their strategies concerning their supply chains, launch new products and services, increase customer service oriented activities. When launching a new product on a new or an existing market it is crucial to estimate the market potential. The market for fast consumer goods is one of the most demanding markets globally and requires special attention from the logistic service providers. There is a lack of theoretical material written on this topic for starting practitioners and for experienced specialists. Hence we try in this thesis to shed light on what the necessary prerequisites that a freight forwarder ought to consider when launching a new product in the category of fast moving consumer goods, hereafter named “Fresh” products. Schenker Arkas provides a good example for building a theoretical framework around their case due to the Turkey’s strategic position in the region and the ideal climate for “Fresh” products market.

From empirical findings we can conclude that Turkish exports is experiencing a strong growth, in particular “Fresh” products which is growing at a higher rate that the total. For freight forwarders there is a great opportunity capitalize on the steady growth in “Fresh” exports but to completely take advantage of growth it is essential that freight forwarders convince customers of the value they bring by participating in the supply chain.
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Contents

1 INTRODUCTION ........................................................................................................................................... 1

1.1 BACKGROUND .......................................................................................................................................... 2

1.2 PROBLEM DISCUSSION ............................................................................................................................ 3

1.3 STATEMENT OF PURPOSE ....................................................................................................................... 4

1.4 RESEARCH QUESTIONS .............................................................................................................................. 4

2 FRAME OF REFERENCE ............................................................................................................................... 4

2.1 DEFINING THE SUPPLY CHAIN .................................................................................................................. 5

2.2 VALUE CHAINS AND VALUE CHAIN MANAGEMENT ............................................................................. 6

2.3 LOGISTIC SERVICE PROVIDERS ............................................................................................................. 7

2.4 FREIGHT FORWARDERS ............................................................................................................................ 9

2.5 FAST MOVING CONSUMER GOODS ....................................................................................................... 12

2.6 REFRIGERATED CONTAINERS THEORY ................................................................................................. 13

2.7 THE LOGISTIC MARKET IN TURKEY ...................................................................................................... 14

3 METHOD ..................................................................................................................................................... 16

3.1 QUALITATIVE RESEARCH ........................................................................................................................ 16

3.2 INTERVIEWS ............................................................................................................................................ 17

3.3 DATA ANALYSIS ..................................................................................................................................... 18

3.4 LITERATURE REVIEW AND INFORMATION SOURCES ......................................................................... 18

3.5 RESEARCH QUALITY ............................................................................................................................... 19

3.6 VALIDITY AND RELIABILITY .................................................................................................................. 19

3.7 TABLE OF INTERVIEWEES ....................................................................................................................... 20

4 EMPIRICAL RESEARCH .............................................................................................................................. 21

4.1 TURKEY “FRESH” OVERVIEW .................................................................................................................. 21

4.2 THE “FRESH” COMMODITIES ................................................................................................................ 24

4.2.1 High-Season “Fresh” Commodities .................................................................................................... 25

4.2.2 Off-season “Fresh” commodities ....................................................................................................... 27

4.2.3 Target markets for “Fresh” .................................................................................................................. 29

4.2.4 Reefer containers ............................................................................................................................... 30

4.3 SCHENKER ARKAS AND THE “FRESH MARKET” ............................................................................. 33

4.3.1 Company overview ........................................................................................................................... 33

4.3.2 Customers .......................................................................................................................................... 34

4.3.3 Competition on the “Fresh” market in Turkey .................................................................................. 37

4.3.4 Competitive advantages .................................................................................................................... 38

5 ANALYSIS .................................................................................................................................................. 39
1 Introduction

Global competition and an increased demand of reduced lead-times have changed the ways companies operate their supply chains: nowadays responsive Supply Chains are not enough to compete on global markets anymore. What Harrison, Christopher and van Hoek (1999) have described as Agile Supply Chain integrated networks 1999 have to be reorganized further more to face 2012 fully prepared. For the logistics industry that provides the logistic services for supply chains, this has meant that third party logistics (TPL) firms, freight forwarders and carriers needed to develop new capabilities and services fast to meet the new demands of advanced globalized logistic services and reduced lead times (Hertz & Alfredsson, 2003).

One of many new products being introduced is providing logistic solutions for fast moving consumer goods. The desire to daily consume fresh fruits, vegetables, dairy products supplied to the supermarket is manifesting itself more. But what we see on the shelves is not always from our own country and might have travelled thousands of miles before it got there. Vegetables and fruits that have a short shelf life can be transported up to 20 days in refrigerated containers in order to become part of consumer healthy lifestyle. On top of our requirements the consumer does not want to overpay for these commodities thus challenging the supply chain managers even more. “Fresh” logistics is an area that requires special attention from the logistic service providers due to its increasing needs for optimization, supply chain integration and development of new solutions for complex demand satisfaction.

Freight forwarders are now aiming to participate in the global supply chain showing some proactive participation as well targeting some niche markets. A good example of this would be the “Fresh” market in Turkey, where TPL and fourth party logistics solutions are terms that gains increased awareness among companies. But cultural awareness must be taken into consideration when Turkish business culture is partially dominated by “traditional way of doing business” (characterized by strong interpersonal relationships and keeping all firm activities in house) which presents a challenge in itself for freight forwarders due to special relations with the clients and other particularities.

Turkey is one of the countries that supplies “Fresh” commodities to large parts of the world. Logistic costs have a great potential of savings especially in moving some products to sea
freight instead of land transportation making Turkey and attractive market for importing the “Fresh” commodities. In our case study of Schenker Arkas, we analyzed the potential for a new product concept for the Turkish market, Schenker Fresh. This concept is successful within DB Schenker group in the divisions Schenker Austria and Schenker Netherlands but in Turkey there is no special designated team per se. The question for Schenker in Turkey is now if this product is ready to be launched in the Turkish market. In order to understand marketable competitive advantages in these particular logistic services for this area we first analyze the export volumes of these products. Furthermore we conduct interviews with carriers, warehouse managers, technical support teams and DB Schenker Arkas managers involved in the development of this new logistic product.

1.1 Background

In our research we viewed the case of a regional representative for one of the world leading logistic service providers in the world, DB Schenker Arkas. DB Schenker stands for the transportation and logistics activities of Deutsche Bahn Group and has over 91,000 employees in 130 countries. DB Schenker combines the DB Schenker Rail and DB Schenker Logistics business units. The logistics division of DB, which we are interested in, is the world’s second largest transportation and logistics service provider based on performance, thus being a very attractive research object for career oriented practitioners. Through its Transportation and Logistics Division, DB holds top positions in global air and ocean freight and has Europe’s most extensive land transport network and the rail expertise of Europe’s largest rail freight company. In the financial year 2010 the transportation and logistics specialists generated revenues of around 18.9 billion EUR, approximately 55 percent of the DB Group’s revenues.

DB Schenker Arkas is a part of DB Schenker group and as mentioned earlier it is an official representation in Turkey. DB Schenker Arkas is a well-established freight forwarder in the Turkey domestic market and strives to satisfy their clients’ special logistics requirements, provides high-tech IT integrated storage systems contracted from Arkas Holding, the largest Logistic Service provider in Turkey.

DB Schenker Arkas deals with transport services organization and value added services along the supply chain, focusing as well on concepts for After Sales logistics, personal relationship with the clients, which are complacent with the latest trends. Within its warehouse solutions, DB Schenker Arkas offers its customers many different services such as inventory
management, consolidation/deconsolidation, Cross-Docking, packing/unpacking, repacking, picking, tailoring, sorting, customs clearance, bonded warehouses with partial customs clearing, labeling, invoicing, reporting or even managing complete supplier parks or logistics centers.

The Turkish domestic market provides great opportunities and even greater challenges for competing logistic service providers. The growing demand of fresh fruits, vegetables and other perishables is forcing logistic companies to modify their supply chains and adapt to the end customer needs, especially considering huge export volumes to international markets (OECD Country Report, Turkey, 2010).

A big influence is the Russian and Ukrainian markets, placing pressure on lowering the cost for “Fresh” imports from Turkey and at the same time demanding high quality. This drives LSPs’ to look for new logistic routes and new solutions. The possibility of “Schenker Fresh” logistic service concept development by DB Schenker Arkas comes as a response to continuous growth in this type of business. A “business case” approach is chosen for this study, conducting interviews with supply chains stakeholders to gain a holistic view and understanding of the key factors that are involved in “Fresh” products business. Having a better understanding of the Turkish market for the “Fresh” products and their flows, we were able to better assess the opportunity for the “Schenker Fresh” logistic service development.

1.2 Problem discussion
To meet the demand in a growing export market LSPs’ have started to niche themselves introducing new specialized services targeting a specific segment of the market. For a freight forwarder to enter into a new market the niche for “Fresh” products it requires a great deal of knowledge of the target products in question, potential customers, carriers and market situation in order to meet the demand successfully. We mentioned earlier that in some countries the “Fresh” concept is highly developed and the supply chains of these products undergo studies to increase efficacy. In Turkey there is a limited amount of information for the practitioners regarding the “Fresh” products, regarding the target markets for these products or a full review on all the competitors in this domain. There are a lot of problems that a freight forwarder can encounter while trying to enter this type of commodities market in this geographical area. Customer relations, relations with the carriers, technical support of the
equipment used to handle “Fresh” products, are just some of the problems. Within our research we tried to address these problems through our research questions.

1.3 Statement of Purpose
The purpose of this study is to assess the market conditions from a freight forwarders perspective in order to determine if the market in Turkey is ready to integrated “Fresh” concept product and mainly answer if a freight forwarder expand in Turkey by entering the “Fresh” market and exploring the potentials of the ”Fresh” commodities. The market conditions examined is the growth rate of the export market in Turkey, carriers that currently handle “Fresh” commodities, the markets they work with, the potential customers and their view of ”Fresh” shipping.

1.4 Research Questions
To fulfill the purpose of this study we analyzed the case of Schenker Arkas, as a well-established freight forwarder in Turkey.

- What are the particularities of the “Fresh” commodities market in Turkey?
- What is the forecast on the “Fresh” export and the possible opportunities of growth?
- What are the competitive advantages that a freight forwarder can bring to the market of “Fresh” products, how the clients and competitors react in response and what are the specifics of their interaction?
- Is their growth potential in providing new value added services to new and existing customers and what are the key elements in negotiating future collaboration?

2 Frame of reference
The literature review aims to give the reader a basic understanding of the Supply Chains and how different participants in the supply chain bring value thus creating a Value Chain. After the reader is acquainted with the idea we mention some basic information regarding the “Fresh” logistics and afterwards describe in depth third party logistics concept and how they are involved in “Fresh” logistics as service providers or freight forwarders. Understanding the role of the freight forwarders in the Value Chain helps answering the main research question, the possibilities of developing the new logistic services concept in Turkey named Schenker Fresh. We are presenting previous literature on LSPs’ and Fast consumer goods again to see if
the solution for the “Fresh” concept lies behind the services that a freight forwarder can provide/sell to the “Fresh” exporters. A general overview of the Turkish market finalizes our theoretical part and familiarizes the reader with the particularities of the region and the special business environment that Turkey represents.

