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Diversification in the Dutch International Freight  
Forwarding Industry

By

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## **Acknowledgments**

As I approach the end of my academic life, writing this thesis gave me the opportunity to reflect on the very demanding year at MEL I am about to complete. I would like to take this opportunity to thank to everyone who provided moral support, love and assistance not only throughout my master's education but also throughout my higher education life.

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## Abstract of the work

*Purpose* – The purpose of this paper is to find out how diversified are the service offerings of the international freight forwarders based in the Netherlands as well as to discover the motivations behind pursuing this strategy.

*Design/methodology/approach* – The paper features a quantitative and qualitative analysis of the responses given by 41 international freight forwarders based in the Netherlands. In addition to the survey questionnaire, desk research is used to provide more inputs for data analysis. According to the responses given, the IFFs were ranked on a diversification points index, and a comparison of structural and perspectival differences of the most and least diverse firms were conducted. The methodology is designed to extract information regarding the different service offerings as well as the corresponding revenue generated from these services. The paper also provides a theoretical framework of the freight forwarding market principles.

*Findings* – The IFFs in the Netherlands have diversified service offerings and related-diversification is the main strategy of choice. The findings support that the traditional forwarders are transforming to logistics service providers, aiming to increase their profitability by capturing more parts of the transport chains. The Dutch IFF market structure showed the characteristics of a fragmented market, showing similarities to the UK and the US IFF markets. The IFFs with wide structural asset bases were also more diversified in their service offerings. The size in terms of number of employees, offices, and warehouses were also positively correlated with a firm's revenue. The larger IFFs with more buying power reported to be more engaged in the service diversification strategies.

*Research limitations/implications* – The focus of the paper is on the Dutch IFFs, but the analysis can be applied to different geographical settings as well as sectors. The limitations were mainly present in the data acquisition aspect of this study that required additional methodological applications to be minimised.

*Practical implications* – This thesis presents findings regarding the service-offering portfolio of IFFs of different sizes and present the adequate revenues yielded from the different services they offer. This can serve as a guide for businesses who are looking to diversify their service offerings but are not sure what implications this will have on their profitability.

*Originality/value* – This thesis provides some practical insights from the Dutch IFF industry regarding the use of diversification to stay competitive against other types of logistics providers in a global market where total logistics concept is becoming dominant. The originality arises from the fact that there aren't any previous studies done in the Dutch IFF industry that focuses on their service diversification strategies, which has been identified as an on-going trend in the sector.

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## **List of Abbreviations**

RQ – Research Question  
IFF – International Freight Forwarder  
3PL – Third Party Logistics Provider  
ICT – Internet and Communication Technologies  
LSP – Logistics Service Providers  
NVOCC – Non-vessel operating common carrier  
CHB – Custom-house brokers  
OSRA - Ocean Shipping Reform Act  
FMC – Federal Maritime Commission  
EU – European Union  
MPV – Market-point View  
RBV – Resource-based View  
TCE – Transaction cost Economics  
EBIT – Earnings Before Interest and Tax  
GNP – Gross National Product  
ROCE – Return on Capital Employed

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## Chapter 1. Introduction

### 1.1 Introduction

We are currently living in the era of communication where we have access to information more and easier than ever. The developments of Internet and information technology have transformed the way we live, do business and interact with each other. Like every modern business, the international freight forwarders (IFFs) who have been the traditional middlemen in the transport chain have been evolving to adapt to the fast moving and competitive business environment. As part of their adaptation attempts, they are changing their business strategies and are expanding their service offerings to benefit from the increased demand for value adding services. The following chapter will outline the identified research topic and justify the need to study the diversification strategies of the IFFs operating in the Netherlands.

### 1.2 Problem Statement and the Research Question

Many new business opportunities are arising for companies as trade barriers reduce, the ICT systems develop and customers' demand for additional value from services increase. The impacts of these are particularly apparent on freight forwarders that operate in a dynamic market structure which has been the traditional middlemen for the movement of international freight. As increasing number of other logistics service providers such as 3PLs and NVOCCs now started providing similar services as traditional freight forwarders, the functional distinction of these organisations is becoming unclear (Markides and Holweg, 2006). The traditional freight forwarders, which have always functioned in volatile business settings, now need new strategies to remain in business. The attitude towards change as well as strategies pursued is likely to be influenced by the size of companies. However, regardless of size, most freight forwarders have started offering diversified service offerings for the provision of "one-stop shopping" concept (Murphy and Daley, 1995). Although similar studies have been carried out in Hong Kong (Lai *et.al.* 2004), in US (Murphy and Daley, 2000) and in the UK (Markides and Holweg, 2006), there are no studies regarding this matter in the Netherlands, especially with a focus on *service diversification*. Considering the key role the Netherlands play in the European logistics networks, this study will provide a description and analysis of current strategies pursued by the Dutch freight forwarders, the impacts of these strategies on their revenue structures and the on-going trends happening in the sector. The study will be limited to the IFFs that are in active trade in The Netherlands only. The careful assessment of the statements above led to the formulation of the following statement that will be the main research question of this study.

RQ 1: How diversified are the service offerings of Dutch Freight Forwarders?

In order to investigate this phenomenon in greater detail as well as to increase the practical value of this study, two further research questions will be answered.

RQ 2: Is there a link between an IFFs asset base and service diversification strategies?



RQ 3: What is the relationship between company structure and perception for diversification?

### ***1.3 Aim of the work / State of the field***

This piece of academic research aims to provide an overview of the current diversification strategies of international freight forwarders in the Netherlands, and explore a number of matters in greater detail. Firstly, it will explore the market environment aiming to shed light on the ongoing trends that are causing changes in the market structure that ultimately leads to changes in companies' strategies. It will then explore the types of diversification that is currently being practiced at the industry level and the general impact of such strategies on companies' revenues. For this purpose, this thesis will touch upon the strategy as well as product/service diversification research domains. By presenting a comparison of companies with differentiated service offerings, size and expertise, this research aims to present how the revenue structures are affected according to different levels of diversification present. After giving the generalized overview of the market, the focus will then be shifted to the firm level, and explore the willingness of the individual firms to diversify. Finally, the paper aims to discover the direction the international freight forward is leading in terms of business structure as well as the services offered by the companies.

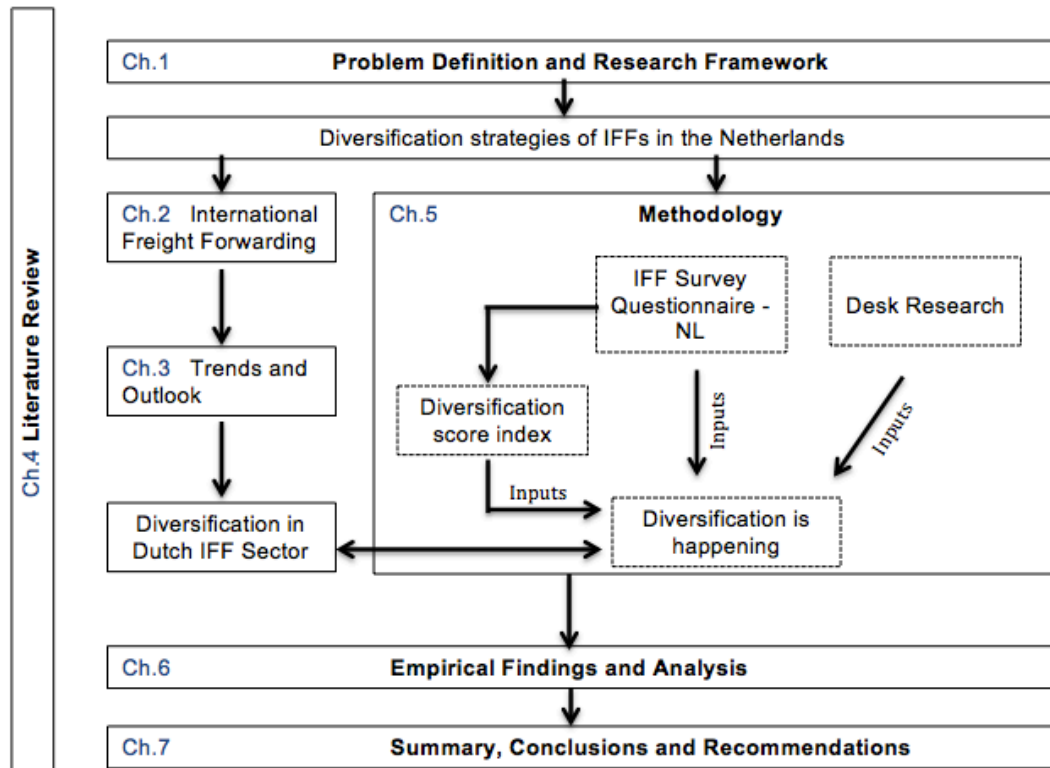
### ***1.4 Research Design and Methodology***

This research will mainly have the characteristics of a small-scale descriptive study. In terms of time dimension, it will be a representation of the freight forwarding industry at a specific point in time (like a snapshot). This piece of research will use an online survey that is sent out to the entire list of Fenex, which is the trade association for the Dutch forwarders. The information presented will further be based on the desk research about the existing studies in the field as well as the company websites, government statistics and consultant reports.

### ***1.5 Thesis Structure***

This thesis consists of seven chapters. The introduction chapter will define the problem and the research objectives as well as stating the rationale behind this thesis and outlining the structure it will follow. Following the first chapter, chapter 2 will introduce the international freight-forwarding sector in a more generalized manner outlining the roles of intermediaries in the transport chains. After introducing the global IFF market structure, the IFF focus will be narrowed down and focus on the IFFs in the Netherlands. Chapter 3 will discuss the current trends in the market that are fueling the change happening to the traditional role of IFFs which provides further justification to why service diversification is necessary. Chapter 4 presents reviews of previous studies done in the field of strategy, diversification and the impact of diversification on performance. The chapter provides an in-depth review of the existing body of knowledge within the topical boundaries of this thesis. Chapter 5 introduces the methodology to be used in the study and state the data acquisition methods used as well as providing reasoning for the methodological choices. Following this, chapter 6 presents the data analysis process and presents the

empirical findings of this thesis as a result of the thorough analysis. The final chapter serves as a closing chapter, where the research limitations are stated, research findings are reinstated and indications for future research are given.



**Figure 1 Thesis Structure**

Source: Own elaboration.

## 1.6 Definitions

The similar function the contemporary third party logistics providers, international freight forwarders and non-vessel operating container carriers has is one of the reasons why this research is being conducted. Therefore, it is important to clearly define the main subjects that will be explored in the introduction of this academic research.

International Freight Forwarder (IFF) can be defined as “an international trade specialist who can provide a variety of functions to facilitate the movement of cross-border shipment” (Murphy *et al.*, 1992, p.152). IFFs play a key role as international trade intermediaries and are being employed by all kinds of companies willing to engage in cross-border trade (Lambert *et al.*, 1997). IFFs traditionally offered services such as “booking vessel space, preparing relevant documentation, consolidation, paying freight charges and arranging inland transportation services” (Coyle *et al.*, 1996).

The third party logistics (3PL) concept includes the outsourcing of any part of the logistics activities that previously have been done in-house (Skjoett-Larsen, 2000).

Lieb *et. al.* (1993) described this phenomena as a service that *“involves the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within that process”*.

Similar to international freight forwarders, Non-vessel operating common carriers also have intermediary roles in ocean freight markets (Clott, C.B, 2000). US legislation defines the NVOCC's as *“a common carrier that does not operate the vessels by which the ocean transportation is provided, and is a shipper in its relationship with the ocean carrier”* (US Public Law, 1998). In other words, they simply buy space on vessels operated by carriers that they consolidate according to the needs of their clients (Clott, C.B, 2000).

Finally, it is crucial to define what does the term “diversification” stand for within the scope of this study. Diversification is the type of competitive strategy, where a company increases their product or service offerings with products that have no or little market interaction with the remainder of services they offer (Rumelt, R.P, 1982). There are different types of diversification and the different types can be organized under two main sub-groups, namely, related and un-related diversification. This study will focus on the service (product) diversification strategies of the IFFs based in the Netherlands and its impacts on the company revenues.

## **Chapter 2. International Freight Forwarding**

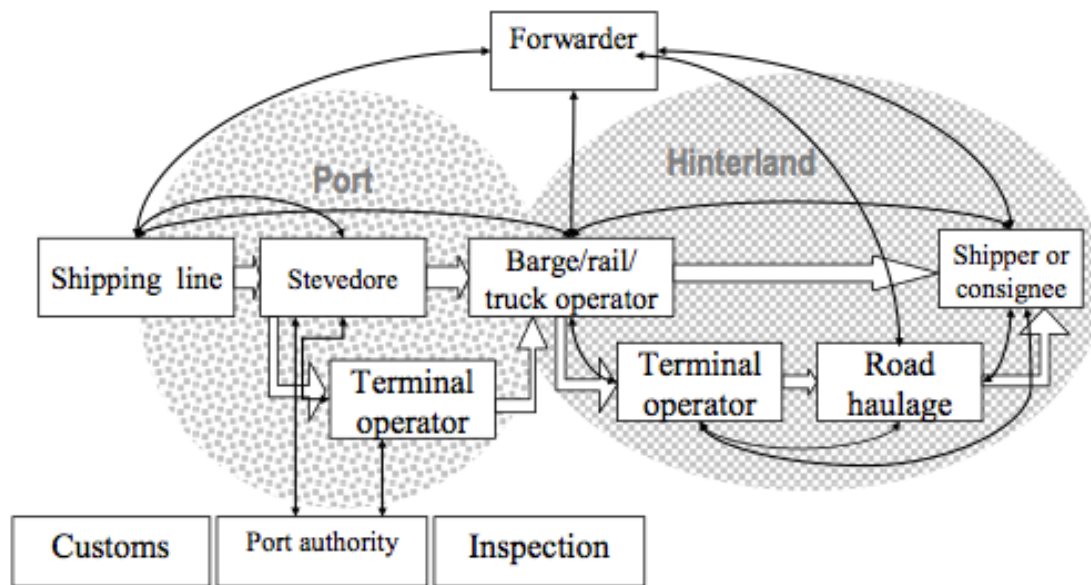
### **2.1 Background**

The freight-forwarding sector has always been a dynamic and evolving industry. There are number of causes for this dynamism such as advancements in Internet and communication technologies, globalisation and de-regulation. Collectively, they transformed the freight forwarding market into an extremely volatile market (Murphy and Dale, 2000). As increasing number of other logistics service providers such as 3PLs and NVOCCs now started providing similar services as traditional freight forwarders, the functional distinction of these organisations is becoming unclear (Markides and Holweg, 2006). In order to remain in business, the traditional freight forwarders have to evolve with the market and diversify their service offerings. Most freight forwarders are changing their operational structures and incorporating a broad range of services under one roof (Ozsomer *et.al.* 1993).