2.1 Defining the Supply Chain

The following definitions are just two of the many definitions that are available in the literature and even though the perception of the supply chain somewhat changes over time, the core idea and the substance behind it remains the same:

“Supply chain is the network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services delivered to the ultimate consumer”, (Christopher, 1992).

“Supply chain: a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer”, (Mentzer, DeWitt, Keebler, Min, Nix, Smith, Zacharia, 2001).

To have an even better understanding, the reader can observe Exhibit 1 displaying different relations in a supply chain between the end consumer and the suppliers, from simple direct supply chains to the ultimate supply chains.

Exhibit 1: Different types of supply chains relationships. Source: Mentzer et al., 2001
Different types of Supply Chains require different approaches to manage them. “Fresh” commodities are usually part of ultimate supply chains due to the complexity of the network they are part of. From the producers of the “Fresh” commodities such as farmers and fishermen, known as primary producers, all the way to the supermarket shelves and eventually, our shopping carts, the commodities pass through a lot of hands via different channels. A freight forwarder can participate in this flow of goods as a Third Party Logistics Supplier, further on we mention its position in the supply chain and its contribution to create a Value Chain. Such a complex supply chain structure raises concerns and questions about an integrated view on Supply Chain and coordinated planning (Douglas, Paul, 1996). Even so, already more than five decades ago, Porter (1985) presented to the larger audience his “What is Strategy?” where we can find his visionary Value Chain. His concept was revolutionary and produced a ripple effect throughout businesses, at that time changing the core understanding of added value. Even though Porter’s (1985) approach concerned a single focal firm and not the whole supply chain network, the notion of inbound and outbound logistics is still being utilized and studied now. The supporting activities that add value to the whole Supply Chain are of even greater importance for Logistic Service Providers now and the knowledge of all value added activities in the company is very important for coordination in a Supply Chain (Douglas, Paul, 1996). As a Logistic Service Intermediary in the “Fresh” business, a freight forwarder should seek the understanding as to where is the real value for the client and what activities that add value for all stakeholders throughout the “Fresh” Supply Chain. Value can manifest itself in many forms, the low costs, shorter lead times or strict on-time deliveries being just some of them.

2.2 Value Chains and Value Chain Management

From the earlier chapter, we transition from Supply Chain to Supply chain management, which is defined by Cooper, Lambert and Pagh (1997) as “An integrative philosophy to manage the total flow of a distribution channel from supplier to the ultimate user”. As opposed to Supply Chain Management, Value Chain Management (VCM) focuses on managing integrated information about product flows, all the way from suppliers to end users. VCM aims for reducing defects in inventories, speeding the process, achieving greater time to market and improving customer satisfaction and is primarily concerned with the customer from the start throughout the whole process along the Supply Chain. (Zairil, Al-Mudimigh & Yasar, 2010).
Value added services became the main differentiator between different competing distribution systems, especially when the level of customer demand is high in fast consumer goods as stated in Price Waterhouse Cooper’s reports (2000). Managers must understand where the value comes from and how to capitalize on it especially since “Fresh” industry is embedded in a dynamic environment. Where product managers are facing changing markets affected by the information age, more demanding consumers and new retail formats.

2.3 Logistic service providers

LSPs’ now play a crucial role in the supply chain for the customer. Companies do not compete against each other but the combined performance of the supply chains gives the competitive advantage to one firm over the other, defining the market share (Soinio, Tanskanen & Finne, 2012). In the literature there are several definitions on what a LSP stands for and there is no absolute consistency (Farahani, Rezapour & Kardar, 2011). The most basic view by Hertz and Alfredsson (2003) on LSP is that it is an external provider of logistic services that performs managing, controlling and delivery of logistic services for the customer. After the level of integration LSP providers, according to Hertz & Alfredsson (2003), can be dived in to four categories:

**Standard LSP provider:** These companies provide the basic forms of logistic services such as distribution, pick and pack and warehousing for the customer.

**The service developer:** Performs advanced value adding logistic activates such as security systems, specific packaging and track and trace of goods.

**Customer adapter:** The LSP provider is contracted to take over control over certain logistic activities that is outsourced by the customer. Is requires a substantial amount of resources by the LSP to manage the customers actives hence the customer base is relatively small.

**Customer developers:** These LSPs’ have the highest levels of integration with the customer. They are contracted by the customer to take control and manage the whole logistic processes. LSPs’ of this kind have few customers because of the high levels of resources that are required to in detail operate the supply chain.
To go deeper into the different forms of LSPs’ Cui & Hertz (2010) depict in Exhibit 2 the different forms of LSPs’ and their positions in the supply chain. With a network and resource based view Cui & Hertz (2010) has mapped what capabilities and resources that characterize the different LSP and how they interact with each other.

These are the definitions that Cui & Hertz (2010) have through their research mapped what characterizes the different LSPs’:

- **TPL firms**
  TPL firms have the capabilities to manage customers’ whole supply chain by customizing and integrating their services after customers’ requests. As a part of the integrated service TPLs’ coordinate the use of the logistics actors in the vertical network on the customers’ behalf.

- **Logistics intermediary**
  Logistic intermediaries’ business idea is to be the middleman between customers and carries, managing the goods after customers’ requests through other LSPs’. Hence Logistic intermediaries’ are usually non asset based and work to consolidate consignments and they manage a network of horizontal actors.
• **Carriers**

Carriers’ core capability is to as efficiently as possible transport goods from certain locations with their own assets. Carriers work with a horizontal network.

The different choices these logistics firms make in investments gives them the capabilities to compete in different sections of the market, satisfying the demand of different customer groups. For LSPs’ to expand their service portfolio by moving into a new segment means new investments in assets, shift in network focus and development of new clients and knowledge. Nevertheless this is costly and difficult when it requires that firms understand the logic of operating in a new segment (Cui & Hertz, 2010).

The driving force behind the rapid expansion in the logistics industry is the high demand of advanced globalized logistic services, reduction in lead times, outsourcing and customer orientation. This implies that the role of the LSPs’ changes, leading to the rise in new LSPs’ that develop new services (Farahani et al, 2011). To develop these services it is crucial to understand the market situation, what are the new demands and changes in the current trends. The market strategy is furthermore founded on the knowledge of which the major players are and the culture (Branch, 2009). In order to be successful, LSPs’ must combine investments in resources and fit it into the company’s strategy to create innovative logistics solutions. This requires the products to be designed and managed on domestic and global levels, and internal network resources to be used at full to support the processes involved. The new strategy is now to sell the concept of a “one-stop-shop” that can provide all the supply chain solutions and logistic products for the buyer (Branch, 2009).

2.4 **Freight forwarders**

In this section we go deeper into the definition of what the logistics intermediary also known as freight forwarder basic functions are. As explained in the previous section by Cui & Hertz (2010) the freight forwarders role is to take the position as the intermediary between the carrier and its customer. To elaborate on which actors’ freight forwarders mediate with Reuvid and Sherlocks’ (2011) theory is synthesized in Exhibit 3. Shippers, which we in this thesis name as customers can be in different forms of companies; export manufacturers, exporter merchants and buying, confirming and indent houses. Different forms of carriers are sea, air, road and rail based (Reuvid & Sherlock 2011).
From the definitions of LSPs’ mentioned in the previous section by Hertz (2003) a freight forwarder is categorized as a service developer that has relatively high customer adaption and high problem solving capability. The different services that a freight forwarder provides can differentiate them greatly from each other but what they have in common is that they are most often non asset based, they have no investments in resources such as trucks, warehouses and handling equipment. Instead they invest in information systems that support their operations and in education of the employees (Stefansson, 2006).

Available resources are used to consolidate shipments into more economical sizes, the volume of these shipments can range from one container to full ships. The freight forwarder takes responsibility for the cargo during transport and is liable for damage and loss through transit (Coyle, Novack, Gibson & Bardi, 2010). Revenue on the services can come from different sources, one source is commission received from the carrier, another source is preparation of freight documents and the third form of revenue source is the difference between the price it takes for the consolidation and the cost of hiring the carrier (Coyle, Langley, Gibson, Novack & Bardi, 2008).

Over time the Freight forward industry has undergone a major change because of globalization, increased competition, outsourcing of logistic activities and changes in technology (Markides & Holweg, 2006). Their responsibilities have increased tremendously, expanding the freight forwarders activities from solely providing administration to designing
customized logistic arrangements and information systems and implementing the setups (Stefansson, 2006).

Furthermore, as consequences of maintaining competitiveness and coping with the changes on the market, freight forwards have started to increase their size by acquiring smaller forwarders or/and consolidate their business with them. In order to increase the competitive market advantages some companies have started to niche themselves in provide value adding service while others have instead continued to focus on basic logistic services (Markides & Holweg, 2006). Focusing on new ways to add value to the customers has become essential as customers now are more aware of international trade and the technology gives them the opportunity to carry out freight forwarding activities themselves (Murphy & Daley, 2001).

Advantages of using freight forwarders are that they possess expert knowledge and can give advice on many areas of the logistics market in not only physical transport to customers. Many freight forwarders are specialized in certain modes of transport and goods. Within these areas (e.g. carriers, warehouses, customs and authorities) they have formal and informal contacts that they quickly can turn to for solutions on their problems (Reuvid & Sherlock, 2011).

These advantages make contracting a freight forwarder a convenient solution to the customer, instead of handling the transportation they can focus on their core activities. Some exporters nonetheless see it as disadvantageous to contract freight forwarders and have difficulties with handing over their goods to an intermediary because they feel a loss of control over it, hence they decide to keep activities such as warehousing and transport in-house. This is a costly solution to keeping control of the goods, a freight forwarder that performs the service correctly will without doubt reduce logistic costs (Reuvid & Sherlock 2011). Taking customer relationship management one step further is to invest in account management. Account managers perform increasing services that are integrated with the customers processes, account managers should be appointed by freight forwarders to act as a single point of contact for the customer, argues van Hoek (2000a). For the freight forwarder Hoek (2000a) deems that the consequences of investing in an account manager may return in that the freight forwarder is seen as a desired provider of services of a higher value and that customers are bound into a long term relation. Moreover Hoek (2000b) argues that customer relations
start on a small scale when the customers are aware of the LSPs’ products they are prone to purchase more services.

2.5 Fast moving consumer goods

Green groceries are a big part of the fast “Fresh” consumer goods. It is generally known that fruits and vegetables are an important part of our healthy eating habits and these commodities have to be delivered on daily basis to wholesalers, retailers, ending up on the shelves and ultimately in the shipping carts of the end consumer. Leading representatives of the European grocery industry formed the European Efficient Consumer Response (ECR-) Initiative in 1995 (Kotzab & Teller, 2003) signaling an emergence of new principles of collaborative management along the supply chain. As mentioned earlier value chains are all about the end consumer and ECR was showing a ways to serve the client faster and better just by collaboration of all the parties involved in the supply process.

Along with China, Thailand and Chile, Turkey exports account for 58% of developing countries exports of processed fruits and vegetables, and the numbers are expected to grow as stated in the World Bank Report (2007). Being at the same time an exporter and a large consumer of green groceries, Turkey has its own challenges because of the perishable state, seasonality, bulkiness and consumption habits which vary from region to region, (Veena, Babu, Venkatesha, 2011). In unison with ECR and these challenges “Fresh” logistics comes as a solution.

“Fresh” logistics is always looking for an efficient response to the constantly increasing demand of transportation solutions for fruits, vegetables, as well frozen and chilled meat, poultry, fish, sea products and other commodities that fit this category. It is important to find out what logistic services are the most attractive to local businesses: pre- and post-harvest operations, assembling, sorting, grading, storage, transportation and distribution (Vena et al., 2011). Aggressive price competition and a shift towards consolidation in the industry, drives innovation in logistic services and integration on both supply side and demand side say Kotzab and Teller (2003).

They mention the following applications on the supply side as Electronic Data Interchange, Efficient Unit Load and Efficient Replenishment (EDI, EUL, and ER). Even though mentioned here we understand that these logistic solutions are more suitable for clients with greater
export volumes. Implementing Electronic Data Interchange: enables standardized data transfers between various participants in the Supply Chain, same order types, invoice types, leading to minimal data loss. EUL, efficient unit loads: same logistic standards, unit labeling, widely accepted norms and sizes (ISO standards), fewer re-stockings. Efficient replenishment (ER) is the heart of all logistic processes, cross-docking, continuous replenishment, forecasting data exchange. The process is targeting achievement in lower levels of inventory, better response to fluctuating demand and quicker replenishment processes.

On the demand side we have, Category Management (CM), which is a joint-planning process between retailers and vendors in order to offer a customized set of products to be managed as a strategic business unit as well engage in postponement logistic process leading to minimizing the inventory and increasing responsiveness, (Kotzab & Teller, 2003).

A freight forwarder might or might not fully participate in all these processes but it can offer information or even consult the client and help them integrate. This would position freight forwarders beyond simple representation as mentioned earlier in the advantages of using a freight forwarder and might open new possibilities.

2.6 Refrigerated Containers Theory

Besides land transportation by trucks equipped with generator backed up refrigerated containers, a big part of the transported "Fresh" products is done by container vessels in refrigerated containers (reefers). The two main container types that are used for transport of the perishables are porthole containers and integral refrigerated containers (Wijnolst & Waals, 1999).

Porthole containers

The porthole container does not have a refrigeration system attached to the container instead it is connected to a refrigeration unit. During transportation all containers have the same temperature on the ship. Because of the absence of a refrigeration unit, porthole containers can take a larger volume and is an inexpensive option compared to integral containers. These containers are therefore used on trade routes where large volumes of the same commodity are shipped regularly. The drawback is its high inflexibility since it is permanently dependent
on an external cooling source. The use of porthole containers is decreasing and most new ships are now designed to only handle integral containers (Wijnolst & Waals, 1999).

**Integral containers**

The integral containers have their own cooling system inbuilt. These containers do not need an external refrigeration unit but simply a plug for electricity. The integral containers are preferably used with trades in underdeveloped countries where cold storage facilities are non-existing in ports. The cooling system is capable of keeping temperatures at least between -18 to +20 degrees and controlling the atmosphere inside the container. This gives the user full flexibility when volumes and the range of the fresh commodities differ. When the reefer container is unloaded and placed on a truck it is connected to a diesel generator that maintains the atmospheric conditions inside the container (Wijnolst & Waals, 1999). Furthermore integral containers have a black box built into the refrigeration unit, which records all kinds of changes in e.g. temperature and humidity. This information facilitates the investigation of which party that is responsible for spoiling of the goods. An example is causing a temperature increase (Arduino & Murillo, 2010).

The fresh commodities are highly susceptible to changes in the atmosphere, maintaining the right temperature for bananas is for example crucial, there is no margins in the transit times if a ship with bananas is delayed it has devastating consequences, e.g. this is what happened to Hapag-Lloyd when their ship was delayed at port the cargo of 600 tons of bananas was spoiled.

### 2.7 The logistic market in Turkey

Turkey is geographically positioned between East and West hence it is seen as an attractive strategic position from a logistics company’s point of view, this makes the transportation industry an essential part of the economic growth of the region (Aktas & Ulengin, 2005). Furthermore Turkey were not affected by the financial crisis that begun in the fall of 2008 as much as the advanced economies, hence the Turkish economy was one of the first to get out of the economic down turn that crippled many countries (Turhan & Kilinc, 2011). In 2008 the transportation and logistics industry sector in Turkey was estimated to have the value of 65-95 billion USD, with a growth rate of 20% on average over a 5 year period the forecast is that the
transportation and logistics market by 2015 will have the estimated value of 120 billion USD (Transportation & Logistics Industry Report, 2010).

These advantages give Turkey a great potential for logistic activities, hence many international firms decide to base their distribution centers in Turkey which creates a high demand of first class logistic services. Further advantages with the logistics industry in Turkey from a LSPs’ perspective are the high potential to increase the service degree due to the low labor costs (Aktas & Ulengin, 2005). The Turkish government also invests in infrastructure and produce plans to improve infrastructure in the whole of Turkey, a great deal of the focus is put on the support and developing of opportunities to make Istanbul an internationally renowned logistics center (Özdemir, 2010).

The products sold on the Turkish logistics market and the buying behavior was 2005 researched by Aktas and Ulengin (2005), findings presented that transportation was the most sold service. And that sixty percent of the customers decide to outsource their transportation between manufacturers to customer, in transportation between supplier and manufacturer Aktas and Ulengin (2005) found that fifty-four percent were choosing to collaborate with a LSP. Furthermore the customers view on the Turkish LSPs’ show from Aktas and Ulengin (2005) research in 2005 that the LSPs’ powers are underestimated. Customers are not aware of the benefits of outsourcing logistics; they see it as if logistic services are only for transportation of goods from the manufacturer to the point of delivery. Moreover they discovered that the selection of the LSP was mostly based on if the LSP is easy to collaborate with and/or if it has a good reputation.

Aktas and Ulengin (2005) have in their review of the Turkish manufacturers buying behavior of logistic services recognized that there are two types of companies in Turkey that place different emphasis on logistics. One of the categories is the “modern” companies that see the logistic services as the second most important activity. Logistics is outsourced in a higher degree in these companies compared to the second type known as the “traditional” companies that see logistics as the fourth important activity. From Catay and Göls’ (2010) research made in 2010 it is seen a change in the behavior compared to what Aktas and Ulengin (2005) saw in 2005, the difference is that the demand from the customers have
increased specially when it comes to the expectations of creating long term strategic relations to their supplier of logistic services.

3  Method

In this chapter we argue why we chose the following approaches to meet the purpose of this research. As little research has been done on the topic of fast consumer goods in Turkey the study aims to contribute with new insights by conducting a qualitative research. This type of research in logistics and supply chain management is still not prominent in academic literature and is still not considered sufficiently rigorous. And qualitative data are – despite their so called “soft” nature – quite hard to analyze, and it is often difficult to communicate the results in a meaningful way that captures both the richness of such studies and the issues of general interest (The Nordic Logistics Research Network, NOFOMA). And yet, due to the nature of these logistic phenomena, qualitative research establishes a strong initial connection that can bridge and facilitate further future studies for practitioners in TPL and Logistic Service Providers domains. Moreover we present an analytic discussion of the reliability and validity of the thesis.

3.1 Qualitative research

Generally researchers consider two main types of scientific research methods, quantitative and qualitative. Qualitative research in comparison with quantitative research aims to find in depth understanding and clarification of the topic that is researched (Golafshani, 2003). The main tools and elements of qualitative research are interview transcripts, open ended survey responses, emails, notes, feedback forms, photos and videos. In the thesis we applied the qualitative research methodologies in the case of DB Schenker Arkas. The reason behind this decision is that the data gathered in the investigation seeks out to answer practical questions through interviews on site in Turkey with representatives in key positions involved in “Fresh” exports. Qualitative research does not rely on statistics or numbers only, which are the domain of quantitative researchers, but produces irrefutable arguments and practical solutions to real time problems. No matter what the field of study, qualitative research often produces findings that were not sought in advance and were not predetermined, thus going beyond the immediate boundaries of the study itself. Qualitative research is especially effective in obtaining culturally specific information about the values, opinions, behaviors, and
social contexts which is important giving the Europeanized Middle Eastern country such as Turkey, which reunites secular Muslim traditions along with democratic values and principles.

3.2 Interviews

Interviewing is seen throughout the literature as the most direct and useful method to gather data. The interviews facilitate drawing information directly from the decision makers thus its’ importance being paramount, which gives the study validity and reliability (Yeung, 1995). But there are others who tried to define the qualitative interviews as following:

“The qualitative research interview seeks to describe and the meanings of central themes in the life world of the subjects. The main task in interviewing is to understand the meaning of what the interviewees say”, (Kvale, 1996)

“Interviews are particularly useful for getting the story behind a participant’s experiences. The interviewer can pursue in-depth information around the topic. Interviews may be useful as follow-up to certain respondents to questionnaires e.g., to further investigate their responses”, (McNamara, 1999).

As McNamara (1999) suggests in his interview definition, it helps to find out the inside information on the subject. Our preferred designed for the interview is semi structured to maximize the benefits of the “getting the story behind the participant’s experience”. This structure gives the interviewee the possibility to explain in depth their ideas of adding value to provided services, collaborating along the supply chain and explain small practical detail that work on this particular region, concerning the “Fresh” commodities. With this type of interview structure we can gather data from which we can identify and build an understanding of the “why” and “what” aspects of these products from the different positions of our interviewees (Saunders, Lewis & Thornhill 2009). By using Interviews, in the semi structured form, it is possible to gather high volumes of qualitative practical data even within the time frame set for one single interview. Due to the cultural particularities of the region, semi structured interviews in the form of a round table meeting/discussion are the best ways to gather qualitative data. With round table interviews we mean that a representative of Schenker Arkas accompanied us at our interviews to explain, clarify and translate our questions into Turkish. Thus overcoming the language barrier and creating a dialogue between us and the interviewee. Average duration of the interviews was approximately 20-30 minutes.
3.3 Data Analysis

As the method of obtaining knowledge about the topic is qualitative inductive we compared the response that we get from the different interviewees with the theoretical framework and analyze to identify differences between the gathered data and the theories from scientific articles (Walliman, 2010). Analyzing qualitative data is a challenge compared to quantitative data. Quantitative data can be analyzed through well proven statistical methods that support and validates the conclusions, Qualitative data on the other hand consists of words, pictures and even sounds hence it is difficult to apply the statistical data analysis methods used on this kind of “soft” data (Walliman, 2010). To analyze the large data in an effective way the three step approach is used in this thesis that was developed by Walliman (2010).

1. Data reduction
2. Data display
3. Drawing conclusion and verification

Processing and grasping the essence of large amounts of data that is gathered is demanding and researchers often seek to simplify the data by building patterns of it. Methods used in this process are clustering, coding and summarization of the data by reduction of it. By using these methods data can be entered into diagrams and tables that can display the relationship between the empirical part and the theory.