### **2.2 The Role and the Position of the Transport Intermediaries**

In a nutshell, the role of the intermediaries can be described as “linking of disjointed (and often incompatible) transport systems” (Potter and Skinner, 2000). Ports have long been envisioned as important clusters where economic activities including the value added logistics happen, however, most logistics facilities are often located outside the actual ports (De Langen, 2004, Van Der Lugt and De Langen, 2005). The transport intermediaries such as freight forwarders, port authorities, transport and terminal operators all contribute to improving the access to the hinterlands (De Langen and Chouly, 2004). Ports would be willing to enhance their hinterland connection as this plays a key role in their competitiveness (Notteboom and Winkelmans, 2004). The intermediaries have the role of helping to overcome the complexities and the “ coordination problems in hinterland chains” (De Langen, 2004). For instance, the forwarders actively reduce the coordination costs by arranging the right carrier at the right price and with the right legal documentation required for the transport of cargo. In addition, they are responsible for monitoring and the execution of these activities, making sure everything runs according to the plan (Ducruet and van der Host, 2009). It is efficient to use the dedicated forwarders to take care of these activities as it leads to cost savings. Considering that the hinterland transport costs make up a large part of total transport costs (Notteboom and Winkelmans, 2004), it is important to incorporate the forwarding function in to the transport process.

The position of freight forwarders in a traditional port-hinterland transport chain is demonstrated by the figure below.



**Figure 2 Organisational structure of port-hinterland transport chains**

Source: Van Der Horst and De Langen (2008).

The global forwarding is one of the four basic types of forwarding, namely, overland transportation which consists of mainly tracking and increasing amount of rail forwarding, global forwarding which consists of the international transportation of sea and air freight, contract logistics which has the role of coordinating different parts of supply chains, and integrators, which consist of door-to-door and express service operators (Hanke, 2012).



### 2.3 The geographical and economic rationale for freight forwarders

When distinguishing the roles of different players within a transport supply chain it is important to understand the relationship between the amount of physical involvement of service providers with the economic rationale they seek to carry out their tasks. Figure 4 below provides a graphical representation of this relationship and presents differing levels of physical and organizational operations carried out by different types of logistics service providers.

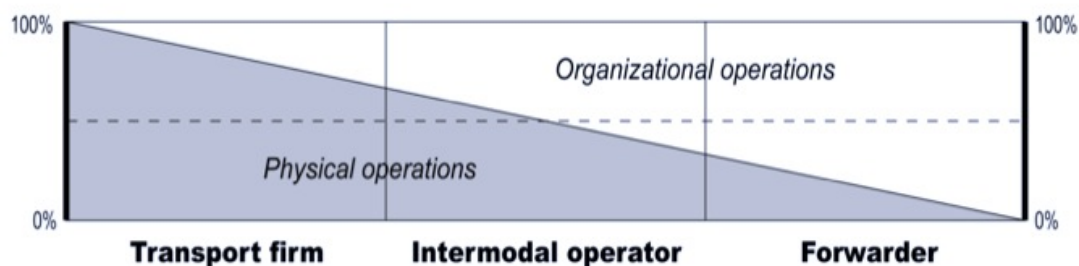


Figure 4 Main economics rational of the three types of firms

Source: (Ducruet and van der Host, 2009)

The traditional forwarders are mainly responsible for the organisational issues and do not own a lot of physical assets. The transport firms on the other hand, are mainly represented by the physical operations they take care of such as the road transport by trucks, sea/river transport by barges and rail transport. The intermodal companies lay in the middle of the spectrum, and they are known to vertically integrate different operations within a transport chain (Ducruet and van der Host, 2009). In fact, one of the main reasons for the existence of companies of this nature is “to overcome different types of separations between transport modalities” (Keller, 2004).

The traditional freight forwarders are reported to be a relatively footloose intermediary (Ducruet and van der Host, 2009). This can be explained by the fact that they are quiet asset light, taking care mostly the organizational operations. Although it is not necessary for the forwarders to be present in the port cities, being located in a port cluster allows them to save costs as well as giving them a more convenient position to act as “bridging tie” (De Langen, 2004). In the Netherlands, the non-asset owning forwarders will have a particularly important role due to Port of Rotterdam’s strong position in the region as well as for the logistics sector. Here, there is a necessity for the intermediary service providers and a freight forwarder located in this area will certainly be advantageous (Ducruet and van der Host, 2009). It goes without saying that the forwarders are more likely to be attracted to ports that have thick and varied flow of commodities of large volumes. Another important indicator for a forwarder is a port’s position at the transport chain. If a port is one of the first ports of call, this port will be more attractive for the forwarders specializing in consolidating imports. On the other hand, an export consolidator specialist will be more in favor of being located near a port that is usually the last port of call (Ducruet and van der Host, 2009). There are however many more factors that can influence a forwarder’s decisions to be located in a port region. For instance, most forwarders will prefer to be based in a country where the tax climate is more positive. The efficiency level of the customs procedures is also an important

factor to forwarders, as customs clearance forms an important part of the forwarding business (Ducruet and van der Host, 2009).

In addition to the reasons why the freight forwarders would be willing to be located in a certain area, it is important to understand why a region has the incubating characteristics and whether there is a necessity for the freight forwarders' offerings. For instance, a well-developed and efficient application of ICT at a customs authority may reduce the necessity for a forwarder in the region. Similarly, the local labor climate and transport chains expertise can also deduce as well as increase the necessity for freight forwarding services. Lastly, the level of liberalization, in terms of a company's openness to vertical and horizontal integration can also have an impact as these may potentially present a legal and institutional entry barrier for a freight forwarder's entry in a seaport or in a transport chain (De Langen and Pallis, 2007).

### 2.3.1 Financial Structure of Freight Forwarders

Forwarding businesses have long been associated with relatively low profit margins and are reported to be very sensitive to declines in revenue. The diagram below showing the typical profit and loss account of freight forwarders can help us understand why they need to be sensitive to the declines in revenue.

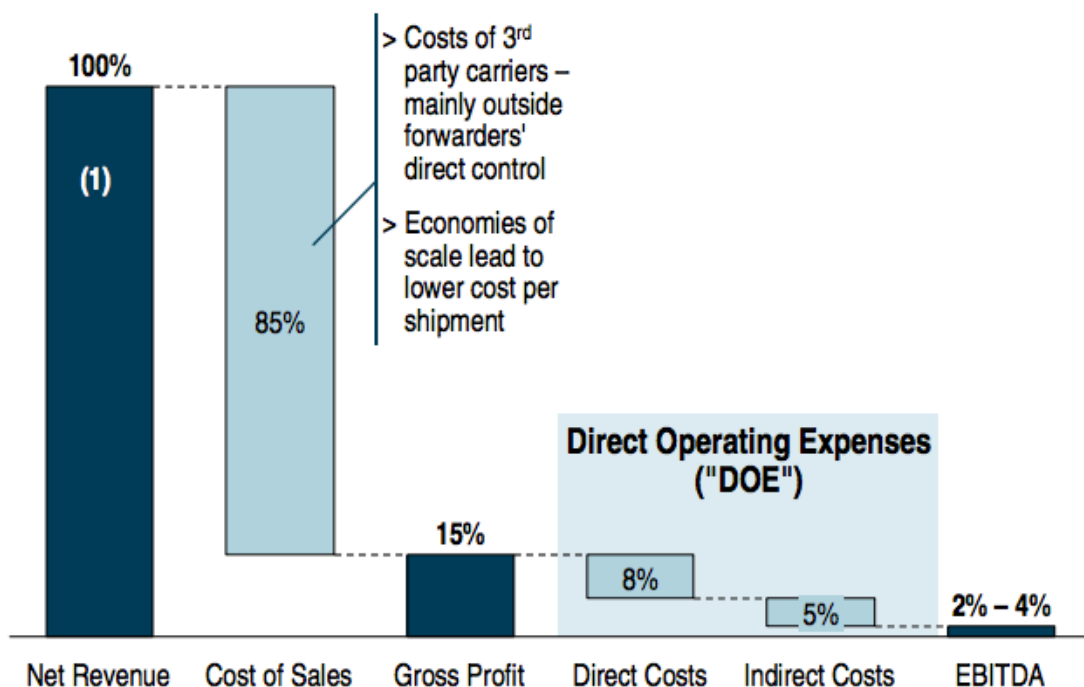


Figure 5 Typical freight forwarder Profit and Loss (illustrative)

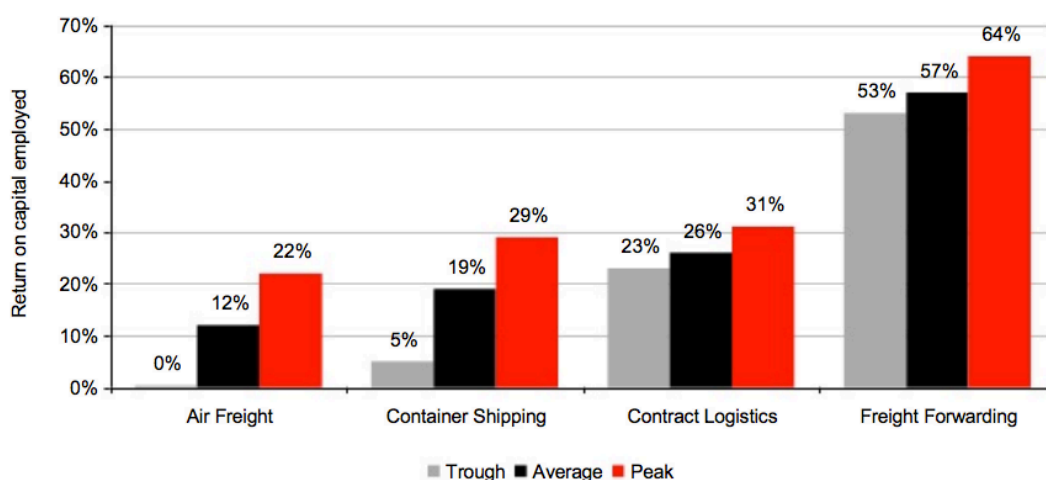
Source: Source: Hanke, Roland Berger Strategic Consultancy, 2012.

In the chart above, it is clear that there are limited sets of things freight forwarders can do to increase their profitability (Hanke, 2012). First of all, they can try to increase their net revenue, this can be done by selling more of their products/services, or by introducing new services which can also be associated with



a service diversification strategy. Secondly, they can try and decrease the cost of sales, which makes up the majority of their expenses as demonstrated in Figure 5. The cost of selling their products/services is incurred from using the 3<sup>rd</sup> party carriers as well as their own means of transport for the carriage of goods. Since the freight forwarders generally do not have any direct control over the operations of the 3<sup>rd</sup> party carriers, they need to focus on carrying out their own tasks more efficiently and for less cost. This can be done by achieving economies of scale within the organization which can eventually lower the costs per shipment. Lastly, they can try reducing their direct operating expenses that consists of the direct and indirect costs they incur, however this will not have such a great impact as the methods stated earlier (Hanke, 2012). It is important to mention here that one of the main benefits of taking on service diversification is to benefit from economies of scope and due to this reason, pursuing such strategies could be of interest for IFFs.

Although the profit margins of traditional IFFs seem to be rather low, it must be noted that IFFs, due to their asset-light nature, generate more return on capital employed when compared to the other transport segments such as air freight, container shipping, contract logistics (American Shipper, 2008). Figure 6 below demonstrates the favorable position of IFFs in terms of return of capital employed performance when compared to other sub-segments. As presented below, the freight forwarders clearly demonstrate a better ROCE performance due to their asset-light business models.



**Figure 6 Return on Capital Performance Comparison, 2000-2006**

Source: American Shipper (2008)

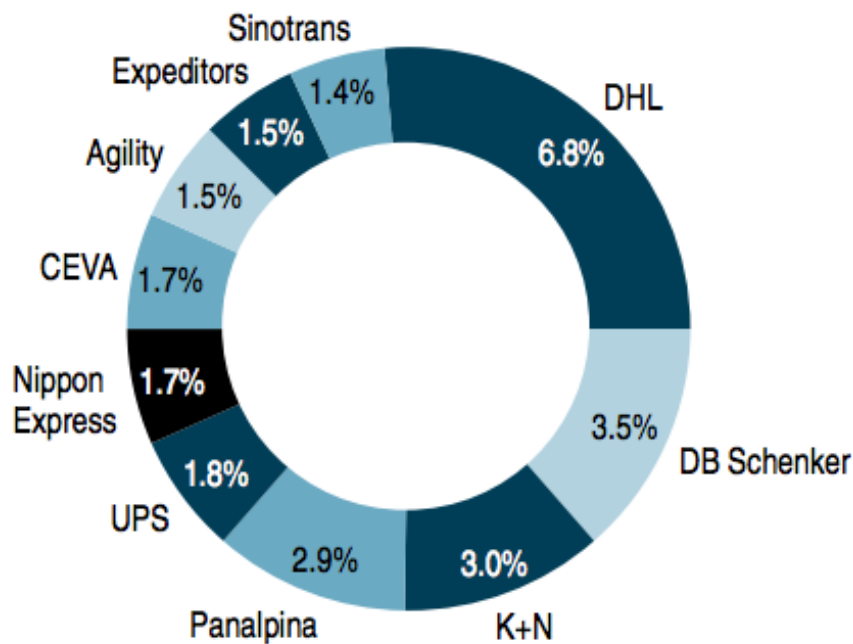
## 2.4 Market structure and Firm size

In 1998, it was reported that 80% of all the goods in the EU were being transported by the land-based freight forwarders (Burckhardt et al., 1998). In 2010, the total value of the European freight forwarding market was estimated to be around €32 billion accounting for 32% of all the global freight forwarding activity, making Europe the region with the busiest forwarding activity in the world (Businesscoot, 2012). This makes the freight forwarding one of the most important sectors in the EU that is larger than the European pharmaceuticals, textiles and paper sectors (Burckhardt et

al., 1998). The freight-forwarding sector is dominated by a handful of large freight forwarders that are remarkably larger in size as well as in the market share owned. The remainder of the industry is made of smaller companies with less than 50 employees, which still make decent profits in relation to their sizes. Globally, the key players in the forwarding related market segments are DHL, K+N, and DB Schenker, while the rest of the market is shared by the smaller companies. Accordingly freight forwarding is a very fragmented market (Hanke, 2012). The firm size is however an important determinant of the type of strategy pursued by the forwarders (Schwartz, 1998). The freight forwarding market has relatively low market entry barriers, as it requires little expertise and low capital investments. However, there is a very low entry rate in to the market (Gillis, 1996). The reasoning for the low market entry barriers is due to the fact that typical IFFs have asset light business models (Joynson *et.al.* 2010). However, it must be noted that different IFFs have differing business models, which can be classified into two different types. The first type is the traditional IFFs that are asset light operators and generally do not own or operate transport vehicles and do not perform the actual carriage of freight, and organise the carriage to other parties. An example of an IFF of this kind is Panalpina, which is considered to be the purest asset light forwarder. The second type is the asset owning forwarders, also known as hybrid operators, that run their own transport vehicles as well as sub-contracting the carriage activities to other parties. An example of a hybrid type forwarder is Kuehne and Nagel. They have an asset light model for forwarding operations but have also developed an extensive fleet of trucks for road-based networks in Europe (Joynson *et.al.* 2010).

As mentioned earlier, the forwarding industry is divided into four main categories, overland transportation which represents the trucking and rail forwarding, global forwarding which consists of sea and air freight, contract logistics and integrators (Hanke, 2012). Each of these markets cater for the same need in their cores; they use different means of transport to get the job done. Naturally, each of these markets have differing operational characteristics and different companies will have the competitive edge in different markets.

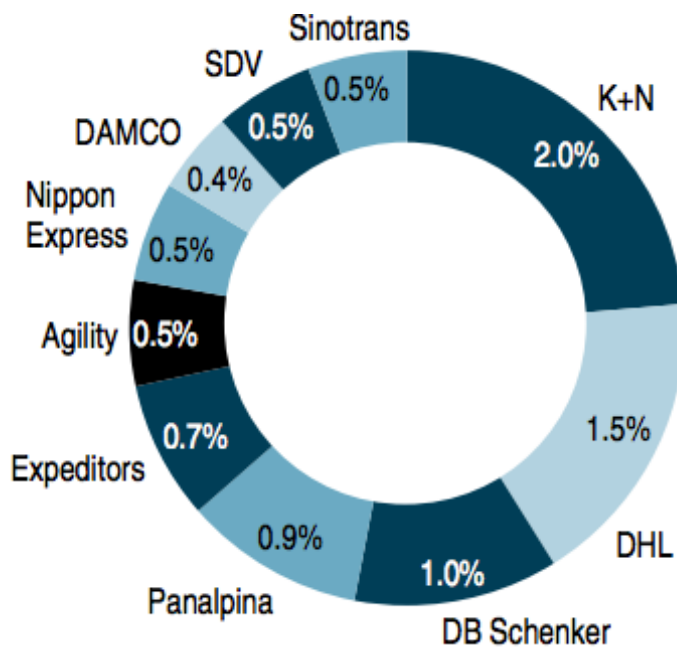
The global leader in the Airfreight market is DHL and their market share is more than the total of the next two biggest competitors (Hanke, 2012). The figure below demonstrates the division of market share in the air freight market.



**Figure 7 Airfreight - Market Share**

Source: Hanke, 2012

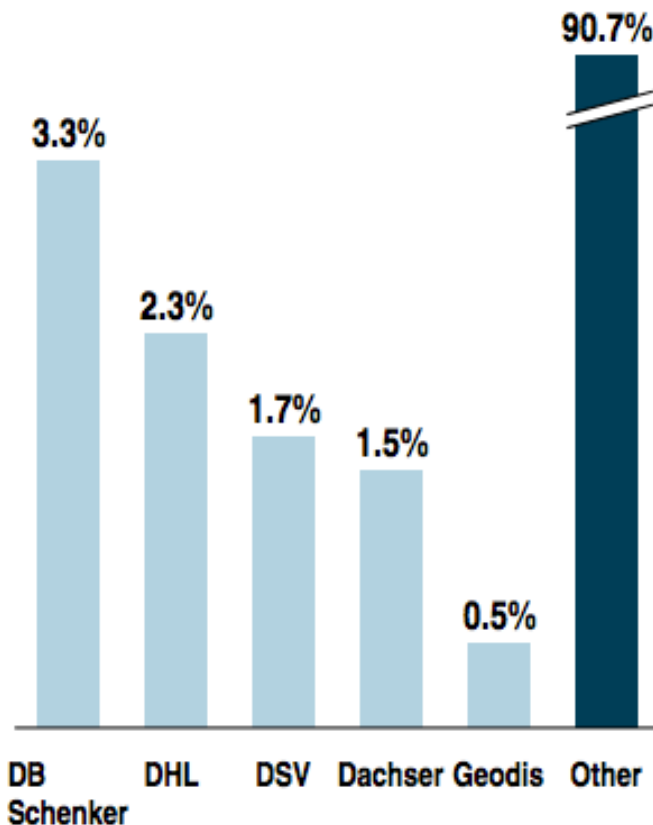
In the ocean freight sector, Kuehne and Nagel (K+N) is the current leader, followed closely by DHL and DB Schenker. Similar to the airfreight sector, Panalpina is closely following the three biggest shareholders of the ocean freight sector. The figure below demonstrates the division of market share in the ocean freight market.



**Figure 8 Ocean Freight - Market Share**

Source: Hanke, 2012

The overland market, which is made of the road and rail freight markets, is even more fragmented in its nature than the ocean and air freight markets. The five biggest players in the market (descending order), DB Schenker, DSV, Dascher and Geodis together own only less than 10% of the overland transportation market share (Hanke, 2012). The market is very fragmented and the rest of the market share belongs to small-sized companies. The figure below demonstrates the overland market shares for the European market.



**Figure 9 Overland transportation - European Market Shares**

Source: Hanke, 2012

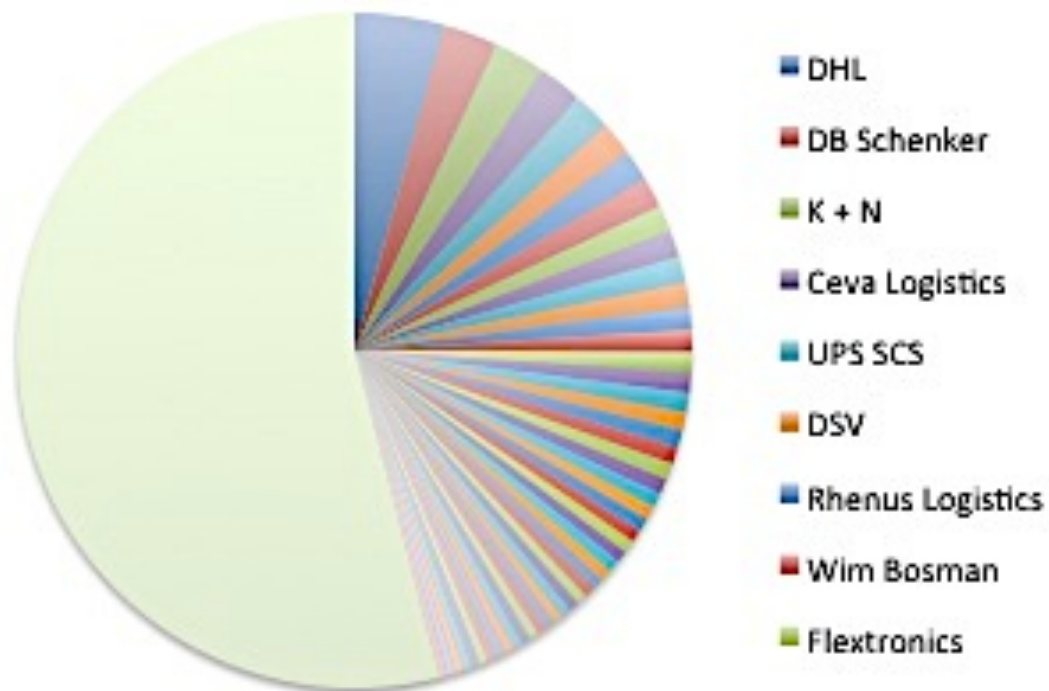
The overland transportation market is known to have a very competitive environment that is characterized by the “low product differentiation”. The basic transportation service is taken care mostly by local haulers in addition to the large international players that are active globally. Since the product/service in the overland transportation market is fairly homogenous, different companies in the sector can only compete with the prices they set for the homogenous service they provide (Hanke, 2012). The companies who are willing to improve their competitiveness by charging lower prices need to focus on improving their “process efficiency” and reducing their “network cost” (Hanke, 2012). This means that they need to improve all processes making up the transport chain. For this purpose, they will need to reduce their asset costs, reduce operational costs such as the cost of drivers and reduce the terminal operation times which IFFs usually have little direct control over. Another strategy to improve the profitability is to offer value-adding services, which is a kind of differentiation strategy (Hanke, 2012). This will give the companies an opportunity to either raise their prices or to offer more value to the

customers in the market where the products are mainly homogenous. The large multinational players in the field are known to offer these value adding services. Their power allows them to have more control over their transport chains as well as to diversify their value adding service offerings.

## ***2.5 The IFF Sector in the Netherlands***

The importance of transport and logistics services in the Netherlands is not only apparent for the domestic market but for the whole of Europe. In 2012, the total value of the transport and logistics sector was estimated to be €42 billion, boasting a workforce of 750,000 employees directly or indirectly employed in the transport and logistics sector (Dinalog, 2012). While the €39 billion of the yearly GNP generated from the sector derive from the operational logistics, which consists of the actual carriage, transport and distribution of freight, a GNP of €3 billion is generated solely from the organization, direction and coordination of logistics operations (Dinalog, 2012). The range of services offered by the IFFs and hence the GNP contribution of their activities can often contribute to both of the sub-sectors mentioned earlier. Therefore, it is rather difficult to determine the exact GNP generated solely by the operations of the Dutch IFFs. What can be stated for certain is that the actual carriage of freight is more of a “standardized” operation where the profit margins are not very attractive and subject to a lot of volatility for a number of reasons. The coordination and the organization of such operations generally allows the generation of higher profits in the Dutch logistics sector, allowing high profit margins from providing value adding services which requires effective and clever organizational design but rather limited infrastructure investment.

Similar to the UK IFF market, the Dutch IFF market is very fragmented in its nature. The Dutch IFF market is made out of a handful of very large multinationals, considerable number of middle sized IFFs that is ranked in the top 50 largest IFFs in The Netherlands, and the rest of the market is filled by many smaller IFFs. The market is dominated by very large IFFs such as DHL, DB Schenker, Kuehne + Nagel, Ceva Logistics, UPS, DSV and Rhenus. Other companies which have a considerable amount of market share are Wim Bosman Groep, Flextronics logistics, Norbert Dentressangle and Geodis (Bijlage Logistiek Magazine, 2012). As demonstrated in the figure 10 below, the market share occupied by the 50 largest IFFs in the Netherlands accounts to less than half of the market, where even the largest of the IFFs DHL only owning 4% of the total market, confirming the fragmented structure.



**Figure 10 IFF market share structure in the Netherlands**

Source: Own elaboration based on data presented by Bijlage Logistiek Magazine (2012)

The results of this research re-confirmed this structure. The market is very fragmented where the most firms operating in the sector are small sized IFFs, where the rest of the market is shared between the multinational players.

## **2.6 Product/Service Diversification in the Dutch Freight Forwarding Sector**

In the context of freight forwarding, diversification is one of the main responses of companies to the volatile business setting and the on-going trends in the sector. As a strategy, companies that are larger in size more often pursue diversification. Many international forwarders now provide an extended range of logistics related services such as warehousing, customs house broking, insurance, consultancy and additional value adding activities such as packing, labeling and palletizing.

Freight forwarding companies are aware of this new developments happening in the sector and are changing to be able to capture some of the market share. One of the strategies pursued by some of the larger freight forwarders is to diversify by mergers and acquisitions. For instance, the acquisition by Danzas of AEI and Fedexs' acquisition of Tower Group international which specialized in customs brokerage, warehousing and international freight forwarding (Murphy and Daley, 2000). Mergers and acquisitions could help satisfying customers' demand for one-stop services. The merger of Eagle Logistics (domestic) and Circle International (international) is an example of pooling of expertise and capabilities (Krause, 2000). The existence of this trend is also evident in the Dutch IFF scene, such as the acquisition of Wincanton by JCL Logistics, Gebr. Huybrechts by Bakker Logistics and Van Opzeeland by Nabuurs (Jorritsma, 2012).

The desk research done as part of this thesis confirms that the IFFs based in the Netherlands do have diversified service offerings. This thesis will serve the purpose to confirm whether this statement holds true after making a thorough study of the market.

## **Chapter 3 – Industry Trends and Market Outlook**

### ***3.1 Trends in the IFF sector***

The changing trends were identified by Murphy and Daley (2000) as the globalisation of production, deregulation and dismantling of institutional obstacles to competition, increased competition between transport modes, technological change and the outsourcing of the logistics function. The new business setting proved to be beneficial for the 3PL providers as it could offer much more personalised service that could be tailored to fit the customers' supply chains. They offer added value services such as "procurement, inventory and warehouse management, order management, packing & repacking, labelling & relabeling as well as IT support" (Lai and Cheng, 2006). In addition to the general trends, more IFF specific trends such as the yield decline and vertical integration will be discussed.

#### ***3.1.1 Development of IT***

The recent developments in the Internet and communication technologies had impacted the way we live, communicate and do business. The customers nowadays can easily access most of the information that was only available to the IFFs, before the ICT technologies were developed to the current extend. The modern IFFs as well as the other transport intermediaries have been facilitating the advanced technological networks to increase the accuracy of their data processing, speed up the transfers and increase the seamlessness of their complex supply chains. They not only make use of IT to improve their efficiency, but transform the new developments to added value services by offering online tracking of vessels, containers and parcels in transit. A UK study among the freight forwarders operating in the UK reported that the IT technologies most significantly improved the data processing and the overall control and security of the operational data (Hardaker et al, 1994). Improvements in the operations and more accessible information available meant that the customers were more satisfied with the services offered by the companies that used IT in their operations at the time this paper was published. The paper concluded that IT systems reduced the operations costs, improved product and market awareness as well as improving market reactivity, thus gave a competitive edge to the companies (Hardaker et al, 1994).

The outlook for IT points towards the emergence of a global IT standard in logistics that would improve the communication efficiency between different logistics service providers (Hanke, 2012). Studies conducted in the field also claim that numerous proprietary IT standards are expected to develop by year 2015. Resulting from the competition among logistics service providers, the propriety IT systems are prospected to be critical for achieving improved "process efficiency" and realization of value adding activities such as service innovation, product/service differentiation and customization (Hanke, 2012). The service differentiation examples using IT can already be seen in use in the market. For instance, the "capacity platform" which is a dedicated shipper interaction platform is able to automatically calculate prices, and works in a similar fashion to online plane ticket booking systems (Hanke, 2012). The adaptation process for proprietary systems are expected to be particularly difficult for smaller logistics service providers since the development of such systems often requires a lot of resources. However, the smaller service providers need to ensure that they are compatible with at least one of the new IT standards as this could have



a big impact for their survival. IFF is a sector with a lot of market fragmentation where there are many smaller logistics service providers who may not have the resources and capabilities required to develop IT systems. Due to this reason, the leading IT service providers such as Oracle and SAP are likely to be competing to provide their IT packages for the smaller forwarders as well as the large multinationals in the sector (Hanke, 2012).

### 3.1.2 Globalisation vs Regionalization

In the context of maritime transportation, globalization describes the trend of international trade that is outgrowing the world's GDP. Together with the trade of the finished goods and services, there is also a demand for the raw materials, components and the manufacturing systems that are used to provide finished goods and services (Kumar and Hoffman, 2002). Considering the fact that 90% of all the cargo in the world is transported by sea, the facilitating role of maritime transport and the important role of transport intermediaries such as IFFs are evident (International Maritime Organization, 2006). Maritime transport is likely to keep growing in the foreseeable future as demand to transport goods will always be present. Together with more liberated regulations, more developed Internet and communication technologies and increased international standardization, transport is contributing to the ease of trade of merchandised goods and raw materials (Kumar and Hoffman, 2002). Figure 11 below shows the positive relationship of world's GDP and export growth in trillion million Euros. Both exports and world's GDP are expected to grow at a reasonably high rate and in 2030 the value of exports are expected to almost fourfold reaching 51 trillion Euros. It is important to explore the forecast of world's GDP as well as world's exports as they are the two most important factors that can influence the demand for transportation services and the size of the transport sector as well as being an important driver of globalization (Hanke, 2012).