As the next step we analyzed the connection between the theory and the empirical part attempting to explain why, how and what are the differences. This process is aided by grouping the coded information; dividing data into smaller groups is easier to analyze and spot the connections that answer our research questions. Memos of ideas and summaries were also done to review the data (Walliman, 2010).

3.4 Literature review and information sources

The data used in the literature review is gathered by using Jonkoping University Library search engine, Google books/scholar and Emeralds’ data base of published journals. Key words used when searching for literature in these databases; third party logistics, LSP, account management logistics, customer relationship LSP, Value added services in logistics, qualitative research in Logistics, Value Chains, Added Value in Supply Chain. For the information on the economics of the region and in particularly Turkey, for country statistical data and other
information regards to country logistics OECD reports were used. Turkish Statistical Institute databases were used to collect data on the volumes “Fresh” products exported over the years as absolute volumes and related to total export volumes in order to understand the market share of “Fresh” commodities and the growth potential. Schenker Arkas internal reports on export volumes were also made available for us to improve the quality of our research.

3.5 Research Quality
The main strength of the research is the information gathered through interviews which comes directly from logistic service providers, warehouse managers, international carrier representatives and other parties directly involved in daily logistic operations concerning our target “Fresh” commodities. All the information obtained reflects the reality of the reefer business on the Turkish domestic market and all the comments and quotes from the professionals in the field are most valuable for practitioners that will start their work in the logistics domain and will have to deal with a lot of perishable commodities transportation in similar markets or geographical regions with similar seasonality issues. One of the strong points is the interest of the Schenker Arkas in this topic and their assistance along the research in contacting the other major players on the market and personal relationships they have with them. It was very important in Turkey to have someone’s recommendation and having Schenker Arkas backing up our research and participate with us at interviews to build trust and start an initial dialogue with the interviewee.

Nonetheless one downside of the research is of course the reluctance of major carriers to disclose the private information regarding the exact volumes of commodities they ship per year and the volume of “Fresh” goods ratio from the total shipments which is protected by company’s policies. The absence of precise statistical data regarding the market share of Fresh products shipped by land and by sea from the total forces us into accepting some of the interviewee’s statements and attributing them maximum credibility.

3.6 Validity and Reliability
To prove credibility of the findings of an empirical study the validity and reliability are two aspects that must be of concern to the author. In qualitative research the researcher is the instrument when conducting the interviews to gather data, hence validity and reliability is dependent on the researchers’ abilities and effort (Golafshani, 2003). The choice of the right
methods and the correct usage of them support the conclusions and convince readers of its validity (Walliman, 2010). To support and improve both the reliability and the validity of the research, it is important to have several points of view on the same matter or the case of data collection from several sources of the same issue, as defined by Denzin (1978) who states that triangulation is nothing else but the combination of methodologies in the study of the same phenomenon. Jick (1979) considers further development of the triangulation as failsafe of the validity and reliability and talks about “between methods” type, Denzin (1978) states that this particular method is the most popular for cross validation, having two different methods congruent and yielding comparable data. The “between methods” triangulation states external validity. Within our case study we are analyzing the statistical data and the growth perspectives from numerical side as well as collecting opinions and statements from people employed in key position overseeing the transportation of “Fresh” products providing different data that would reinforce or disprove certain theories and assumptions.

3.7 Table of interviewees

<table>
<thead>
<tr>
<th>Company name</th>
<th>Interviewees name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight forwarder</td>
<td>Schenker Arkas</td>
<td>Ali Can Bulut</td>
</tr>
<tr>
<td>Freight forwarder</td>
<td>Schenker Arkas</td>
<td>Togan Moler</td>
</tr>
<tr>
<td>Warehousing</td>
<td>Schenker Arkas- Sasali warehouse</td>
<td>Volkan Karaali</td>
</tr>
<tr>
<td>Warehousing</td>
<td>Schenker Arkas- Sutculer warehouse</td>
<td>Kadir Kadiroğlu</td>
</tr>
<tr>
<td>Reefer Container Technical Services</td>
<td>Ardep Customs and Warehousing S.A.</td>
<td>Friksos Rothman</td>
</tr>
<tr>
<td>Carrier</td>
<td>CMA CGM</td>
<td>Verda Guven</td>
</tr>
<tr>
<td>Carrier</td>
<td>Yang Ming Anatolian Shipping Agency S.A</td>
<td>Didem Boran</td>
</tr>
<tr>
<td>Carrier</td>
<td>Yang Ming Anatolian Shipping Agency S.A</td>
<td>Ilker Oksuz</td>
</tr>
<tr>
<td>Carrier</td>
<td>Arkas Shipping and Transport</td>
<td>Attila Karagulle</td>
</tr>
<tr>
<td>Carrier</td>
<td>Hapag-Lloyd Overseas Transport S.A</td>
<td>Ugur Yalgin</td>
</tr>
<tr>
<td>Carrier</td>
<td>Evergreen</td>
<td>Ümit Incirkus</td>
</tr>
<tr>
<td>Customer</td>
<td>Ekiz Yumurta</td>
<td>Umut Ekiz</td>
</tr>
</tbody>
</table>
4 Empirical Research

Our empirical research is based upon observational analysis; semi structured interviews as well as studies of Turkey statistical data of “Fresh” commodities exports. The research is directed towards the analysis of a potential development of a more structured logistic approach to the “Fresh” goods in Turkey. In this chapter we consolidate and present our findings from the interviewees mentioned in the previous chapter. We discuss the regional specificities and the key factors in the Turkish market that influence the “Fresh” exports.

4.1 Turkey “Fresh” overview

When we talk about the “Fresh” commodities in Turkey, our thesis mainly concerns the exported products and not the imports. The export of these “Fresh” commodities per se, it is not exactly something new or unexplored in the region. Turkey has been a major exporter of fruits, vegetables, meat, poultry, cheese, nuts, and other goods, that can be labeled “Fresh” due to special required conditions for export, for a long time. For some commodities as cheese, fish, mandarins, oranges, tomatoes, cucumbers, Turkey is a regional supplier. Having access to the Aegean, Black and Mediterranean seas, Turkey can tap a lot of consumer markets.

This kind of exports were mainly conducted by means of ground transportation, trucks equipped with special diesel generators that power up the refrigerated container. Even though there are such commodities like cherries, strawberries, peaches that cannot be exported by other means of transport due to short shelf lives, trends are changing and more exporters find sea transportation suitable for their needs. Kotzab and Teller (2003) mention in their work that aggressive pricing competition drives LSPs’ and supply chains to consolidate integrate and develop new solutions, these developments of services are trends that are catching up in Turkey.
A lot of exporters are considering and some are actively changing the means of transportations. Freight forwarders report an increase in their accounts for clients exporting to regions that are usually reachable by trucks such as Russia, Ukraine and even some European countries like France and Italy. Some carriers have foreseen this major trend change hence they have been buying large amounts of reefer inventory, in order to meet this increasing large demand. Exporters report price competition on their target markets. Managers facing the choice to cut the profit margins or cut some other costs are constantly analyzing the possibility of using ocean/sea freight for their commodities, easily cutting up to 25% of transportation costs. Cutting costs is not the only reason for exporters to switch to ocean freight, one of them is that refrigerated trucks do not have humidity control. New rules regulating reefers imports(exports) all over the world dictate special humidity conditions for different commodities. Even if this might not affect exporters of frozen meat or fish, who have higher profit margins, it definitely represents a huge opportunity for those doing business in agriculture, especially grapes or citrus.

Another particularity on the Turkish market is the strong seasonality, to illustrate that we compared the quarterly fluctuations of total exports in comparison with the exports of “Fresh” commodities this is displayed in Exhibit 4:

Exhibit 4 Seasonality analysis, Source: Turkish Statistical Institute
We can note that the fourth quarter is responsible for almost 40% of all exports in “Fresh” commodities and export rates slow down and drop a bit in the second and third quarters. Further on in the empirical part of our thesis we are analyzing the “high season” and “off season” “Fresh” commodities that are being shipped, but for now the reader can get the basic understanding of the strong seasonal character. It implies some adaptation in the reefer business in the area on the Carriers side. Many carriers have to relocate some inventory to other ports such as Alexandria, Egypt. In Egypt the specificity of the climate dictates its own market rules and “Fresh” exports are active year round. Besides loading the empty reefers with some other product, this seems to be the solution employed by most of the carriers in the area. Relocation ports may vary though.

Another strong advantage of Turkey and a key element in identifying the future growth and potential of the region in “Fresh” exports is Izmir Service and Operation center for reefers. Its quality is widely recognized by the shipping line and greatly valued. Reefer equipment is very sensitive, expansive and the value of transported cargos can rise up to 600,000-700,000$ for one single container. Friksos Rothman, the manager, co-founder and the technical mastermind behind Reefer Container Technical Services at Ardep Customs and Warehousing S.A, (ARDEP) the service agency and operator of reefers in the region. Mr. Rothman declares that the Reefer Container Technical Services division has more than half a million US dollars in spare parts at all times and that they service 25 shipping lines in the region 24/7. The closest service point that could rise to the same level would be in Italy or Spain. No one saw Turkey as a quality standard for the reefer service, but this is changing over time with great efforts from ARDEP and support from Arkas lines which is one of their largest shareholders.

An observation for the practitioners is that taking a business model from another country and implementing on the Turkish market does not work well in Turkey. Many globally recognized carriers coming to Turkish market had to rethink their strategies and start joint ventures with local companies in order to access the business. Carriers decide to establish agencies and representations in Turkey and 50/50% joint ventures such as Hapag-Lloyd, Yang Ming or Schenker. To conclude, another cultural regional specific is that many producers, exporters and other players on the Turkish market have the traditional view of logistics and are unaware of the benefits of outsourcing warehousing and the outbound flow of goods hence these activities are kept in house Togan Moler explains, but they are changing as well Atilla
Karagulle, a marketing and sales representatives of Arkas lines confirms. “We will knock on their doors if we have to and reach those customers” confesses Mr. Karagulle.

4.2 The ”Fresh” Commodities

From our interviews with the carriers, Schenker Arkas clients and Schenker Arkas management we tried to extract as many facts as possible about the fresh commodities and compare it with Turkish statistical data. We have outlined the commodities that have the largest export volumes and divided them into two categories seasonal and off season commodities. The definition of the season is commodities that are shipped in between August to January. Off season “Fresh” commodities have been dried, frozen or produced throughout the year.

An important part about “Fresh” commodities is that the exports are growing and they are growing at a faster pace than the total exports. If we look at the following two exhibits, Exhibit 5 showing total exports and growths in percentage per year in comparison to the previous year. We simply want to illustrate the impressive rates of growth on the Turkish market,

![Turkey Exports, Total Volumes and Yearly Growth Analysis (2002-2011)](chart)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Export Volumes, Turkey (2002-2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>+9.5%</td>
</tr>
<tr>
<td>2003</td>
<td>+22%</td>
</tr>
<tr>
<td>2004</td>
<td>+16%</td>
</tr>
<tr>
<td>2005</td>
<td>+15%</td>
</tr>
<tr>
<td>2006</td>
<td>+15%</td>
</tr>
<tr>
<td>2007</td>
<td>+14%</td>
</tr>
<tr>
<td>2008</td>
<td>-18%</td>
</tr>
<tr>
<td>2009</td>
<td>+16%</td>
</tr>
<tr>
<td>2010</td>
<td>+14%</td>
</tr>
<tr>
<td>2011</td>
<td>+14%</td>
</tr>
</tbody>
</table>

Exhibit 5: Turkey Exports, Total Volumes and Yearly Growth Analysis (2002-2011) Source: Turkish Statistical Institute

in Exhibit 6 we see the growth rates of “Fresh” commodities exported in comparison to the total export growth rates.
Exhibit 6: Growth Rates comparison between total exports and “Fresh” exports in Turkey, 2002-2011 Source: Turkish Statistical Institute

From this we can clearly see that the yearly growth of “Fresh” commodities is on average higher than the average growth of the total exports. To be more precise the numbers obtained from the Turkish statistical institute show a higher rate for “Fresh” of 2.8%, meaning that its share from the total exports is constantly growing and it implies a further potential of growth and development of exports of the “Fresh Commodities”. The data is taken from the last 10 years, a follow up in the nearest future would add even more value and verify the trend changes in the future.

Seasonality plays an important part in researching the “Fresh” commodities. In Exhibit 4 we saw that the 4th quarter of the year is responsible for a big part of fresh exports caused mainly by the fruits and vegetables that are exported at that time. Many Carriers representatives inform us that the high demand season for reefers is expanding. It is no longer September-December, now there are heavy flows in August to January and even February, so in the future we will see some slow changes in the seasonal trend.

4.2.1 High-Season “Fresh” Commodities

High season commodities are mainly fruits and vegetables that begin to be exported in the 3rd quarter and gradually increase to reach the highest levels of export in the 4th quarter as mentioned earlier in Exhibit 4. Mandarins, oranges and grapefruit, are the main citrus commodities that have a strong seasonal character and can be called high season. The ports of export for these are Mersin, Izmir, and Gemlik. Mersin port has the highest volumes of mandarins and oranges shipped by sea due to some specifics in regional agriculture. The
thickness of the citrus membrane of these commodities in this region prolongs the shelf life and makes it possible to ship by sea. Even though this particularity is in detriment to the taste due to lower sunray penetration causing lower saccharine levels, some markets are ready to import these highly competitive price-wise commodities. Another important regional factor about the citrus exports is the concentration of the processing facilities around the ports of export such as Mersin. 80-90% of all country’s exports of oranges and mandarins is handled in Mersin.

Tomatoes as well are a high season commodity and have highest volumes of exports amongst all other "Fresh" commodities, from Turkish Statistical institute we can see that exports levels are over 350 million Euro for 2011, this data being provisional and might increase when final. Some carriers report exporting tomatoes to Japan, there are tomato shipments to Europe in small volumes. Turkey due to its geographical position can grow tomatoes for a longer period of time throughout the year in comparison to the countries in the temperate climate zone, having 2 crops harvests or more.

Cucumbers, onions, apples, apricots are amongst the high season commodities that exhibit same export growth patterns as citruses and tomatoes, volumes of these commodities are also considerable, from 50 to 150 million of Euro in exports. As we mentioned earlier in the regional particularities of the Turkish market for Fresh, almost 90% of all Agriculture is done in the Mediterranean and Aegean coast lines. All export ports for these "Fresh" commodities are also Mersin, Gemlik and Izmir.

The carriers who report dealing more with the high-season commodities are saying that the reefer business grows at a smaller pace than the industry itself or at the same pace in the best case scenario.
As presented in Exhibit 7 growth of fruit and vegetables as part of "Fresh" exports, which are the high season commodities, averages around 11% same as the total exports. Due to limitations in agriculture such as exploiting new lands suitable for cultivation, this sector cannot sustain growth forever. All these commodities require more and more land in order to grow and by the basic laws of location economics, farmers cannot expand forever, they would eventually reach the zone where buying the land for agriculture proves to be too expensive.

An exception would be grapes export that started booming in the region, Izmir port being the hub, in a few years carriers report exponential increase in reefer container shipments of this commodity, some went from 50 containers to almost 2000 in 4 years.

In the next sub-chapter we looked into the off-season "Fresh" commodities, even though they have lower export volumes than seasonal commodities, on average the export rate of these commodities are growing at a higher rate, which is partially confirmed by the carriers.

4.2.2 Off-season "Fresh" commodities

Frozen meat, frozen chicken, frozen chicken parts, frozen fish, hazelnuts, chestnuts, dried fruits, dried tomatoes, eggs, cheese are a few of the off-season commodities that are shipped in reefer containers and as mentioned before, the growth of these commodities for export is much higher. If we take two large groups of these commodities such as meat and meat preparations and dairy products and eggs, we can see the growth in comparison to the fruits and vegetables (2002-2011) in Exhibit 8.
We notice the same decrease in volumes in 2006 and then a slowdown in 2009 after the financial crisis, but the average growth rate is high. For dairy products and eggs it is 30% and almost 41% yearly growth in exports of meat and meat preparations. This way we can say that the driver for the faster growth in “Fresh” commodities export that we mentioned in earlier chapters are the off season “Fresh” exports.

Worth to mention is that off season commodities, in significant amounts, are shipped from the northern ports of Turkey such as Samsun or Istanbul. Even though Istanbul port is often described as a congested port, the frozen meat, the frozen poultry, nuts or even cheese can go to/from this port because these commodities can survive a longer transshipment or other delays in ports during the transfer from the feeder vessels to the main vessels. Some carriers have their own port terminals and their own cranes to facilitate the flow of goods even when the ports are working at maximum capacity. Carriers who have this advantage can offer faster loading times thus acquiring shorter transition times.

In the next chapter we discuss the target markets for exporters of “Fresh” commodities, giving the reader an understanding of “Fresh” commodities flows in the region.
4.2.3 Target markets for "Fresh"

With its geographically strategic position, as mentioned before, Turkey has access to the Mediterranean, Aegean, Black Sea markets. The proximity of the target markets makes it viable to send "Fresh" products by sea. Many carriers focus their attention on these sea markets because they can open trade routes going to Asia, North, East and West Africa and to Russia through the port of Novorossiysk.

The European market is where the life style of the population includes daily consumption of vegetables, fruits, fresh fish, fresh meat and availability of everything on the supermarkets is taken for granted. Due to extremely high demand focus on quality, a lot of "Fresh" commodities are not competitive on the European market if transported by sea. For example a container of citruses from Izmir area to Paris by truck arrives in 4-5 days including customs and local distribution. By sea, the same cargo would arrive 8-9 days later, thus making this mode of transport unacceptable for the European market. Some commodities though are getting a lot of attention. Hazelnuts and walnuts for example are exported by sea in large quantities to Europe.

The European market in generally and the “Fresh” in particular have a steady growth, but the growth is insignificant or almost stagnant compared to e.g. the Asian booming markets. The life standard is increasing in the expanding markets hence the demand for “Fresh” will also follow this increase, these products being almost synonymous with the increase in social status. Vietnam, Hong Kong, Mainland China are the countries that receive most of the "Fresh" exports in Asia, even though the transit time are long for the “Fresh” concept, the frozen poultry, meat and other similar products are always in high demand. “These are the markets that have the highest growth potential”, Mr. Bulut from Schenker Arkas declares.

African countries are also large importers of frozen poultry, meat, eggs and cheese. Carriers report that Kenya, Congo, and Liberia would be the biggest markets for “Fresh” products from Turkey. Even though the region around the port of Mombasa is dangerous because of the pirates but there have been no incidents so far.

High potential markets for the future of “Fresh” shipments are the currently politically unstable countries around Turkey such as Iran, Iraq and recently Syria. The turbulences in the region have caused disruptions within their infrastructure and now these countries are in
constant need of imports to satisfy the domestic demand. Until the infrastructure is rebuilt and fully functional, this region will always look at their neighbor Turkey for imports. For example, large volumes of eggs are already going into Iran weekly by truck and there is potential to switch to ocean freight as well. Iraq is importing almost everything for the basic needs of daily consumption.

The Russian market, as we stated earlier, has a high potential, especially for fruits and vegetables from the Mediterranean and Aegean regions of Turkey. Through the port of Novorossiysk, some carriers transport up to 90% of all their “Fresh” shipments of Mediterranean and Aegean seasonal fruits and vegetables. Moscow is the main target market for citrus and due to “lowest price” type of demand, ocean freight for mandarins and oranges is included in the logistic equation.

Shelf life of the products dictates low transit times and preferably no transshipments, otherwise the cargo is lost and “Fresh” cargo is a very sensible. Because of this, the target markets for seasonal “Fresh” commodities should always be close and for the off-season commodities, there is always demand in the world that is just waiting to be identified, presenting a challenge for the market analysts.

4.2.4 Reefer containers
Reefer containers are the core equipment in the “Fresh” industry, yearly carriers purchase new reefer container to keep up with the growth in the market and to not fall behind the competitors. The cost of one reefer container is between 20 000-25 000 U.S. Dollar depending on which extra features are added to the container. The expected life length, Mr. Rothman says, is about 20 years and they have 5 years warranty and the option of another 5 years extended warranty from the producer. The reefer industry is mainly dominated by major manufacturers like Carrier, Daikin, Termoking, which are constantly developing new technologies and upgrade the reefer containers. New updates and technical advancements in reefer containers are paramount for the “Fresh” business and this is why new information is always shared along the supply chain and not only with the technicians but sometimes with managers or even customers. This implies frequent trips to intermodal transport fairs in e.g. Rotterdam and Hamburg or constant monitoring of information releases from the
manufacturers of refrigerated containers. The newest container of the “Carrier” model for example, has significant improvements compared to its predecessor, requires 45% less energy and is 17% better at performance. Having more reefer containers up to date with the technology can prove to be a competitive advantage, being able to provide lower prices.

Reefers are considered an expensive investment by some carriers that is why in high season the reefer capacity on the market is limited. In contrary to the high season, in the low season there is a lot of repositioning in the region, reefers are always going from port to port, to satisfy the demand and get the maximum value. Managers try to analyze and understand the flows of “Fresh” commodities in the region and make the most out of the reefer equipment. Profit per time in use is one of the main criteria for repositioning decision. Egypt and Israel are the main repositioning destination due to their proximity to Turkey and the specific climate, favorable for agriculture all year long.

Another usage for reefers, Mr. Karagulle says, is to fill them with wood from Russia so they do not come empty back. This particular practice covered the repositioning costs, but it is done no more. The risks of damages that can be done to the sensitive equipment by the inappropriate cargo are too high. “This practice of course is not very popular amongst the carriers and the service technicians repairing the reefers because expensive equipment might get damaged along the way” Mr. Rothman confirms.