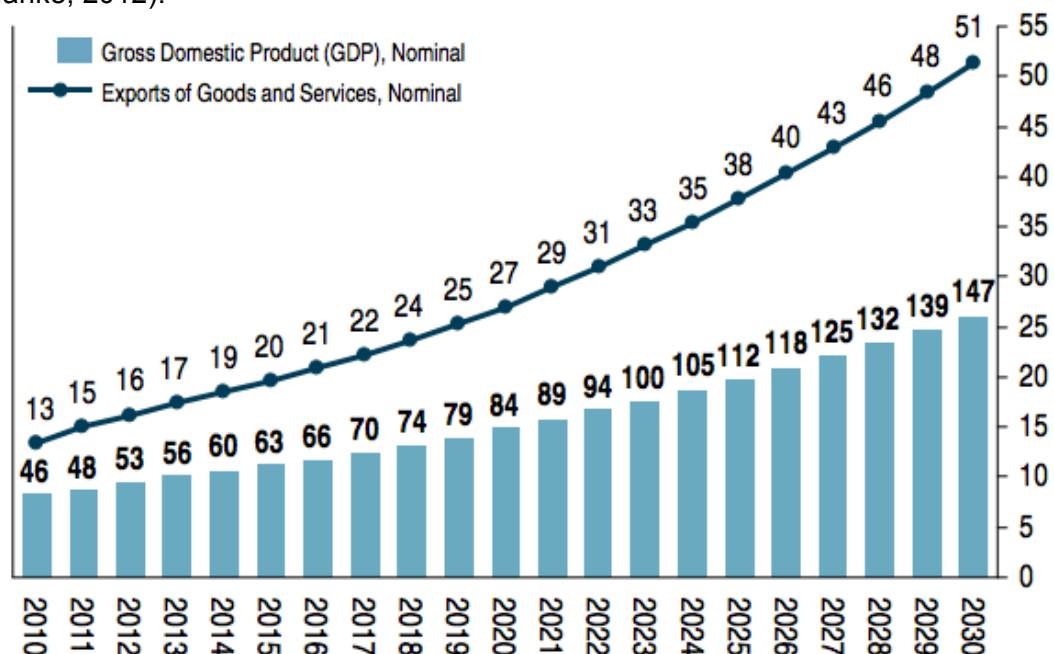


Figure 11 World GDP and Export Growth [Euro, trillion]

Source: Hanke, 2012

As products and services become more homogenous, companies are constantly looking for ways to differentiate themselves and their offerings from their competitors. The foreign competition that the firms face due to globalization is most likely to have an influence over the international diversification strategy pursued by a company (Wiersema and Bowen, 2008). The international competition impacts the firm level diversification strategies as the foreign companies push the domestic companies to become more productive and efficient (Chung, 2001). In some cases, the increased competition can force the marginal firms out of the industry increasing the overall domestic productivity (Caves, 1996). It is important to mention that product diversification and geographic diversification can be seen as two conflicting expansion strategies (Wiersema and Bowen, 2008). In other words, the firms that have a higher level of product differentiation can face limitations when developing international competitive advantages due to the resource and managerial constraints they face (Wan and Hoskisson, 2003). This pressure on the companies' key resources is a limiting factor to a firm's ability for geographical expansion (Wiersema and Bowen, 2008). The pressure related to globalization is also apparent in the Dutch IFF industry where the companies are becoming more diversified in terms of the services they offer. While the majority of the market share belongs to few large multinational players who have the well-connected worldwide networks and systems which allows global reach as well as product diversification, dedicating a large part of the company resources to various product diversification activities is a limiting factor for the geographical expansion of many of the smaller firms.

Although globalization is still an ongoing trend, there are discussions regarding whether this trend will continue or will there be a new moment towards regionalization. Regionalization or localization refers to the manufacturing of goods and services closer to their final destination (Luca, 2003). The arguments pointing towards an increased regionalization are in line with companies' efforts to cut costs, reduce their environmental impacts and design supply chains fine tuned for their needs (Hanke, 2012). For instance, the rising energy prices favour the regionalization trend as the geographically shorter flow of goods and materials are preferred when the oil prices are high. In the past, the minimum wages of production labour in Asia was considerably cheaper which supported the remote production of goods/services (Hanke, 2012). However, since these remote economies got stronger, the labour wages have been on the rise, eliminating the incentive to move the production to remote locations.

The increased awareness on sustainable and more environmental business practices are also in favour of regionalization as the customers will prefer to buy locally produced goods/services. The trend is also supported by governmental regulations which points towards more localized production. However, this may not always be possible, since production requires a lot of resources such as raw materials, skilled labour, water and energy, and these resources may not always be available locally (Hanke, 2012). Lastly, more and more companies are adopting modern supply chain systems such as "just in time delivery", which requires very fast response times and a lot of flexibility. The modern markets now require more innovations which often require shorter and faster supply chains structures (Hanke, 2012).

### **3.1.3 Deregulation**

#### ***Deregulation in ocean shipping***

The conference system has been the long established mechanism involving formal agreements between shippers. The formal agreements concern setting prices and allocating capacity for the trade routes, pooling profits and managing capacity. The conference system is particularly established in the liner-shipping sector where the liners operate as common carriers (Sjostrom, 2004). This is one of the reasons why the IFFs which act as intermediaries in the sector are heavily impacted by the deregulation happening in the sector. Conferences cover a large number of the world's trade routes and often have the majority of market share dominating the trade routes (Sjostrom, 2004). The conferences act as the self-governing mechanism of the shipping market and have adequate freight setting and capacity allocating mechanism. The shipping market has the characteristics of a sector which is suitable for incubating such a practice. The fact that the conference system has been around since 1870s transformed this practice to be the industry norm (Sjostrom, 2004). They make the entry in to the industry relatively easy and are accepted by the majority of the customers (McConville, 1994). However, the conference system has been accused of acting like cartels, due to its monopolistic behavior and the benefit they receive by making use of economies of scale ultimately leading to a fewer number of firms being active in the industry (Marshall, 1921). Containerization has been one of the revolutionary events transforming the way the general cargo is transported. It not only allowed immense cost savings and increased efficiency; it also led to the development of intermodal means of transport (Palmer and DeGiulio, 1989). The seamless transport networks offered by multiple means of transport led to the development of innovative logistics concepts such as "just in time logistics", "total logistics" and "one-stop logistics concepts". The extensive multimodal logistics led the transport intermediaries such as IFFs to provide more developed through-transport and logistics services, leading to the development of a new service sector (Sagers, 2006).

The Shipping Act of 1984 ruled that conferences, which were referred to as "price-fixing cartels," are exempted from anti-trust laws as the characteristic problems in the sector, the cost and the overcapacity problem, could only be addressed using horizontal collusion (Shipping Act of 1984). The legal deregulation efforts were continued with the introduction of the Ocean Shipping Reform Act (OSRA) of 1998, which was significant for establishing that the Ocean shipping was a free market (Sagers, 2006). The OSRA not only helped reducing the transparency rates of the freight rates but also "reduced Federal Maritime Commission's (FMC) cartel enforcement role" encouraging "the offering of customer-shipping services that are differentiated in terms of quality and price" (Reitzes and Sheran, 2002, p.56). The carriers, however, have always argued that they would not be able to survive in a market where there is high competition (Pirrong S.C., 1992). In 2008, following a 2-year grace period the European Commission decided to repeal the block exemption for anti-trust on the liner conferences. This meant that the cartel like activities such as price fixing and capacity regulation was now illegal (Wong, 2009). As the competition in the liner shipping increases, the increased competition also impacts the IFFs that are one of the intermediaries in the maritime transport. Although it is unclear what the impact of the abolishment of conferences will have on the freight rates, it is certain that the market will not have the stability it used to have with conferences (Wong, 2009).

## ***Deregulation of European Freight Forwarding Industry***

The idea of a fully deregulated EU transport market can be a game changer for the freight forwarding industry forcing the traditional forwarders to expand their service offerings. As part of the deregulation, the firms will start showing a greater emphasis on efficiency and profitability that is likely to force some of the smaller and less competent firms out of the business. However, the forwarders that are more flexible to adapt and change can benefit from the new business opportunities that will arise (Burckhardt et al., 1998). From the customer's perspective, the deregulation is likely to be beneficial. They will enjoy better services at more competitive rates as part of freight forwarders' efforts to improve efficiency and competitiveness. This is particularly important as the business customers become more and more dependent on high service levels to keep running their sophisticated logistics systems smoothly (Burckhardt et al., 1998).

- ***Land-based freight forwarding (Trucking)***

During the pre-1988 period, freight forwarding was an industry that was regulated both nationally and internationally. The companies had a certain level of protection from competition, counting on the constrained fixed income they would receive as well as the operating restrictions that were in place. The taxes and labour regulations varied from country to country and domestic traffic was confined to the domestic haulers while the international traffic was regulated by the bilateral agreements between countries (Burckhardt et al., 1998).

During the years 1988-90, the first phase of deregulation has started, that immediately granted freedom to set prices for first international freight transport and later for national traffic. This was a major event during the time since it represented the opening of the international borders and reducing the entry barriers for new players in the sector. As the entry barriers diminished, many new companies entered the market, strengthening the competition. The bilateral quota agreements were replaced with EU quotas together with EU wide labor legislations that were put in place. The second phase of deregulation took place during 1990-93 and further liberalised the passenger cabotage allowing. The third phase of deregulation took place between 1993-98, and led to the full liberalisation of the freight cabotage and granted full freedom to set prices for domestic transport (Burckhardt et al., 1998).

- ***Rail freight forwarding***

Rail industry being a heavily subsidized industry, was one of the items on top of the EC's priorities as they declared in their 2001 White Paper (EC, 2001). The First Infrastructure Package was introduced as part of European legislators' attempts to liberalize the rail markets of central Europe (Ludvigsen, 2009). This package aimed to foster "the intra-rail competition, non-discriminatory access to rail networks, gradual enhancement of rail freight competitiveness vis-à-vis motorized conveyance" and decrease the socio-environmental damage caused by the dominant freight transport sector (Ludvigsen, 2009, p.49). The First Infrastructure Package came in three directives (2001/12/13/14/EC), the first directive (2001/12/EC) provided infrastructure access rights to private rail undertakings offering international freight services, separated accounts of passengers and freight operations, separated the function of train carriage and infrastructure capacity allocation, and formulated the principles for infrastructure charging and licensing of

new rail undertakings. The second directive (2001/13/EC) dealt with licensing of undertakings and the third directive (2001/14/EC) defined the rules for allocation of infrastructure capacity and levying of charges for the use of infrastructure and safety certification (EC, 2001).

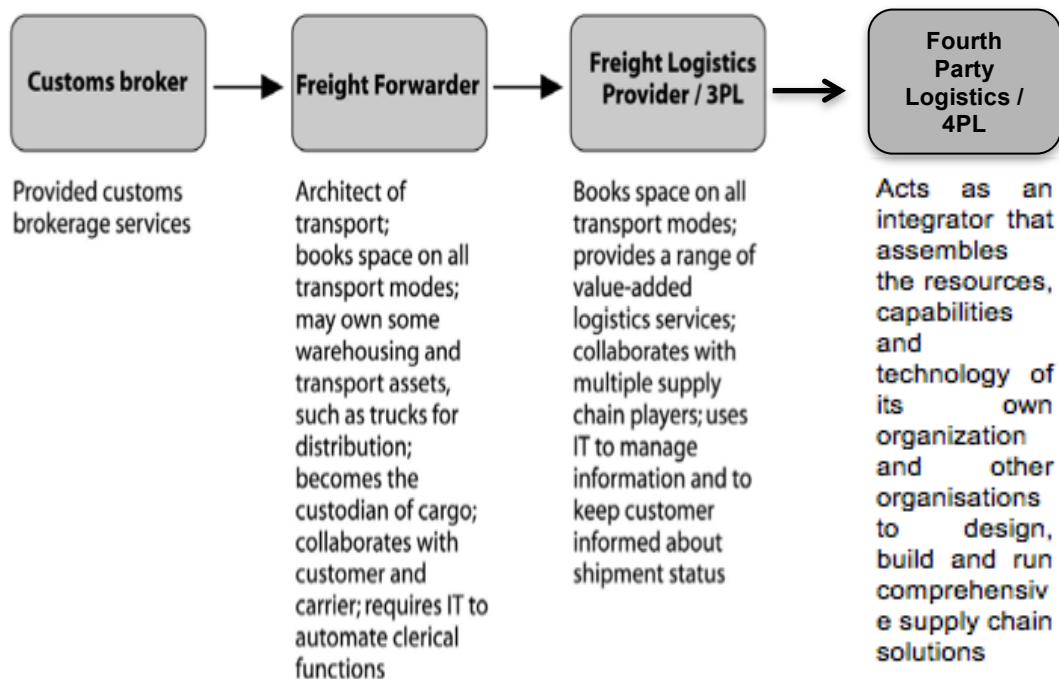
- ***Airfreight forwarding***

In 2007, the airfreight forwarding accounted for 30% of the global scheduled airline output (by weight) (Doganis, 2007). The airfreight sector has a particularly important role in today's time sensitive transport and supply chains ensuring and enhancing time-critical mobility of goods that facilitate access to broad markets. Air freight forwarders can be condensed into few main groups. Firstly, the line haul operators who make use of the freight forwarders to deal with the customers and consolidate cargo, move cargo from airport to airport. The integrated/delivery/express/courier operators are the ones who are capable of offering time definite door-to-door services. Finally, the niche operators offer specialised equipment and expertise to cater for the specific needs of customers. The airfreight market is growing and the deregulation and liberalization of the market is one of the contributors of this growth (Reynolds-Feighan, 2011). As part of the of Business Aviation Vision 2025, the freight markets are expected to be further liberalized and deregulated, increasing the competition, improving service quality and providing new growth potentials (Linz *et.al.* 2011).

The review of the current trends influencing the IFF industry is particularly important. The first trend, globalization, is one of the main drivers of global demand for products and services, which ultimately needs to be transported by carriers while the IFFs facilitate this process. The deregulation and the liberalization of the markets provide the necessary legal and regulatory setting which fosters the development of the freight-forwarding sector by increasing competition and the service quality in the sector. As part of the IFFs efforts to remain competitive, they tend to offer more varied and specialised services, matching the needs of today's modern businesses, which have very sophisticated supply chain structures. The efficiency, variety and the capability of providing a well-managed cargo transport service is facilitated by the developments on the internet and the communication technologies as well as advancements that lead to more efficient management of their organizations as well as the networks under their operation. With the joint influence of the trends currently happening, companies are choosing to diversify their service offerings, and use diversification as a company strategy to remain competitive.