The reefers require careful handling. An example of very troublesome shipping destinations, when it comes to reefer handling procedures, is: North African port of Algeria or Tunisia. In their ports reefers are mishandled badly. Dropping them one upon another is recorded sometimes or pulling/unloading them with the use of chains which damages the containers and sometimes the cargo. They do not have the equipment and the knowhow to handle reefers properly. Furthermore Novorossiysk, Russia, is also a problematic destination because they do not have the capacity to handle the reefers in high season. Their solution is to rotate the reefers on the electricity plugs which can affect the cargo negatively. The commodities that need to be kept at plus 2 degrees suffer the most out of these practices, because if the temperature drops it freezes and if get to warm it loses its freshness. An example of the effects of changes in the atmosphere in an increase of temperature has on the cargo is the
case of Hapag-Lloyd; when their ship was delayed at port, the cargo of 600 tons of bananas was spoiled.

Frequently it happens, Mr. Rothman explains, that he is held responsible when another party has spoiled the cargo due to mishandling. To make proper investigation is such cases, the technicians can then access the Black box that records all the handling of any reefer container over the past three years. All the information there can show if it is the accusing party’s own fault that the cargo is spoiled due to time unplugged.

In the past in “Fresh” business, Carriers Managers neglected the importance of technical assistance services and cargoes worth hundreds of thousands dollars have been lost because of this. Now, by simply paying the pre-trip inspection (PTI) fee of 75 U.S. dollars this can be avoided. Ardep takes responsibility for that the reefer will maintain the quality of the goods and they service all the carriers in the region who ask for assistance with no exception. There are several types of PTI, depending on the cargo shipped; there is Long PTI – for longer trips, Short PTI for 5-10 days transit, Chill PTI for everything under 2 degrees Celsius. This procedure being a main requirement for insurance companies and even proven its importance is still surprisingly neglected by some carriers. Lack of knowledge in these particular technicalities can result in huge financial losses, so managers are more and more interested in educating themselves but there is still a long way to go.

To finalize our finding about the technical part of the “Fresh” transports, we compared the available information about the transportation temperatures done in 1999 with the current findings.
If we are to compare Exhibit 9 from Wijnolst and Waals (1999), with the data we received from Mr. Rothman, the temperatures correspond but there are cases which are target market sensitive. Some destinations require special conditions for the humidity and ventilation (level of $\text{CO}_2$) or even a specific temperature for specific commodities in order to be approved for import. Overall it didn’t change much, just many more products are now transported by reefer containers and the table could be updated.

4.3 Schenker Arkas and the “Fresh Market”

4.3.1 Company overview

With around 2,000 offices in the world’s most important economic regions, DB’s logistics division has a global network geared toward customer service, quality and sustainability. The transportation and logistics experts offer customers tailored, continuous and cross-carrier door-to-door solutions as well as additional logistics solutions along the entire value-added chain. Their strongest competitive advantage is the expertise in land transport, the other top
three ranked freight forwarders cannot compete on this marker, DHL is considered number one on air freight and Kuhne-Nagel is ranked as the third largest freight forwarder controlling the sea freight forwarding industry. To not fall behind in on the global logistics market DB Schenker continuously merge and acquire local logistics firms of various kinds to get a local knowledge and presence. In recent years Schenker has established themselves in the Carpathian region (Romania-RomTrans) and the Black Sea region (DB Schenker Arkas, since 1995) positioning themselves as a full service provider in a challenging growth region.

Schenker Arkas as a joint venture of Arkas Holding and DB Schenker keeps the worldly recognized brand of Schenker and the support and cooperation with the Nr. 1 logistic service provider as well as the biggest transportation company in Turkey. The 50/50 model works in turkey for many other carriers who tried to enter the market at first and found themselves in difficult positions without the knowledge of local particularities. In previous subchapters we offered special attention to some of those particularities in the area of ”Fresh” commodities business and we will continue to discuss our findings about these particularities further on, adding Schenker Arkas in the context.

Schenker Arkas has been shipping “Fresh” commodities by sea for quite a while. Even though they do not have a fleet of trucks equipped with refrigerated containers which would imply large volumes of business, the amount of shipments by sea have attracted the management’s attention and “Fresh” concept became a topic of discussion and a driver for further research, development and improvement of this particular concept on the Turkish market. As a freight forwarder Schenker Arkas has a wide network of contacts within the carriers on the market and a long term established relationships with some of them coming from either global agreements of Schenker or local agreements based on high volumes and long term cooperation. This is important for a freight forwarder being an intermediary in the supply chain and in the flow of goods. The specifics of Turkish market makes the Freight Forwarder often stand in a delicate position in terms of price bargaining and the clients often understand prices as the only value they receive.

4.3.2 Customers

Customers are defined as purchasers of transportation, the manufacturers of the “Fresh” commodities. Through our interviews we have studied customers’ needs and their behavior on
the Turkish market. Carriers and Schenker Arkas have somewhat the same view on the customers; there are the customers that have the traditional way of working with logistics and the ones that are more open minded towards purchasing logistic services.

Mr. Karagulle explains, many of these large companies that have a traditional view on logistics, keeping the outbound logistic function in house. With their own truck fleets they deliver to the door of the customer even though this is more expensive than outsourcing this function. “They cannot in one day just sell their fleet of refrigerated trucks” explains Mr. Karagulle. Smaller manufacturers are also very reluctant to use the services of big carriers and instead they handle their own shipments, they have the attitude of “I have 2-3 containers per month, don’t touch me”. Mr. Moler also says that the customers have the same attitude towards warehousing they want to have complete control over the stock, he says that “the companies’ warehouse is the same as their personal bedroom; no one is allowed to touch it”. From these kinds of customers they also meet a lot of underestimation of their services. Many customers Mr. Karagulle explains are afraid to put the cargo into someone else’s hands because of the fear that the carrier may spoil it. Referring back to statistics Mr. Karagulle can say that the fears of goods being spoiled is over exaggerated, he explains Arkas Shipping and Transport have a long history of successfully handling fresh goods for export and has a very low rate of goods being spoiled in the transport process. Mr. Karagulle approach towards changing the prejudice is to frequently make customer visits and calls trying to convince them of the benefits of outsourcing logistic activates, it is a though trade he says but he is starting to see a change in customers behavior now and they are becoming more aware of what carriers can do. Schenker Arkas have in comparison with Arkas Shipping and Transport dedicated account managers that handle between 10-12 customers, they also make a lot of customer visits seeking to hear what the customers’ demands are, they also visit potential customers also trying to convince them of what a convenient solution a freight forwarders services would be.

Customers interviewed say that the main requirement that they have when contracting logistic services are that they get the lowest possible price. In reefer shipments the use of technology and tracking is not needed as long as they have accurate delivery times. For Çamlı Yem Company it is the delivery time that is the main concern, they currently use frigo trucks to export their frozen fish to Europe, contracting sea carries to ship their frozen fish to Europe because it is cheaper is not a viable option for them because of the agreed transport time of
three days to Hamburg and Frankfurt. Exporting to U.S.A. would mean for them that using air carriers is the only option of transportation. Trucks is also a favorable mode of transport for Ekiz Yumurta, Mr. Ekiz explains to the countries close to Turkey this is done because of the fast delivery times he can in total ship 230 trucks a month to for example Israel, Iraq and Azerbaijan. On longer destinations like to North African countries the use of sea carriers are used because of the lower price.

From a freight forwarders perspective, being able to meet the demand of low cost transportation is crucial, Mr. Moler explains that a good customer service is of course a must for the customers but the main consideration for the customer is that they get the lowest possible price, hence accepting lowers bids in the initiation of a customer relations is a must, arguing over for e.g. 50 U.S. Dollar is not possible if a freight forwarder wants to be competitive on the Turkish market. But the problem with offering low prices is that the customer can start a price competition between carrier and freight forwarder because in reefer business Schenker Arkas works on shipment basis and not contracts. It occurs that customers goes directly to the carrier and quotes the price that they recently received from Schenker Arkas on the last shipment, hence creating a price race, they might save 10-15 dollars per shipment a few times but in the end both carrier and freight forwarder has had enough and raises the prices, customers can then accept the new price or stand without a carrier Mr. Moler explains.

As the previous example shows it is important to understand the business culture here in Turkey, it is essential when doing business and establishing a successful logistics company. Implementing the same foreign concept of doing business in their home market on Turkey without considering Turkish cultural differences creates a lot of discrepancies, in the end the result is that these carriers are not preferred to work with. An example of this Mr. Togan explains is how the shipping company Maersk has taken their Danish concept and implemented it in Turkey with no consideration of the Turkish culture. The consequence of this he says is that they are not favorable to work with in Turkey because one of the reasons is that their customer service is not user friendly.
4.3.3  Competition on the “Fresh” market in Turkey

From the position of a freight forwarder, Schenker Arkas is facing competition from different players of logistics industry as their service can be bypassed. Interviewed global sea carriers, like CMA CMG for example, can sell their service directly to the customer via their website or simply calling them. Even though this proves often a difficult procedure for both carrier and potential client because of the lack of knowledge and terminology from the customer side, this channel is still practiced by carriers. Mrs. Guven explains how it is sometimes very difficult to get paid for the shipments to eastern African countries hence they refrain from working directly the customer and instead work with the freight forwarders or with very large traders with impeccable credentials. For a carrier it is much easier to work with a freight forwarder, the latter being a professional in the logistic domain so they would avoid competing with a freight forwarder if possible, especially in prices, unless they have to compete simultaneously with other carriers.

Within the sea carrier line of business, each shipping line faces competition on their trade routes, for example Yang-Ming faces competition on their rout to Asia by Maersk which is the largest sea carrier in the world. Local and national sea and truck carriers also hold a strong grip of the country, Mr. Yalgin explains, that even though Hapag-Lloyd is the second largest carrier of reefers in the world it is still only possible to compete with Arkas Shipping and Transport on a short term basis, in the long run it is not profitable thus rendering it not feasible. Some specific trade routes are monopolized beyond competition.

The scenario most beneficial for a freight forwarder is when two or more carriers start competing on the same route, improving lead times, minimizing transshipment times or eliminating transshipment ports completely, where is possible due to high volumes. A good example being that Hapag-Lloyd is the only carrier in Turkey that has a direct route between Istanbul and the U.K. to meet the demand of fast deliveries to Europe. Eventually competition might lead to the price wars. In this scenario, the situation corresponds to the old proverb “where two are fighting, the third one wins”, the third one being the freight forwarder in our case.

In the case when a carrier has been developing a specific route for specific commodities and practically monopolized that flow of goods, like Arkas Shipping and the grape trade, it can
either offer some special conditions for the additional distribution channel that a freight forwarder might provide or might refuse any special conditions because the goods will end up on their vessels anyway if they have to be exported to that specific destination they control. In both cases there is actually not an astute competition for the freight forwarder, who can always find a niche in being a professional intermediary who is preferred by both exporters and carriers.

Arkas Shipping and Transport in turn have to compete with the small truck carriers and manufacturers that keep the delivery of their own products in house with their own trucks they deliver to the door of the customer even though this is expensive. Fast deliveries and low cost services are essential in this business, hence in the shipping industry stops in the routs is a great disadvantage.