The justification above supports the idea that freight forwarders are actively evolving from primitiveness and are becoming freight logistics providers. As part of their evolution, the modern IFFs are now acknowledging the importance of their value adding role in addition to their core business, which was traditionally limited to "procurement of international transport capacities" (Hanke, 2012). Figure 3 below demonstrates the direction the traditional freight forwarders are moving towards with their evolution. The figure as presented by Baluch (2006) exhibited the development of freight forwarders up to the third party logistics. There is, however, a new concept of logistics service providers, where organisations delegate the complete ownership of their supply chain activities and outsource this function from dedicated supply chain integrators known as the fourth party logistics providers (Concargo, 2012).

Figure 9 below is modified to represent this trend.



**Figure 12 The Freight Forwarder's Evolution**

Source: Original adopted from Baluch, I. 2006, updated using own elaboration.

### 3.1.4 Other Trends

There are further efforts of the large carriers and shippers to engage into vertical and horizontal integration strategies (Hanke, 2012). Porter defines vertical integration as “the combination of technologically distinct production, distribution, selling and/or other economic processes within the confines of a single firm” (Porter, M., 1980, p.9). Horizontal integration that is more complete and complex than vertical integration can be defined as integrating all the systems across different function groups under a single roof to support the business processes effectively (Layle and Lee, 2001). Within the context of global freight forwarding, the impact of integration could be felt mainly as a result of the carriers’ and shippers’ profit maximization attempts where they try taking over more parts of the supply chains. The diagram below demonstrates this phenomenon and shows how the companies who formerly carried out only the shipment leg now branch out to other parts of the transport chain.

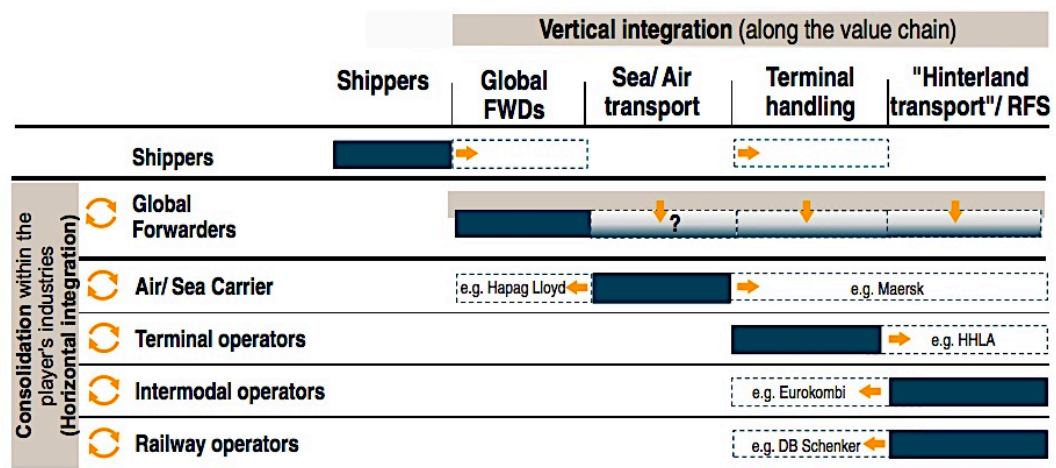


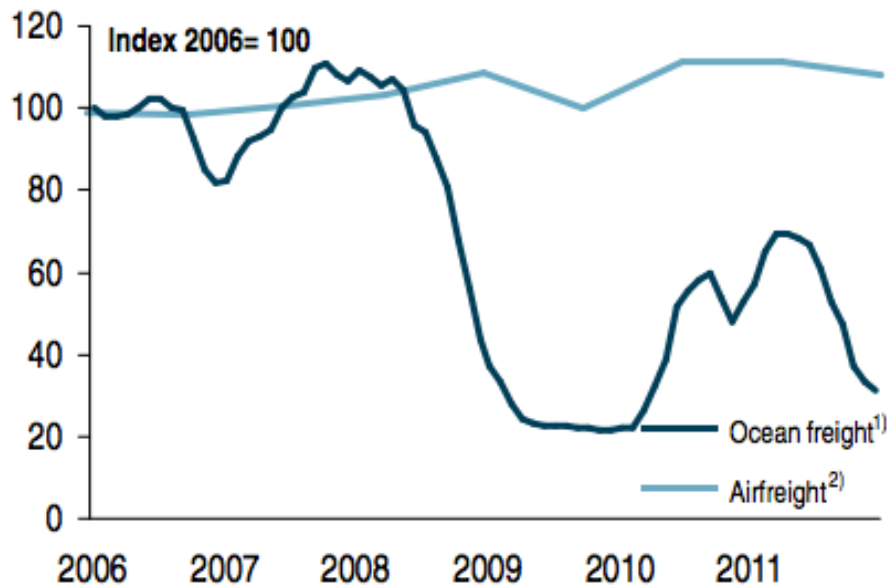
Figure 13 Vertical and Horizontal Integration of Shippers

Source: Roland Berger, Hanke, 2012.

Hapag Lloyd that traditionally provided the sea/air carriage leg of the transport chain can now also serve their client with their in-house forwarding service, competing with the global forwarders. Similarly, Maersk, who is the biggest container carrier in the world, is not only operating its own dedicated terminals and handling its vessels in-house, but also managing the hinterland transport leg of its transport chains. DB-Schenker which specializes in the rail-freight within the hinterland transport leg have also become more horizontally integrated and is now handling its own terminals (Hanke, 2012). The modern global freight forwarders are now more and more vertically integrated and have to provide services that they traditionally did not and that are more value adding which is in line with one-stop shopping concepts. Although it is not easy to say that this trend is going to be long lasting, the vertical/horizontal integration is happening and the current business climate requires the conjoint application of integration and differentiation strategies to improve profitability.

## Yield Decline

The "yield" can be defined as the profit received from each unit moved (Hanke, 2012). When discussing yield decline, it is important to understand the price developments happening in air and ocean freights. The diagram below demonstrates these developments starting from 2006. As demonstrated, there is a sharp decline in the air and ocean freight rates. The first reason for this sharp decline is the global economic crisis, more specifically the global "credit-crunch" which was one of the sharpest economic downturns in the history. As the world economy dipped, the global trade was heavily effected and this had a direct impact on the freight rates. The second cause contributing to the sharp decline of 2008 is the abolishment of the conference system and the ever existing problem of "over-capacity" that is apparent in the maritime freight transport sector. There is a very large difference between the cargo carrying capacity of ships and the demand for maritime transport, where the supply of cargo carrying capacity is much larger than the demand for such services. The abolishment of conference system in maritime freight transport increased the volatility of the freight rates, making the business climate of maritime transport even worse.

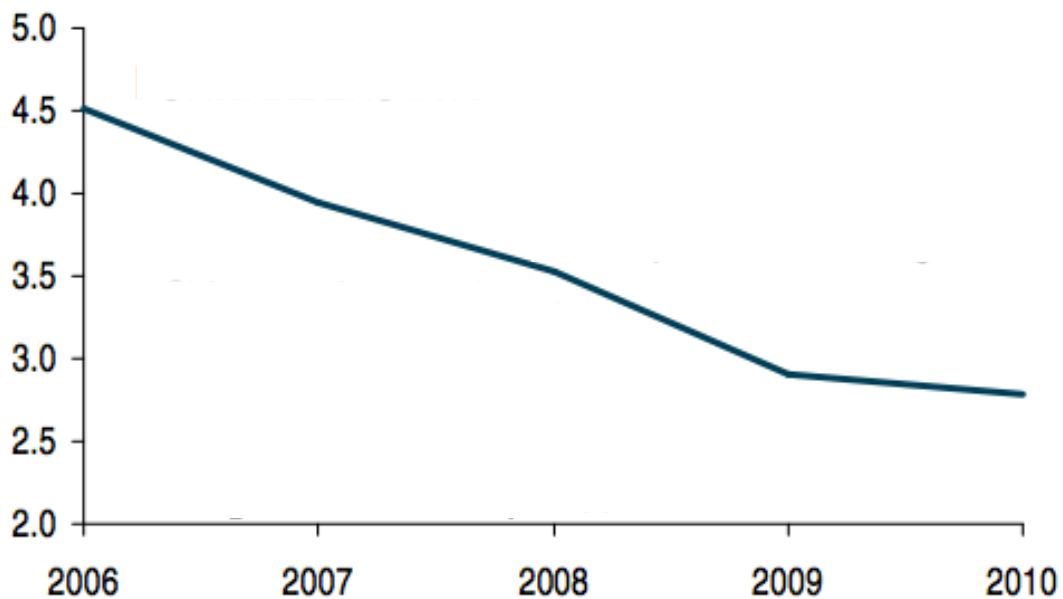


**Figure 14 Price Development Index for Air and Ocean Freight**

Source: Roland Berger, Hanke, 2012.

1) Harpex container price index 2) IATA global air cargo revenue compared to volume.

As demonstrated below, the ocean freight rates have been on a decline starting from 2005. While the airfreight remained more stable over the years, it has remained higher when compared to ocean freight rates, which could be explained by the increasing oil prices, which are being reflected on the airfreight rates by the carriers (Hanke, 2012).



**Figure 15 Yields for Global Freight Forwarders (EBIT RoS-margin, %)**

Source: Roland Berger, Hanke, 2012.



The implications of declining freight rates can be critical for the forwarders. On the other hand, the forwarders would benefit if the rates were on an incline (Hanke, 2012). However, the forwarders are subject to further pressure from shippers as they are also affected by the volatility of the economy and they tend to pass on the pressure to the forwarders who they buy services from. On the other hand, carriers exert further pressure on the forwarders as they try to address the overcapacity problem in the sea and airfreight markets, impacting the profit margins of the forwarders even more (Hanke, 2012).

In addition to the argument above, there is another important issue concerning the freight rates and the resilient profit margins of freight forwarders arising due to the nature of the freight forwarders function. Since freight forwarders generally don't operate aircrafts and sea-going vessels, they are dependent on the carriers who have the actual control on the freight rates. Since they act as coordinators rather than actual carriers, a freight rate lag effect is existent in their prices as it often takes one or two months until they can reflect the increases in prices to their customers. This acts as a buffer and is actually beneficial for freight forwarders when there is an economic downturn (Joynson *et.al.* 2010).

## Chapter 4. Literature Review on Strategy and Diversification

### 4.1 Introduction

The following section will investigate the concept of diversification strategy in greater detail touching upon the strategy and service diversification domains and explore the added services offered by the modern forwarders of today. It will discuss the benefits and drawback as well as the impact of pursuing such strategies on firms' performance.

### 4.2 Strategy

Andrews defined in his book dated 1980 defined corporate strategy as “the pattern of decisions in a company that determines and reveals its objectives, purposes or goals, produces the principal policies and plans for achieving those goals, and defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be, and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers and communities” (Andrews, 1980, p.18).

During the same year, Michael Porter introduced the concept of three generic strategies namely, cost leadership, differentiation and focus (see Figure 4). These strategies represented the strategic positioning of firms at a very simple and broad level (Porter, 1980). It was pointed that a company needs to choose clearly which generic strategy they will focus on, in order to avoid getting caught in the middle and in the inherent contradictions of different strategies (Porter, 1980).

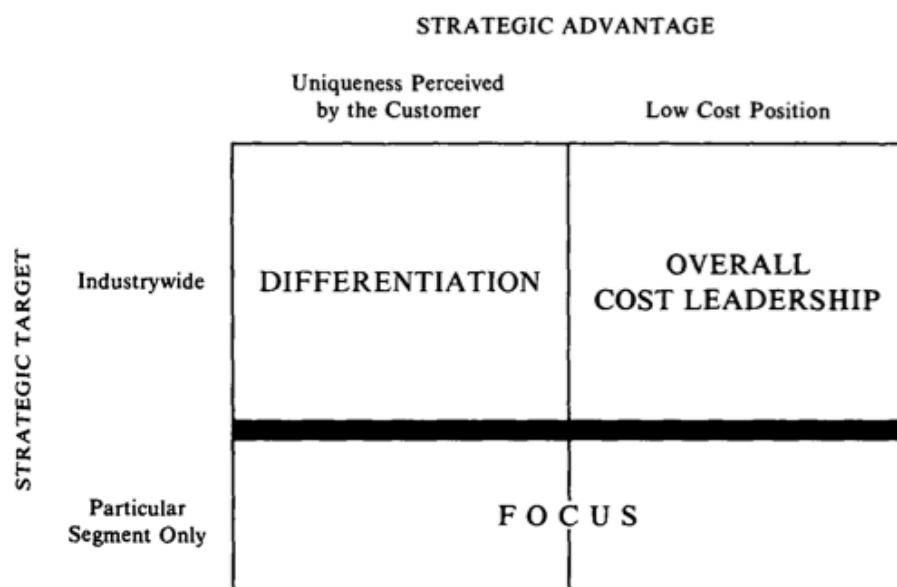


Figure 16 Three generic strategies

Source: Porter, 1980.

Companies show a lot of variation among themselves and this is what sets each company and their offerings apart from each other. The extensive set of activities required to run a company, to design and manufacture products and sell those products leads to different costs and prices that they each charge for the products/services they provide (Porter, 1996). As part of the process of companies' efforts to perform better and become more efficient, many management techniques were developed which resulted in operational improvements (Porter, 1996). It is however important to make the differentiation of strategy and operational effectiveness. Michael E. Porter famously stated "a company can outperform rivals only if it can establish a difference that it can preserve" (Porter, 1996, p.62). An operational improvement can be achieved, but it wouldn't be considered as a strategy if the differentiating factor of a company cannot be preserved. The strategic positioning of a company concerns the activities that a firm can perform differently than others or a company can perform a similar task in a different way (Porter, 1996). In its core, a company strategy is about being different and "deliberately choosing a different set of activities to deliver a unique mix of value" (Porter, 1996, p.64). A companies positioning can be focused on offering a variety of industry's products and services. This type of position is known as "variety-based" positioning and is based on service (or product) varieties and is an economically viable option if a company can best produce particular services "using distinctive set of activities" (Porter, 1996). Another type of strategic positioning is "needs-based" positioning, and "arises when there are groups of customers with different needs, and when a tailored set of activities can serve those needs best" (Porter, 1996, p.66).

### ***4.3 Diversification***

Igor Ansoff, who is one of the first scholars who touched upon the diversification topic, describes this phenomenon as "a change in the characteristics of the company's product line and/or market" (Ansoff, 1957, p.113). In other words, a firm diversifies when it starts producing products or offering services that do not have a market interaction with their previous product/service offerings. The existing line of offerings and the new products produced under the diversification strategy normally have zero cross price elasticity (Rumelt, 1982). In contrast to diversification, Ansoff introduces "market penetration", "market development" and "product development" as other strategies that can help changing the product/service and or market (Ansoff, 1957). The Product/Market Ansoff matrix below demonstrates the four main strategies defined in this context.

		Products	
		Present	New
Markets	Present	Market penetration	Product development
	New	Market development	<b>Diversification</b>

**Figure 17 The Product/Market Ansoff Matrix**

Source: Adopted from Ansoff, 1957.

The diversification differs from the three other strategies here since it requires “new skills, new techniques, and new facilities” (Ansoff, 1957, p.114). Inevitably, pursuing diversification as a strategy leads to a series of organisational and operational changes. The literature categorises the concept of diversification into three sub-groups according to the “direction” a company aims to diversify to.

A “vertical” diversification is when a company decides to branch out to the production of the components, spare parts and the materials that go into the final finished goods they make (Ansoff, 1957). This type of diversification was most famously applied and realised in the Ford production plants back in the times when Henry Ford first introduced the assembly lines of car production where each part was built in house and then assembled on to the earlier models of Ford automobiles. Within the scope of a service business such as IFF, this would mean the IFF for taking complete ownership of their delivery service. The production/realisation of services under the vertical diversification will require developing certain new knowledge as well as skills (Ansoff, 1957).

A “horizontal” diversification strategy is concerned with the introduction of new products/services which is not related to the existing product or service portfolio of the company. The companies are able to pursue this kind of strategy as it “caters to missions which lie within the company’s know-how and experience in technology, finance and marketing” (Ansoff, 1957, p. 117).

Lastly, a “lateral” diversification strategy involves diversifying into a segment which is beyond the borders of an industry. This is the most unrestricted form of the diversification and can open a range of new opportunities that can potentially lead to further profits from different markets, while the horizontal and vertical strategies are somewhat limiting (Ansoff, 1957).

#### **4.3.1 Product/Service Diversification**

When discussing diversification, it is important to clarify what type of diversification is under investigation. The “product/service” diversification is the main type that this piece of research is mainly concerned with and the general types of product/service diversification have already been discussed in the previous subsection. The international diversification is described as a firm’s effort to become “horizontally

and vertically integrated across different national sub-markets” (Hisey and Caves, 1985, p.51).

It is argued that there is indeed a relationship between a firm’s level of product diversification and international diversification (Wiersema and Bowen, 2008). There are, however, varied arguments regarding this depending on which school of economic viewpoint you approach the subject even though the resource-based view (RBV) and the transaction cost economics (TCE) agree that a company should face the decision of trading off one of the strategies over another as they have a substitute relationship (Wiersema and Bowen, 2008). Another area of consensus is the impact of having high level of product diversification “weakening the positive effect of higher industry globalization on a firm’s degree and scope of international diversification” (Wiersema and Bowen, 2008).

The product/service diversification is further sub-categorised into two main types (Rumelt, 1974). The “related diversification is where firms diversify within industries while unrelated is where firms diversify across industries” (Qian, 1997, p.128). The firms that pursue “related diversification” are argued to have narrow product spectrums while firms that pursue “unrelated diversification” have broad product spectrums (Qian, 1997).

The cost and benefit of pursuing one of the diversification strategies depends on the relationship the current business activities have and the portfolio of product/service offerings of the firm (Qian, 1997). It is argued that progressing with related diversification allows companies to enjoy the synergies that will be created with the new products/services. While the firm will be able to transfer part of the negligible marginal costs arising from the manufacturing of the new product/service using common means of manufacture, they will further be benefiting from economies of scope as they can make use of common indivisible inputs (Qian, 1997). This will not only reduce some of the transaction costs arising during manufacturing (Williamson, 1981), it will also gain some comparative advantages through the transfer of existing skills and resources in the market (Porter, 1987). In contrast, firms cannot enjoy the same benefits if they choose to pursue the “unrelated” diversification strategy as this strategy creates very little synergies and the firms have to deal with an increased amount of internal administration (Qian, 1997). In fact, this is reported to be linked to the failure of many spectacular attempts of diversification where companies failed to show enough emphasis of the relatedness of business sectors they are involved in (Grant 1988).

#### ***4.3.2 Why do companies choose diversification as a strategy from an Economical Viewpoint?***

There have been many attempts to describe why a firm will seek diversification as a corporate strategy. For this reason, it will be beneficial to provide an overview of the viewpoints of different schools of economic thoughts regarding this subject.

The “*Market Point View*” suggests that the firms seek this strategy not because they are more efficient than other firms in the sector, but because they can make use of the “conglomerate power” and count on this for the success of their strategies at the expense of their competitors in the sector (Hill, 1985). Although regarded as an “anti-competitive approach”, conglomerates generate their yield power in three ways. Firstly, they use “cross-subsidization” and it is the act of using the profit made

in one market to support “predatory pricing” strategies in another (Montgomery, 1994). Secondly, using “mutual forbearance – where competitors meeting each other in multiple markets recognize their interdependence and compete less vigorously” (Bernheim and Whinston, 1990). The third source leading to “conglomerate power” is through “reciprocal buying” which signifies the interrelationship of larger players in the market, raising the entry barriers as well as toughening the conditions of a market and making it inaccessible for smaller players. This is one of the reasons why the MPV suggests that this kind of motivation for diversification may lead to a more concentrated market reducing the competition (Montgomery, 1994). In contrast, the empirical work in the field failed to find a sufficient evidence proving that diversification leads to anti-competitive behavior, even though theoretically it would be reasonable to believe that it may (Grant, 1998). Similarly, opposing to the game-theoretic models, predatory pricing arising from cross-subsidization can only be used in some instances (Saloner, 1987), and “is seldom employed” (Geroski, 1995).

The “*Agency View*” links the diversification strategy with the life-cycle of a firm and argues that young and growing companies will have many avenues and opportunities to reinvest their earnings seeking further profits (Montgomery, 1994). In contrast, a mature firm will have less business opportunities that they could regard as potentially profitable investment opportunities and have to spend their earnings for more distant opportunities (Mueller, 1972). In addition, the self-interested managers will have the tendency to spend their earnings rather than paying it out to the shareholders and invest in low-gain projects (Montgomery, 1994).

The “*Resource View*”, based on the work of Edith Penrose (Penrose, 1959), gives a different perspective of the matter, and considers the firms as “heterogeneous” rather than “homogenous” (Montgomery, 1994). Under the principles of this view, it is argued that the “rent-seeking” companies seek diversification because they have an extra producing capacity that they are not utilizing. These extra utilities are accumulated through their previous transactions, and as long as diversification leads to the facilitation of these previously unused sources, the companies are leaned towards this strategy (Montgomery, 1994). A deviation from the principles of Penrose, Teece stated that the rationale behind the diversification may disappear if there is already a market where they can sell the excess production resources they have (Teece, 1980). Some other authors further argued that “a firm’s resources differ in specificity” (Montgomery and Wernerfelt, 1988, p.625), and much of “a firm’s skills and much of its knowledge are deeply imbedded in the routines of the firm” (Nelson and Winter, 1982, p.37).

Transaction Cost Economics (TCE) (Coase, 1938; Williamson, 1985), suggests that if a firm wants to increase the scope of their business, they need to have a look at the costs of negotiating, monitoring and enforcing the agreements related to the expansion, and compare the costs of doing these internally or through the market. It was further argued that the cost of coordination is likely to increase together with the level of diversification (Wiersema and Bowen, 2008). Jones and Hill (2012, p.454) added, “the firm is constantly trading off the economic benefits associated with a corporate strategy against the bureaucratic costs of implementing that strategy”.

Regardless of the economic viewpoint taken, the general consensus is that the decisions taken by a firm in the past are likely to influence the next decisions they will make alongside the level of trade-off they will face as a consequence of their decisions regarding geographic or product/service diversification. The product/service diversification and geographic diversification are two different strategic paths that a company can pursue and companies which have high levels of product/service diversification are likely to have relatively less levels of international (geographic) diversification (Wiersema and Bowen, 2008).

#### **4.3.3 Benefits of diversification.**

Many authors focusing on the company strategies agree that diversification, in other words, entering into a related or un-related business can be a very important step to help strengthen a company's long term position in an industry (Nachum, 2004; Narasimhan & Kim 2002). A modern business leading company is usually able to integrate cross-functional expertise and have many offerings that allow them to grow in size and become more profitable (Wind, 2005). It is widely accepted that efficiently managed product/service diversification can have a significant impact on a firm's financial performance (Palich, Cardinal and Miller, 2000). However, it is important that the diversification, more precisely, service diversification in the IFF case, should create a synergy in different lines if possible (Berger and Ofek, 1995). The theory suggests that the functional capabilities such as marketing and operations efficiency together with the product/service and international diversification strategies can have a positive impact on a company's financial performance (Nath *et.al.* 2010).

It is argued that for a single-business company it is harder to have access to cross-subsidization investments. Due to this reason, the only way they can acquire financing is through external debt and equity that is more expensive than self generated funds. In a diversified setting, a company will have access to both internally generated capital as well as external resources (labour) (Stultz, 1990). The diversified firm will also have the opportunity to shift funding around within their portfolio as well as seeking external funding and resources for their growth projects (Meyer, Milgrom, and Roberts, 1992). It is due to the generation of this type of efficiencies that a diversified company can be more advantageous over single-business companies (Gertner, Scharfstein, and Stein, 1994).

It is further claimed that the management of a well diversified firm will have an increased competence in the allocation of company resources, in the most optimal way since they now will have an even better access to information than external markets (Servaes, 1996). For example, the management can shift funding for prosperous and fast growing businesses that are in need of fast financing from slower moving, more mature but cash generating products/services (Shleifer and Vishny, 1990).

Finally, diversification can help a company get rid of the resources they could not previously sell in the market due to transaction costs and various imperfections. Diversification will allow the firm to make use of these unused resources (Markides, 1992). Diversification may potentially lead to some tax benefits for the company thus increasing the profitability of the company (Servaes, 1996). Lastly, diversification will help reducing the overall risk that a company is exposed to "by combining

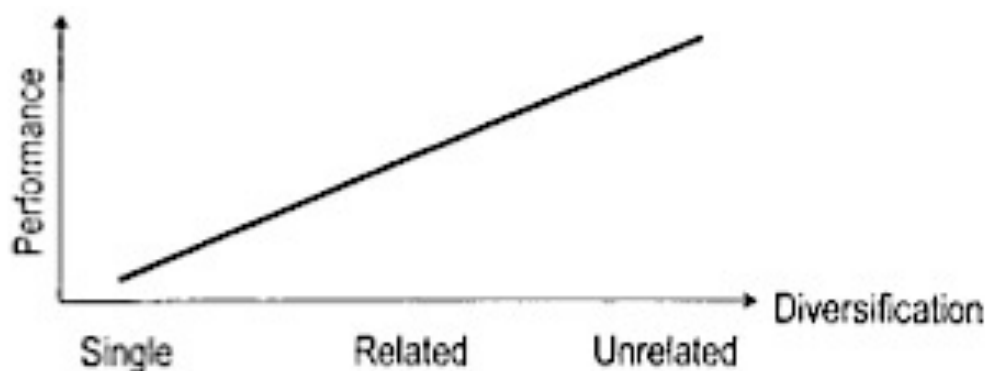
businesses with less than perfectly correlated financial flows” (Barney, 1997; Grant, 1998).

#### **4.3.4 Does diversification lead to better performance?**

The linkage of diversification strategies with a firm’s performance is a popular subject of academic research (Chatterjee and Wernerfelt, 1991). Although there is a wide body of knowledge about this topic, this research domain has not yet reached maturity and many inquiries in the field fall short of consensus (Palich, Cardinal and Miller, 2000). A study conducted by Palich, Cardinal and Miller (2000) investigated the findings of all the studies regarding the diversification-performance relationship and come to the conclusion that there is no consensus regarding this relationship and as stated by Markides and Williamson, 1994 (p.1), “there is still considerable disagreement about precisely how and when diversification can be used to build long-run competitive advantage”. The linkage of diversification strategies and its impacts on performance still remain unclear as scholars argue that the performance enhancing impact of diversification will be apparent only in limited and specific conditions. It is further argued that the outcome of pursuing such strategies are likely to vary according to the business environment and the economic stability of the setting (Chakrabarti, Singh and Mahmood, 2007). Overall, the debate regarding the relationship between diversification and performance revolves around three important contingencies, which are the institutional environment, stability of the economical environment and business group affiliation. Although not reaching a consensus on the relationship between diversification and performance, a notable number of scholars agree that an increased attention should be given to the three important contingencies in order to better understand the relationship under investigation (Chakrabarti, Singh and Mahmood, 2007).

#### **4.3.5 The Linear Model for Diversification and Performance**

As discussed in the previous chapter, diversification allows a firm to have market power advantages, internal market efficiencies and numerous other advantages such as tax benefits and protection from exposure to risk (Palich, Cardinal and Miller, 2000). These advantages are in line with the argument that was first presented by Gort (1962), and states that diversification and performance have a positive and a linear relationship. Figure 5 below explains the relationship of diversification and performance in the liner model.



**Figure 18 The Linear Model of Diversification and Performance**

Source: Palich, Cardinal and Miller (2000).



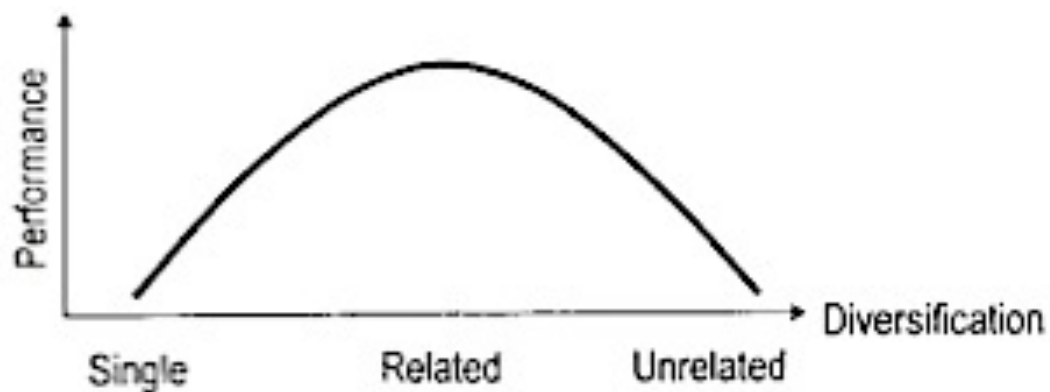
There are number of other theories which acknowledge that increasing the level of diversification will not lead to continuous improvement of performance, “at least not through the relevant continuum” (Palich, Cardinal and Miller, 2000). The two models that support this viewpoint are namely the “Inverted-U Model” and the “Intermediate model”. Both of these models accept that pursuing related diversification is better than not pursuing diversification at all, but disagree with the idea that the level of performance increases as the level of diversification, particularly unrelated diversification (see Figure 14) leads to a greater performance (Palich, Cardinal and Miller, 2000).

### ***The Inverted-U Model***

A firm that chooses to focus on a single industry is known to use a “limited diversification” strategy and cannot leverage resources and capabilities across different parts of their business. It is also argued that these firms are “unlikely to generate above average profits” (Palich, Cardinal and Miller, 2000). This is due to the fact that they will be unable to exploit synergies created by wider product/service portfolios, which also prevents them to benefit from “economies of scope” (Lubatkin and Chatterjee, 1994). In addition, these companies will be more exposed to risk as they will not have the opportunity to “combine less than perfectly correlated financial streams from multiple businesses” (Lubatkin and Chatterjee, 1994, p.120). Furthermore, it will be relatively more difficult for these companies to acquire external financing as well as debt capacity (Lubatkin and Chatterjee, 1994).

It is already discussed earlier that companies pursuing related diversification would be able to utilise a pool of corporate resources (Nayyar, 1992), which provides a number of advantages. They will have product bundling opportunities and a more mutually reinforcing portfolio of businesses (Barney, 1997; Markides and Williamson, 1994).