Mr. Moler, the project manager at Schenker Arkas who works on developing the “Fresh” concept, explained that the reefer business is mainly port to port, so when a freight forwarder considers a client who want to export something to a final destination inland, it involves much more planning and work and here is when a freight forwarder is beating their carrier competition. The decision makers along the supply chain have to figure out this issue to bring more value to shareholders from the reefer business, combining services of different carriers and trucking companies and maybe even adding a warehouse provider to the mix. A carrier might be able to handle it but a professional freight forwarder can deal with these issues faster and easier, as an intermediary, knowing the hinges of the logistic world.

4.3.4 Competitive advantages

Being a global freight forwarder Schenker Arkas largest competitive advantage is the access to a DB Schenker’s worldwide logistic network, this network has large volumes in circulation already hence they can push prices with global carriers. On national level Schenker Arkas Izmir office has close contacts with the sea carriers in the region. They know by heart which sea carrier can ship what commodity and were for the best possible price value. Since they are already shipping large volumes of other products with carriers they have the possibility to negotiate discounts on “Fresh” produce also, resulting in Schenker Arkas ability to offer lower prices to customers in comparison from direct quotes from the carriers. They have many years of experience of handling cargo which can be built upon to create the new service Schenker
“Fresh” in Turkey. Schenker Arkas also has strong management support, which when it comes to allocating resources to develop these products is invaluable. Resources necessary can be deployed fast. Employing of new personnel, investing in people and positioning them at ports with high volumes of fresh goods is a quick way to establish the services and reach out to target customers.

Furthermore the Schenker brand is very strong and within turkey Arkas is known for its high standards also, it is reassuring for customers to know that Schenker Arkas is not going for any good reason out of business. That is the advantage that is sold to the customer, because any person can start a freight forwarding company and give low rates but the next month they can be gone because of competition Mr. Moler explains.

5 Analysis

In the analytical part we try to synthesize all the information from interviews and the observational research that we conducted. We made a parallel between some of the empirical work and the theoretical information. We have tried to answer the main research questions that we proposed at the start of our project and see to what extent these questions are answered, so in the end to realize how was the purpose of the thesis addressed.

5.1 Particularities of the “Fresh” commodities market in Turkey

From all the interviewees we can easily conclude that the reefer container shipments have increased more or less to all the export markets. The market is growing beyond doubt and there is big potential for all the players in this market, including Schenker Arkas as a freight forwarder. Some statistical data on “Fresh” supports the information from carrier managers. An interesting specific for “Fresh” exports that we see in Exhibit 6 is that it was not as affected as much as the total exports by the financial crisis of the end of 2008 and beginning of 2009. We believe that since these commodities are not considered as luxury household purchases by the end customers they would not cut back on their consumption. To a certain extent this is valid for some target markets because a healthy life has become an idea or even a trend in itself in some parts of the world. People are more aware now than ever of what they eat and seek to buy fresh vegetables and fruits instead of processed substitutes. On the other hand, not all the “Fresh” commodities are fruits and vegetables, we have to consider as well the
fresh, chilled and frozen meat, poultry and fish, as well as cheese, eggs, nuts, dried fruits, etc.

These commodities have stronger variation from year to year, but steadier seasonal character and much higher growth rates. The potential niche for future development of the fresh business is targeting the off-season commodities. Knowing the particularities for seasonal and off season commodities allows to target specific exporters and offer services to new clients. A successful freight forwarder should opt for combined knowledge of seasonality and the regional traits of the commodities. In the “Fresh” business it is important to know when and where the demand will spike up and where to concentrate the efforts of attracting new clients. Starting with summer and all the way to mid-autumn, the demand for reefer transports will concentrate on the shoreline of the Mediterranean, Aegean and Black seas. The rest of the year export focus is more scattered and required knowledge is needed of the export volumes and types of commodities to track it down and capitalize from it.

Frozen meat and all types of cheese are booming in exports, showing smaller volumes compared to fruits and vegetables yet but growing at an increasingly high rate. The northern part of the country is suitable for that but it is not limited to that area. This implies further research is necessary in studying the off season commodities and the locations for major exporters.

Many carriers report to transport all types of commodities and during the whole year. “Fresh” goods are exported in small and medium amounts, or sometimes as consolidation cargo, even though it is rare in “Fresh” exports. To analyze the data gathered and to get an overview of which carriers that ships what and where we have inserted the data from interviews and synthesized it into Exhibit 10 that the reader can find below.
<table>
<thead>
<tr>
<th>Shipper</th>
<th>Port of export</th>
<th>Target markets</th>
<th>Season commodities</th>
<th>Off season commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hapag-Lloyd</td>
<td>South Anatolia (Citrus) Northern regions (Hazelnuts) Mersin, Gemlik, Istanbul (Frozen Chicken)</td>
<td>Russia, UK (Citrus) Black sea region (Hazelnuts) Vietnam, China (Frozen Chicken) Korea, Japan (Chocolates and biscuits)</td>
<td>Citrus (Sept-Feb) Hazelnuts Tomatoes (Sept-Nov) Chocolates and biscuits (Jun-Aug)</td>
<td>Frozen chicken</td>
</tr>
<tr>
<td>CMA-CGM</td>
<td>Izmir (Frozen chicken)</td>
<td>East-Africa (Frozen chicken) U.S.A. (dried tomatoes)</td>
<td>Dried tomatoes</td>
<td>Frozen chicken</td>
</tr>
<tr>
<td>Yang-Ming</td>
<td>Gemlik Izmir Mersin</td>
<td>Vietnam (Chicken Paws) Japan (Tomatoes) Hong Kong (sea cucumber)</td>
<td>Tomatoes</td>
<td>Chicken Paws Sea cucumber</td>
</tr>
<tr>
<td>Arkas Shipping</td>
<td>Izmir (Grapes) Mersin (Citrus)</td>
<td>Grapes (Russia) Citrus (Russia) Frozen Fish (Russia) Dried Fruit (Tunisia,</td>
<td>Grapes (Aug-Jan) Citrus (Aug-Jan)</td>
<td>Frozen Fish Dried Fruit</td>
</tr>
<tr>
<td>Evergrean</td>
<td>Izmir</td>
<td>Alexandria (dried fruit) Ashtok</td>
<td>Tomatoes Cucumbers</td>
<td>Dried fruit Plastic Chocolate</td>
</tr>
</tbody>
</table>

**Exhibit 10. Carrier schematic Source: Interviews**

Since there are 25 carriers on the Turkish market of sea freight, further interviews with all the remaining carriers would clarify the picture even more. Even present some clear limitations, the material gathered points out at some regional tendencies and depicts some Turkish specific trade routes and flows of goods. Schenker Arkas as a freight forwarder possesses this information, but it is spread, clustered, defragmented. Usually their information of the carriers is not categorized in this fashion, the upper managers and some personnel that works directly with the clients know immediately what carriers are involved when a certain commodity is mentioned for export, but otherwise not everybody is aware of this. As a teaching mechanism for company interns or employees who are just starting their career paths, such a table containing simplified information about all the carriers, commodities and destinations should
be available in the company’s databases. The information lacking is the location of the Carriers major clients for different types of commodities and that again requires attention in future studies of the Turkish “Fresh” market and the regional and seasonal specificities.

5.2 A freight forwarder in the context of the Turkish market.

The main purpose of our study was to analyze the potential and answer a very broad difficult question about the potential for development of Schenker Fresh in Turkey. From the growth perspective we can definitely answer that there is room for a new actor on the market. The limitation is the impossibility to structure the “Fresh” exports by land/sea transportation methods in order to assess the potential for different commodities and regions. We mentioned earlier the absence of relevant information regarding the position of major exporters. As a freight forwarder, Schenker Arkas based in Izmir can invest in cold storage warehouse space and reefer container equipment to cover the demand in the region. Furthermore Schenker Arkas have the resources to open representations in other major export port areas and try to consolidate the exporters of “Fresh” commodities having the potential and the necessary relations with all the carriers in the market.

From the competitive advantages of Schenker Arkas, we know that they can get much better rates for reefer containers from carriers than if clients contact the carriers directly. Especially with the carriers that they have huge accounts with the possibility exists to negotiate volume discounts. In addition to that, the expert knowledge Schenker Arkas possess on export procedures which are getting more complicated over time with new rules and regulations in Europe and other target markets they would be a convenient solution for the customer conveying this information. A future desire from customers to simplify the export procedures from the start would make the “Fresh” product a part of the growing “one-stop-shop” trend, referring back to the literature this is what Branch predicted in 2009. The notion of value chain that we have mentioned in our theoretical part comes into play with this certain aspect of the freight forwarder. How does the whole supply chain benefit from the participation of the freight forwarder is a good question we see that its expertise that can minimize the time a exporters spend trying to figure out what document they need and when, is definitely a good answer to it.
Schenker Arkas can facilitate all export related technicalities and minimize the lead time. Even though the impact is not that big, the lead time value equation, when dealing with “Fresh” products, is boosted up by any even minor improvements. We mentioned earlier in the theoretical framework the following services that a LSP can provide: pre- and post-harvest operations, assembling, sorting, grading, storage, transportation and distribution. On the “Fresh” market, a freight forwarder have the possibility to provide some transportation and some storage as well, if it has cold storage units, because “Fresh” products require different conditions of storage that other products that can be simply kept in an ordinary warehouse. The operations related to the harvest itself are the client’s concerns and the assembling, sorting, grading as well. Schenker Arkas has clients where it provides some of these services, but it is not related to the “Fresh” products.

Another important empirical finding is that applications such as EDI, EUL, ER or CM which we have talked about in Fast Consumer Goods section of our theoretical framework, do not have a high implementation ratio when dealing with a freight forwarder. There is undeniably a high level of communication between parties and there is always contact by email or phone but it is not automated. On the Turkish market, a very important part of any client relations is the interpersonal connection. So instead of all the tools mentioned above, people keep contact 24/7 by phone, and whatever happens, “a good freight forwarder will always be there to pick up the phone when you call”. This is another advantage that could be argued to bring value to the whole supply chain.

Account management is used in Schenker Arkas, as van Hoek (2000b) describes its advantages in the theory, to build strong customer relations. We see that account managers have an important role in the Schenker Arkas organization when they must create a one “face” contact with the customers, to communicate the convenience advantage that Reuvid & Sherlock (2011) describe in the theory. We believe that account managers will play a key role in the implementation of the “Fresh” concept in Turkey. As van Hoek (2000a) argues account managers must be aware of that most customer relations start on a small scale, hence when implementing this concept nationwide in Turkey placing one, two account managers close to ports in Turkey Schenker Arkas can target local customers, introduce the product on site and compete with carriers in the region.
5.3 Target markets and future expansion

The target markets for most of the “Fresh” exports are realistically the areas of the Black, Mediterranean and Aegean seas. Since the reefer business is mainly port to port, shorter times to market permit ocean freight and ocean freight means extremely high capabilities. But the main growth would still be markets with high demand for frozen meat, fish and poultry meaning that constant demand analysis should be conducted and even in collaboration with the exporters of these commodities. More business for exporters clearly means more business for the freight forwarder and this value chain structure of cooperation can lead to more value to both and better end results.

The competition on the market is very specific as well. When carriers compete with each other on prices and routes, opening new non-stop port to port destinations, the freight forwarder get to benefit without any draw backs. New and more competitive route means the same new and more competitive route for their clients but for a lower price due to discounts from the carrier. Smaller exporters have to understand that for a freight forwarder, over time the rates will go down due higher volumes and bigger accounts with a carrier. In the long run it is more beneficial to work with a freight forwarder then the carrier directly. Some carriers cannot do pre-carriage due to lack of equipment and in this case the freight forwarder would definitely have an advantage. This advantage is what Schenker Arkas must communicate to the customers, on the market we see after our interviews with Mr. Karagulle and Mr. Moler which confirms what Aktas and Ulengin (2005) observed in the market research in 2005, there is still 2012 predominantly two types of customers on the market, the “modern” and the “traditional” companies. Furthermore Mr. Karagulle sees the same tendencies today that Aktas and Ulengin (2005) saw 2005, that the customers underestimate the benefits and the capabilities of the services that a shipping company or a freight forwarder might provide. Some growth potential is hidden in this latter category of clients and specifically from their transition. When the clients develop and eventually adopt the modern ways of doing business, freight forwarders can much easier point out the benefits of collaboration. On the “fresh” market there is still a long way to go because the agriculture is mainly a “traditional” way of thinking and a panicking fear of over complicating the trade or involving parties that “had nothing to do” with the trade flows before. Knowing what commodities to target and what
the target markets are, Schenker Arkas can develop specific approaches to different time of exporters and sign them up for future collaboration, thus insuring the potential growth.

Another issue, Mr. Rothman relates, that when hypothetically solved could bring more value and more growth potential, is that an alarming majority of managers underestimate the value of technical knowledge in the “Fresh” business. Mr. Rothmans’ services and technical expertise are disregarded, leading to the spoiling of the cargo. Almost all the clients are quite negligent as well towards the technicalities of their business when it comes to the reefer transports. All the exporters are experts in all the processes up until the goods have to be transported. From that point many make the mistake that they do not need to know the rest of the information. Schenker Arkas could easily arrange express training for their account managers and other employees that interact with the clients directly. Constantly sharing changes of this knowledge with the client would improve the relationship and would create a competitive advantage for the freight forwarder, being seen as an indispensable expert.

“Fresh” business is more sophisticated than the dry container trade but still not all exporters need this amount of detail and attention. Even if there is just a small chance that a large exporter would appreciate such a tailored approach, that would mean more business and higher volumes thus potential growth. Freight forwarders should be ready for this contingency. There are undeniable changes in the behavior of all the players on the market and all parties show the willingness to learn and become more enlightened, so Schenker Arkas cannot stay behind and miss a great opportunity of growth and expansion in the area of “Fresh” exports.
6 Conclusion

In this part we will go through the research questions that we proposed and answer them concluding the empirical findings and the analysis in comparison with the theoretical framework.

What are the particularities of the “Fresh” commodities market in Turkey?

In global context, Turkey is experiencing a very strong and much above average growth in Gross Domestic Product, in exports in general and in ”Fresh” commodities in particular. ”Fresh” exports are growing at a higher rate than total exports. Within the ”Fresh” category, some commodities register 30-40% of growth in annual export volumes and this indicates towards tremendous possibilities for a freight forwarder to step in. Furthermore the Turkish market is segmented in off-season and high season commodities. The latter may have higher volumes but it is limited to a few months of the year and it cannot grow at the same pace as off-season commodities. Hence it will be surpassed due to limitation of land used for agriculture. From this data we can only assume that the steady growth will continue since we have seen that ”Fresh” exports from the economic depression in 2008 did leave it with a minor down turn compared to the rest of the exports from Turkey.

What is the forecast on the “Fresh” export and the possible opportunities of growth?

Exports are growing, as carriers report growth for ”Fresh” commodities exports and reefer business in general. Some markets show higher demands for ”Fresh” products from Turkey and the carriers serving those destinations have higher rates of ”Fresh” exports growth. Some destinations record low rates of reefer business due to higher lead times and self-sufficient geographical area in terms of ”Fresh” produce. To fully assess the possibilities of growth for a freight forwarder that does not operate refrigerated trucks but mainly deals with ”Fresh” products by sea freight, the data collected is insufficient. Further analysis of trucking companies is required to understand their share of this business. One observation is that in a market of growth there are always growth opportunities.
What are the competitive advantages that a freight forwarder can bring to the market of “Fresh” products, how the clients and competitors react in response and what are the specifics of their interaction?

The competitive advantage that a freight forwarder such as Schenker Arkas can bring to the market is price negotiation due to strong global presence of their logistic network. Knowledge of operations and good reputation with carriers facilitates all export procedures and of course a more personal approach and a strong communication line between the freight forwarder and the client. Carriers increasingly prefer to work with a freight forwarder now instead of the client directly, which sometimes try to play out the two logistics firms in a price race.

What is the growth potential in providing new value added services to new and existing customers and what are the key elements in negotiating future collaboration?

We already established that one of the biggest challenges when establishing new partnerships is to convince the customer to use an intermediary for their exports. During the transition from the traditional way of doing business to a different way of thinking and doing business, based on a more global long term view, there is a lot of potential for new collaboration. Nonetheless, from existing customers’ perspective, low cost, shorter transit times and interpersonal communication are of the highest concern, and for Schenker Arkas as a freight forwarder it is imperative to capitalise on it.

And, to answer the purpose of our thesis, can a freight forwarder expand in Turkey by entering the “Fresh” market and exploring the potentials of the “Fresh” commodities?

We can conclude that there is a great opportunity on the Turkish “Fresh” market for a freight forwarder to move in and provide service to current “Fresh” exporters, especially in such a rapidly growing areas such as frozen meat, poultry, cheese and other dairy products. More in-depth analysis of regional businesses is required to devise target-specific strategies of expansion.
7 Reference list


McNamara, C., *General Guidelines for Conducting Interviews*, Minnesota, 1999


Qualitative Research in Logistics & Supply Chain Management, Nordic Logistics Research Network, NOFOMA, August 2010.


8 Appendix

8.1 Interviews

In this section we added the framework that we used for interviewing key figures in different positions involved in the “Fresh products” business. The material will include the answers we received to our questions, quotes from interviewees and their remarks on the topic. All information is in the form of notes. All words are exact reproduction from the interview, verified by both interviewers.

8.2 Appendix A: Interview framework - Carriers

A short presentation about us:

We are both currently studying a two year master program: International Logistics and answers/notes) Supply Chain Management at Jonkoping International Business School in Sweden. In Turkey we are trying to make some preliminary analysis of the domestic market for specifically targeted commodities and analyze the possibilities of growth and expansion of logistic services supporting these products. The research work is done as part of our Master program graduation project.

A short presentation of the Purpose of our work

The purpose of our thesis is to research the logistic service that encompass the export of fresh products, evaluate the possibilities of growth in this sector for freight forwarders and carriers. Analyze the possibility for further development of these products and successful marketing.

Formal questions about the interviewed parties:

For a better understating and presentation of the collected data we need to have on the record the position in the company/job title of the interviewed. How long has (have) he/she (they) you been working in this company? How long has (have) he/she (they) you been working in logistic/supply chain management industry? Short description of what are main activities and/or responsibilities in the company?
Main and support questions of the researched topic:

**Main Question 1:** In order to better understand the domestic market related to the transportation of the fresh products, it is important to get an idea of: "What are the business volumes for all the commodities that fall under Fresh products category?"

**Support Questions:** What are the absolute numbers for the transported volume of these products? (TEU/container statistic) What is the share of these products from company's totals? (%). (What are the sources of this information? official/unofficial?) Is there any data for previous years in order to observe the growth dynamics for the transportation of fresh products?

**Main Question 2:** After we have somewhat a picture of the volumes of these products that are transported, we need to analyze furthermore the potential growth of the domestic market. In order to understand these possibilities we need some statistical data on the types of products that are being shipped as "fresh/perishables".

**Support Questions:** What are the main commodities shipped? What are the %ratios for fruits/vegetables/Sea Food/Dairy Products from the total? ; Absolute volumes? Is there a clear leader country-wise in transportation volumes? If there is no clear leader in volumes, what would you consider as core commodities for reefer container transportation? (Are all products going mainly for export? or there is domestic movement of goods? reefer containers transported by trucks, equipped with diesel generators, for domestic distribution?)

**Main Question 3:** What are the main destination for “Fresh Products”?

**Support Questions:** Is there a clear frontrunner in importing these products from Turkey in terms of volume? Is it EU member state/or not? (How requirements vary from EU member states to non-EU). Are there any countries much easier to deal with in terms of documentation/requirements/customs-clearance for “Fresh products”? Any countries you “enjoy” working with in opposing to countries very “difficult” to deal with?

**Main Question 4:** Who are the main customers for ”Fresh” Products?

**Support Questions:** Are there predominantly large corporate clients or smaller businesses? What are the biggest client accounts for shipping Fresh Products (Volume/TEU)? Is there an observed growth% in the quantities of goods transported for the same clients over the years? What is the average waiting time in ports/loading zones for this type of products? Are reefer containers always available at any time to any destination? Or there are cases of difficult destinations and you would have to refuse a client? Where there cases of such complex requirements that you could not meet/had to refuse service? (What would be an example of extremely difficult logistic service requirements from a client?) What are the main ports/harbors for reefer containers? How is the delivery system working? Does it happen ever happen for Fresh Products ExWorks?
Main Question 5: Who are the main competitors in providing transportation services for “Fresh Products”? What are the main competitive advantages?

Support questions: Who are the main competitors on the market for this product? What is their share of the market for Fresh Products in comparison of your share? What are the value added services that make this company get a competitive edge over the competition? What would addition to your services would you implement to get the competitive edge? How are the services for these products being marketed to the clients?
8.3 Appendix B: Interview framework – Warehouse

**Purpose:** Understand the role warehouses play in the exports of “Fresh Products” for Schenker Arkas. How is the warehouse factor involved in the expansion strategy equation based on the “Fresh Products”?

**Formal questions about the interviewed parties:**

For a better understating and presentation of the collected data we need to have on the record the position in the company/job title of the interviewed. How long has (have) he/she(they) you been working in this company? How long has (have) he/she (they) you been working in logistic/supply chain management industry? Short description of what are main activities and/or responsibilities in the company?

**Interviewees:**

**Main question 1:** What are the sizes of the warehouse(s) and what is the nature of ownership?

**Main question 2:** What is the occupancy level in the warehouse(s)?

**Main question 3:** What is the structure of the warehouses and the services provided in different sections? Any of the services cater to the needs of the “Fresh Business”

**Main question 4:** How are “Fresh products” involved in the warehousing process? What are the main requirements for the “Fresh Products” when it comes to a warehouse?
8.4 Appendix C: Interview framework - Reefer Handling

How long have you been working within this field?

Which Carriers do you work with?

Is there seasonality when a greater number of reefers are in movement?

What is the rate of spoiled goods?

What is the most troublesome port to ship to, concerning handling of reefers?

Do you see an increase in the demand for reefer equipment?

What are the latest advancements in reefer business?