Although there are many benefits of pursuing a related diversification strategy, there are also a number of drawbacks associated with this strategy. For instance, Grant, Jammie , and Thomas (1988) argues that managing an increasingly different product/service portfolio would put added pressures on the top management. In addition, the management will incur further costs due to the “control and effort losses, coordination costs and other diseconomies related to organization, inefficiencies from conflicting “dominant logics” between businesses, and internal capital market inefficiencies” (Markides, 1992, p.399). Due to these costs, it could be inferred that the marginal costs of diversification increases in line with the level of diversification (Palich, Cardinal and Miller, 2000).



**Figure 19 The Inverted-u Model of Diversification and Performance**

Source: Palich, Cardinal and Miller (2000).

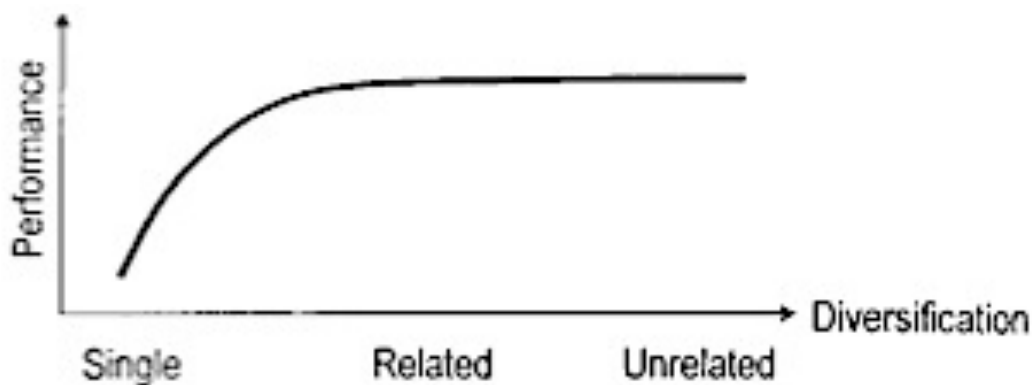
Figure 15 above provides a graphic representation of the dynamics of related diversification, and demonstrates that there is an optimal level of diversification. However, the performance is only optimal and maximised at a certain point, and both sides of the optimal point follow a decreasing pattern (Palich, Cardinal and Miller, 2000). This model also reinstates the superiority of related diversification over unrelated diversification as well as limited diversification (single business company). The inefficiencies a company faces is represented by the left side of the optimal point and the right side represents the declining benefits of diversification where the expansion goes beyond the diversification threshold range (Markides, 1992).

The inverted-u model provides a good explanation of the relationship between diversification and performance acknowledging related diversifications superiority over un-related and limited diversification. Although there is consensus within the existing body of knowledge that related diversification is a better strategy than limited diversification, scholars often debate the supremacy of related diversification over un-related diversification (Palich, Cardinal and Miller, 2000). They argue that these strategies actually have very similar impact on performance levels due to the fact that firms employing related diversification are not always able to benefit fully from the efficiencies as they “may not be able to exploit fully the relatedness designed into the portfolio of businesses” (Palich, Cardinal and Miller, 2000). This issue is referred as “exaggerated relatedness” describes the assumptions of management leading them to believe that their portfolio contains products/services that are more similar than they actually are (Markides and Williamson, 1994). It is stated that these firms will only benefit from the relatedness of products/services if they are in a position to create and compile new strategic assets in a quicker and efficient manner than their competitors (Markides and Williamson, 1994). Nayyar (1992) also points out to the fact that there are costs associated with the act of exploiting relatedness that may undermine the benefits associated with the strategy. For instance, the extra cooperation the individual business units show to reap the benefits of relatedness leads to further costs (Palich, Cardinal and Miller, 2000).

From a TCE perspective, the necessary intra-firm exchanges ultimately lead to inefficiencies due to the extra governance costs, incentive degradation, and bureaucratic distortions (Jones and Hill, 1988; Williamson, 1985). Supporting the viewpoint of authors questioning the logic of the inverted-u model, the inter-firm lack

of communication, inefficient joint cost allocation, incompatible technologies as well as agency issues linked with intra-firm competition impedes a firm's ability to fully exploit the relatedness of products/services (Nayar, 1992). Furthermore, it is common for managerial attempts to fall short of expectancy and to achieve a lower level of synergy than desired (Goold and Campbell, 1998). This further helps to the diminishment of the main advantage related diversification has over un-related diversification (Palich, Cardinal and Miller, 2000).

Following the above discussion regarding the challenges companies are likely to face while seeking benefits from relatedness of products/services, there are certain advantages which only arise when a firm pursues the un-related diversification strategy. For instance, according to the portfolio theory, extra-industry diversification is the only way to reduce industry-specific risk (Kim, Hwang, and Burgers, 1989). Since un-related diversification involves expanding to other industries, it can be a better strategy for risk reduction (Amit and Livnat, 1988). Furthermore, as companies will be better protected against risk, they will also have a lower probability to go bankrupt, which in turn increases their chances to get more debt capacity (Seth, 1990). Lastly, the firms will have the opportunity to pay less tax as interest expenses are generally tax deductible (Amit and Livnat, 1988).



**Figure 20 The Intermediate Model of Diversification and Performance**

Source: Palich, Cardinal and Miller (2000)

Figure 16 above is a graphical representation of the intermediate model, and shows that "diversification yields positive but diminishing returns beyond some point of optimization" (Palich, Cardinal and Miller, 2000, p.160). As a company increases the level of diversification in their product/service offerings, they tend to move away from their core business. Eventually, "the benefits of diversification at the margin decline" (Markides, 1992, p.400). This statement is also consistent with the conclusions reached by Wernerfelt and Montgomery (1988), who observed that firms tend to diversify in similar industries and only continues on to un-related diversification if they still have unutilised excess capacity. As the company moves further away from their core competency, the profitability of diversification gradually wears off, since the company is no longer able to make use of their competitive advantage. For these reasons, it can be concluded that "the marginal benefit from diversification is a decreasing function" (Markides, 1992, p.400).

Overall, studies argue that increased level of diversification will have a positive influence as the companies will be able to benefit from economies of scale, have

more market power, reduce risks and benefit from the learning effects (Christensen and Montgomery, 1981). In contrast, some scholars argue that diversification is inefficient and specialization strategy will lead to more productivity (Matsusaka, 2001). Additionally, in order to argue the efficiency of diversification, it is important to mention what kind of diversification is being related to. For instance, studies revealed that companies that pursue “unrelated” diversification strategy perform worse than those that employ “related” diversification strategies (Rumelt 1974).

#### **4.4 Previous studies specific to service diversification in International Freight Forwarding Sector**

The first scholars to conduct a study on the IFFs were Pope and Thomchick (1985). Their studies focused on the IFFs based in the Northeastern USA and were the first scholars to discover that IFFs are generally small firms which usually employ less than ten employees. Their second finding proved to be the earliest form of the “one-stop” service concept, which they drew attention to since they prospected it to be an important trend. Murphy *et.al.* (1992), reconfirmed Pope and Thomchick’s findings regarding the small company size of the forwarders in their USA IFF study. What was unique in their findings was their discovery regarding the demographic differences existing in the diversified and non-diversified IFFs. They further made discoveries which were in line with Pope and Thomchick’s findings regarding the “one-stop” service concepts. Murphy and Daley conducted two follow-up studies, in 1995 and 2000, which were again focused on the IFFs in the USA. Their 1995 study discovered the increasing popularity of the “one-stop” service concept, and were the first scholars to discover the blurring of distinct operational differences between different transport intermediaries, which is one of the most important topics discussed in this thesis. This paper also presents its findings regarding the IFFs’ involvement in newly developed value adding activities such as cargo tracking, route advisory as well as the core functions such as payment of freight charges and expediting shipments. Their 2000 study served as an update on their 1995 study, and investigated the demographic findings of the USA IFFs and used their findings to make a comparison with their earlier findings. They witnessed the increased emphasis IFFs put on the internet and communication technologies (Murphy and Daley, 2000). The most recent study done on the diversification strategies of IFFs was the study of Markides and Holweg (2006). This was the first study of this kind on the IFFs based in the UK and made a number of important findings. They found that:

- The company size and firms’ asset base is an important indicator to the level of service diversification they pursue.
- One of the main reasons why firms diversify their services is due to the decreasing profits from their core businesses. They are diversifying to value added services to improve profitability and respond to the comprehensive needs of their customers.
- The IFFs in the UK have quiet diversified service portfolios even though this is not always reflected on their revenue streams.
- Larger firms with wide asset bases are more likely to pursue service diversification strategies.

The findings of this study are expected to be in line with the findings of Markides and Holweg (2006) as UK and NL IFF sector have similar characteristics. It is important not to forget the importance of the Dutch ports not only for the Netherlands but also for the whole Europe, as Port of Rotterdam is dubbed to be the “gateway of Europe to the world”. This means that the logistics services in the Netherlands have a very important role and purpose that reaches beyond national borders. It is difficult to measure the implications of the Netherlands’ world-class ports on the individual IFFs in the Dutch IFF sector, but this thesis will be able to shed more light to this topic.

## Chapter 5 – Methodology

### 5.1 Introduction

In this chapter, the methodological framework of the thesis will be explained in detail. Firstly, a description of the type of research will be provided. This will be followed by detailed explanations of the choice of methodology and their reasoning. The chapter will finalize with an explanation for the sampling selection and the measures taken to improve the credibility and accuracy of the information.

### 5.2 Type of Study

This particular study will have the characteristics of both qualitative and quantitative studies. The former aims to describe the nature and character of something, whereas the latter aims to describe the situation using numbers, figures and statistical analysis (Blumberg, Cooper and Shindler, 2011). This thesis aims to explore the level of service diversification happening in the IFF sector as well as the general perception and opinions of participants regarding different strategies in addition to a few contemporary issues in the market. However, the research also attempts to provide the financial impact of pursuing such strategies as well as to document the statistical relationship between different variables, which requires a quantitative study.

In terms of the research design chosen to fulfil the purpose of the study, this research has the characteristics of a small-scale descriptive study as well as casual study since it aims to find out what kind of service diversification is currently happening, and how much each of the participants are practicing this strategy. It also has the characteristics of a casual study as it attempts to find out the relationship of the level of diversification and how different levels impact the revenue structures of the participants (Blumberg, Cooper and Shindler, 2011). In terms of time dimension, it will be a representation of the Dutch IFF industry at a specific point in time. This piece of research will use an online survey that is sent out to the entire list of Fenex that is the trade association for the Dutch forwarders. Finally, the information presented will further be based on the desk research about the existing studies in the field, government statistics, consultant reports as well as the company websites that will be the method for acquiring secondary data.

### 5.3 Data Collection Methods

The main information is acquired by the means of *survey questionnaires* that is a form of quantitative data collection that was e-mailed to the selected sample of IFFs based in the Netherlands. Finally, the information regarding the IFF market in the Netherlands, general company information and the ad-hoc information necessary was acquired by conducting desk research which formed the secondary information used in this thesis. The following sub-sections will provide more detailed explanations and reasoning of the data collection methods of choice.

### **5.3.1 Survey**

The survey questionnaire, which was the main form of data collection, was e-mailed to the determined sample of freight forwarders and aimed to extract information regarding the company demographics, services offered, company turnover, percentage of revenue generated from types of services provided and number of opinion questions about competitive advantage, response to contemporary issues, diversification reasons and future of freight forwarding. A total of 45 useable responses were received from the IFFs operating in the Netherlands. The questionnaire was based on the survey done by Markides and Holweg in their study of "on the diversification of International Freight Forwarders in the UK", in 2006 (see Appendix I). Although the nature of the information extracted remained very similar, the survey was adapted to better suit the IFF industry in the Netherlands as the original were intended to be used in the UK. Furthermore, the survey questionnaire used in the UK study was telephone-administered and this would also require some adjustments in the question design to make sure they are simple enough to avoid any clarity issues. The survey that was originally prepared and used by Markides and Holweg (2006) was formulated after numerous pilot studies and semi-structured interviews with companies. For these reasons, adopting the survey framework and modifying it for this thesis not only saved a lot of time but also improved the quality of information extracted since the survey was already used in similar studies by leading academics in this domain.

The survey was prepared and administered online using the SurveyMonkey.com tools. The survey questions were modified to acquire a certain format of answers which could ease the data analysis process. There are also various advantages and disadvantages of using a targeted web survey. One of the main advantages of using them is practicality as the web survey tools allow you to design or import questionnaires to a word-processing environment, give professional assistance for question and response formatting, and allow the responders easily respond and submit their answers by only using a personal computer that has a web connection. The web surveys also give certain advantages in the collection and analysis of the responses as you are able to view the incoming data in real time, as well as giving automatic tools for analysing the responses (Blumberg, Cooper and Shindler, 2011). On the other hand, the participants may not always be able to complete the surveys due to technological problems. It is also important to mention the problem of e-mail spamming. Since majority of the e-mails sent around in the world are actually spam e-mails, it is not surprising to assume that your recipients could never receive your survey invitation as your e-mail may fall straight into their junk mailbox due to the spam filters in place (Blumberg, Cooper and Shindler, 2011). Overall, the practicality associated with the use of web surveys is faster survey turnaround and analysis times.

In this particular research, the drop-off online survey was self-completed by the receivers due to practicality issues. One of the advantages of using drop-off surveys is that it allows wide access and coverage which makes the use of large sample sizes possible. In addition, the respondents are able to complete the questionnaires at their own pace and while remaining anonymous. This is also one of the most cost effective ways for acquiring information even though the same sample size is going to be large. Although there are some drawbacks of using questionnaires of this form such as low response rates, question clarification issues and difficulty in non-

response follow ups. However, the disadvantages can be compensated for by the large sample size chosen. The questionnaire response rate is very likely to be less than 100% that could lead to non-response bias. Once the research is done and the response rate is determined, a “non-response bias test” would be a test to apply to assess the extent of the potential bias, if the response rate less than 100%.

The following confidentiality statement was sent along the survey questionnaire in an attempt to increase my credibility and have a better survey response rate.

“This is a piece of academic research for the Center for Maritime Economics and Logistics (MEL) at Erasmus University Rotterdam. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address. We will do our best to keep your information confidential. All data is stored in a password protected electronic format. To help protect your confidentiality, the survey will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only and may be shared with Erasmus University Rotterdam representatives. “

The initial response rate was 10.1%, which was expected due to the nature of the online questionnaire methods. However, considering the large sample chosen, this was very low and very likely to be subject to non-response bias.

### **Dealing with the non-response bias**

The non-response bias occurs “when the responses of participants differ in some systematic way from the responses of non-participants” (Blumberg, Cooper and Shindler, 2011). There are two main causes for this kind of bias. It happens either because the researcher is not able to locate the participant or “is unsuccessful in encouraging that person to participate”. In this particular research, there was a non-response bias present to a certain degree and was mainly caused due to latter of causes for the bias. As expected, the response rate was low, and this was due to the lack of encouragement or lack of incentive for the respondents to take part in this research.

There are certain ways to diminish the errors due to non-response bias. The most effective solution is to make call-backs (Blumberg, Cooper and Shindler, 2011), which means sending another round of surveys to the sample e-mailing list. This method is reported to re-gain around 85% of the target participants. In this particular research, a total of 3 call-backs (e-mails) were made, which means that the participants were e-mailed 4 times in total. The e-mail receipt times were strategically planned to achieve the most number of responses. For instance, the e-mails were sent out very late in the night to be able to be higher up in the inboxes of the participants. In addition, various e-mail titles were used to improve the likeliness of the invitation to be opened and read by the participants.

Another way of reducing errors due to non-response bias is to create a non-response sample that is ultimately leads to treating “all remaining non-participants as a new sub-population after a few call-backs.” (Blumberg, Cooper and Shindler, 2011). This can be done by drawing a random sample from this group, and to try and get a response from all the participants in the random sample. Once this is



done, the finding's can be weighted back into the total population estimate (Fuller, 1974).

The last method to deal with the non-response problem is to simply replace the missing participant with someone else who fits within the determined sample characteristics (Blumberg, Cooper and Shindler, 2011). This method was very often used in this particular research due to the very high number of automatic e-mail responses received from the participants. Since this study was conducted at the beginning of summer, it was expected that business professionals working at IFFs to be away from their offices for holiday purposes. Luckily, the majority of the automatic responses redirect me to a different point of contact within the companies who I substituted the initial point of contacts.

After exercising all the methods, I was able to improve the response rate by a total of 5% and had an overall response rate of 15.1%.

### **5.3.2 Desk Research**

In addition to the survey questionnaire, desk research was the main source for acquiring secondary data. This is an efficient approach as there is already a wide body of knowledge built by the previous research conducted in the field. For instance, I was able to benefit greatly from the secondary data that helped me shape this particular thesis. This increased my efficiency as the existing research projects in the field help me to eliminate the unnecessary and time wasting information allowing me to focus on what is really necessary to make this thesis a beneficial piece of research. In addition, the desk research further served a reconciliatory role providing additional information necessary for the data analysis. As part of the desk research, I was able to utilize many industry reports conducted by consultancy companies specializing in the transport sector. Finally, I made use of the official websites of many companies active within the IFF sector and was able to extract information regarding the range of services offered as well as the strategies they choose to publish on their websites. The desk research I've done also helped to triangulate my findings to increase the credibility of the results of this study.

### **5.4 Sample**

There are certain advantages that make sampling sensible. Firstly, it helps lowering costs by scaling down the population, it leads to more accurate results and it speeds up the data collection process (Blumberg, Cooper and Shindler, 2011). Choosing a good sample for a research project depends on two factors, namely, accuracy which refers to making sure there is no bias affecting the accuracy of the information given by the sample, and precision which refers to finding a representative sample representing a population and minimising the standard error of estimate (Blumberg, Cooper and Shindler, 2011).

The type of sampling used in this thesis is called "purposive sampling" and is a type of non-probability sampling. The "purposive sampling" branches into two more specific types of sampling, namely, judgement sampling and quota sampling. Since this research selected a sample of members which met a determined criteria, being

a member of the Fenex association, it used the judgment sampling which is a type of purposive sample technique (Blumberg, Cooper and Shindler, 2011).

The list and details of the freight forwarders were acquired from “Fenex - De Nederlandse Organisatie Voor Expeditie en Logistiek” which is the trade association for the Dutch forwarders. The organization currently has 467 registered forwarders in various parts of The Netherlands. This was the sample chosen for this project and will all be sent surveys. In addition, the membership of the forwarders to the FENEX is one of the few common characteristics the Dutch forwarders share in common, regardless of their location and the types of services they offer.

One of the main problems faced during the process of sending out the survey questionnaires was the large number of undeliverable e-mails. A total of 124 e-mails were returned as undeliverable due to internal server restrictions. This phenomenon of undeliverable e-mails was also reported to exist in Murphy and Daley (1995) and Murphy and Daley (2000). A further research into the FENEX members revealed that 45 of the members were actually companies operating in a number of related sectors, such as transport lawyers, IT companies, transport finance banks. Taking these factors in to account, the thesis sample was effectively reduced to that effectively reduced the sample to size 298 companies.

### ***5.5 Analysis Techniques of Quantitative Data***

In order to study the service and revenue diversification levels, it is first necessary to find a way to quantify diversification in order to better measure and compare the impacts of different extents of diversification strategies adopted by different companies. For this purpose, this thesis adopted the “index of diversification” which was initially constructed by Markides and Holweg (2006). The index will be used to analyse both revenue and service diversification currently happening in the IFFs in the Netherlands.

The revenue diversification index uses the revenue generation information acquired via the survey questionnaire that provides different amounts of revenue generated from different type of services they offered, namely, from air freight, sea freight, rail freight, road freight, warehousing, CHB, insurance and other. It is important to mention that the questionnaire extracted the following information for three different time frames, namely, for past, present and future. Markides and Holweg (2006) have defined the revenue diversification index as “the standard deviation describing the spread of revenue generation among the defined categories”.

As mentioned, a separate index will be used to analyse the diversification of services offered by the IFFs. The companies will first be classified along a two-ended spectrum, namely “diverse” and “non-diverse”. However, since the degree of diversification may be subject to risks of subjectivity, a point-ranking system will be utilized, where the IFFs will be awarded points depending on the services they provide which will be a fair and systematic approach for classification. The pointing system has a scale from 0 to 58 points, where 58 represents the most diverse and 0 represents least diverse. The points will be awarded according to the additional diversification firms offer next to their basic services as well as the additional value added services the firms provide, which can also be extracted from the survey

questionnaire. The appendix II provides more detailed information of the pointing system.

## **Chapter 6. Empirical Findings and Analysis**

### **6.1 Introduction**

The following section will present the empirical findings and the analysis of this information. A total of 45 useable responses were received from the IFFs operating in the Netherlands. The results and analysis are divided into two main categories, namely qualitative and quantitative results, according to the nature of the information presented. The qualitative results are made of the evaluation of the survey questionnaire using hypothesis testing and correlation analysis. The reporting of the results will first start by describing the profiles and categorization of the respondent that will give detailed information regarding their corporate demographics. After introducing the respondents, a detailed analysis of the services they offer will be done as part of the structural analysis exercise. The next step of the analysis report will focus on the perceptions of the respondents for different strategic factors. The qualitative results will end by reporting the strategic choices followed by these companies as well as their viewpoints on some contemporary issues concerning IFFs. The quantitative reporting will be in the form of indexes that aim to measure the amount of revenue and service diversification happening in the sector. Furthermore a correlation analysis is conducted to find out the relationship between service diversification with a firm's asset base. Lastly, a number of hypothesis testing (t-tests) will be presented to compare the perceptions of the "diverse" and "non-diverse" IFFs.

### **6.2 Respondent Profile**

The findings regarding firm size is illustrated in the corporate demographics diagram below together with the comparison from the respondent profiles from the similar studies carried out in the UK by Markides and Holweg in 2006, and two earlier studies by Murphy and Daley dating back to 1995 and 2000.

Within the scope of this research, the freight forwarders were categorised into 3 groups according to their sizes. Within the EU legislation, an enterprise with less than 50 employees and a turnover of €10 millions is considered as a small enterprise. A medium-sized enterprise is the one with more than 250 employees and with a yearly turnover of more than €50 millions (European Commission, 2012). Since freight forwarding is a sector that is mainly dominated by few very large and many small sized enterprises, the EU base sizes would not be a good indicator in terms of size.

For this reason, the companies referred as "small" will have the upper employee number of 50 employees, middle-sized 50-249 employees, and large-sized 250+ employees. The additional reasoning for this categorisation the increased synchronisation and comparability with the earlier studies conducted in the sector to increase the comparability.

The findings and the comparison of this study with earlier studies in the field are presented in Table 1 below. From the data below, it can be derived that 57.8% of the IFFs falls under the "small" category according to this thesis. The "small" category was adjusted within this table to increase the comparability of results with similar studies previously done. The findings presented are in line with the findings

in previous studies and confirms the fragmented structure that is predominant in the IFF industry in the Netherlands. The situation holds true for the UK and the USA IFF markets where the majority of the market share belongs to small freight forwarders. One of the striking differences that were apparent in the findings is the high percentage of firms that are considered as large IFFs in the Netherlands. The UK and the USA studies did not reveal the existence of such a big percentage of large companies. One potential reason for this may be the important role the Netherlands have in the European logistics networks, and the cluster of services are an incumbent environment where IFFs can grow larger.

Number of Employees	Current Study	Percentage of respondents			
		Martin and Holweg 2006	Murphy and Daley		
		2006	2000	1995	1992
0-9	26.7	50.1	19.0	25.2	26.7
10-49	31.1	24.9	51.9	45.3	46.6
50-99	4.4	11.7	12.7	10.6	10.9
>99	37.8	13.2	16.4	18.9	15.8
Netherlands		UK	USA	USA	USA

**Table 1 Company Size**

Source: own elaboration based on Martin and Holweg (2006), Murphy and Daley (1992, 1995, 2000).

## Assets

The IFFs are generally known to be non-asset based logistic service providers, however, as shown in the table most of the companies owned trucks and trailers which means that they actually act as carriers, performing the land-based freight transportation. As presented in table below, the actual ocean and air freight carriage is not performed by the IFFs. The number of trucks and trailers owned by the IFFs were found to be relatively higher than the previous studies in UK and the US. In this study, this holds true at all the IFFs except one IFF who also owned a large fleet of 160 ships next to their other assets. It may be that this particular IFF was actually performing the sea carriage function before diversifying their services to become an IFF. In terms of the warehouses, the majority of the firms declared to own and operate one or more warehouses. Being in the center of the European Logistics networks, most of the IFFs offered a warehousing service as well as operating warehouses used solely for their own activities.

Asset	Min	Max	Average	Standard Deviation
Trucks	0	850	97.1	187.7
Trailers	0	4600	270.7	824.6
Ships	0	160	3.6	23.8
Aircraft	0	2	0.04	0.3
Warehouses	0	60	6.9	15.3
Offices	1	49	7.8	11.8

**Table 2 Firm asset base by type**

Source: own elaboration

One of the largest IFFs have declared to own 2 cargo aircrafts which was an exception in the findings as IFFs generally do not have the buying power to carry out the sea carriage leg of transport by owning a fleet of aircrafts.

Finally, it was found that every IFF had at least one office. The majority of the IFFs owned only 1 office in the Netherlands that could be explained by the size of the Netherlands as a country. Since the Netherlands is a small country, the IFFs can usually have a full geographical coverage even from a single office. The larger IFFs declared to operate from multiple locations. This can be explained by the fact that these larger IFFs are multinational companies operating all over the world. By having multiple locations in the Netherlands, they can expand their coverage outside the boundaries of the Netherlands and cover the Central and Western Europe areas.

### 6.2.1 Structural Analysis

Analysing the service portfolios of the IFFs was one of the main objectives of this thesis. For this purpose, the IFFs were asked whether they provide important services such as customs house broking, NVOCC, warehousing; value adding services such as insurance, packaging, labeling, IT and consulting next to their core services such as air, sea and land based freight forwarding. The companies were further asked to declare whether these services were provided in-house meaning using their own capabilities, or whether they were outsourced to other companies. The findings are presented in the table 3 below.

Service	Freight Forwarding %	CHB %	Insurance %	NVOCC %	Packaging and Palletizing %	Product Modifications %	Information Technology %	Labelling/re-labelling barcoding %	Consultancy %
Inhouse	100.0	64.4	26.7	51.1	55.6	33.3	46.7	48.9	73.3
Outsourced	0.0	31.1	66.6	N/A	22.2	31.1	13.3	20.0	N/A
Not offered	0.0	4.5	6.7	48.9	22.2	35.6	40.0	31.1	26.7

**Table 1 Services provided**

Source: Own elaboration

It was founded that all of the companies carried out the core function of freight forwarding in-house. The 64.4% of the IFFs provided an in-house CHB, 31.1% outsourced CHB while a minor 4.5% didn't provide a CHB service at all. The vast majority of the IFFs, 93.3% to be precise, offered an insurance service which was mainly outsourced. The IFFs that claimed to provide the NVOCC service mounted up to 51.1% which was all done in-house, the remaining 48.9% declared that they do not offer this service. In line with the one-stop shopping and increased added

value service offering trends, IFFs mostly declared that they provide packaging and palletizing, product modification, IT, labeling/barcoding and consultancy services. A surprisingly high percentage, 73.3% of IFFs offered an in-house consultancy service. The labeling/barcoding and packing/palletizing services were also reported to be offered by the majority of the IFFs, a considerable number of them having the in-house capability to offer this service while the rest of the IFFs outsourced such capabilities.

As expected, there was a relationship identified between a firm's size and its yearly turnover. In terms of the company revenues, the turnover of small firms ranged between €1 million and €41 millions, medium-sized between €20 millions and €60 millions, and large-sized between €50 millions and all the way up to €51 billions a year as reported by the biggest forwarder in the survey.

Time frame	Air %	Sea %	Rail %	Road %	Warehousing %	CHB %	Insurance %	Other %
Past 5-10 years	15.9	20.8	6.1	16	9.5	11.7	2.1	3.1
Currently	18.2	24.8	6.4	18	12.7	10.8	2.9	6.2
Expected in 5-10 years	17.1	26.4	8.1	19.2	11.7	12.1	3.1	2.1

**Table 4 Percentage of revenue generation by service**

Source: Own elaboration.

The results presented in the table 4 above reinstated the dominance of the revenues generated from the air, sea, rail and road forwarding services, in relation to the other services they provide. The sea-freight is the largest revenue generating service, making up the 24.8% of current revenues which used to be 20.8%, and is expected to increase to 26.4% in the next 5-10 years. This can be explained by the IFFs hopeful anticipation of the opening of the Maasvlakte 2, which is the new extension of the Port of Rotterdam. Even though the sea-freight generates the most revenues, the land based forwarding which includes trucking and rail-freight proved to be not only a large revenue generator but also a segment which is looking promising for the future, where the companies expect further increases which they reflected on their anticipated revenue generation structures. The share of revenues generated from land-based forwarding was higher when compared to the UK studies. This is understandable when one considers UK is an island and the Netherlands is connected to the mainland Europe, which makes land based forwarding possible, not only within the Netherlands but also to and from the surrounding European countries.

## 6.2.2 Perceptual Analysis

In addition to the structural questions, the IFFs were asked to present their views regarding a number of statements. The first statement in the interpretive part of the questionnaire asked what they perceive as the most important factor leading to competitive advantage in the IFF industry. The choices cost leadership, high customer service levels, wide range of service and niche expertise were given to the IFFs and they were asked to rank these choices on a scale of 1-4, where 1 was the most important factor and 4 was the least important factor. The following choices given were adopted from the Murphy and Daley (2000) and (2006) papers, which initially formulated the options after consulting the IFFs in a pilot study they have done. The results are presented in the table 5 below.

Strategy	Overall	Small	Company Size	
			Medium	Large
Cost leadership	2.6	2.6	2.7	2.7
High customer service levels	1.6	1.7	1.5	1.5
Wide range of services	2.8	3.1	2.8	2.8
Niche expertise	2.9	2.6	3	3.1

**Table 5 Key Strategy Factors ranked by importance (1: most important, 4: least important)**

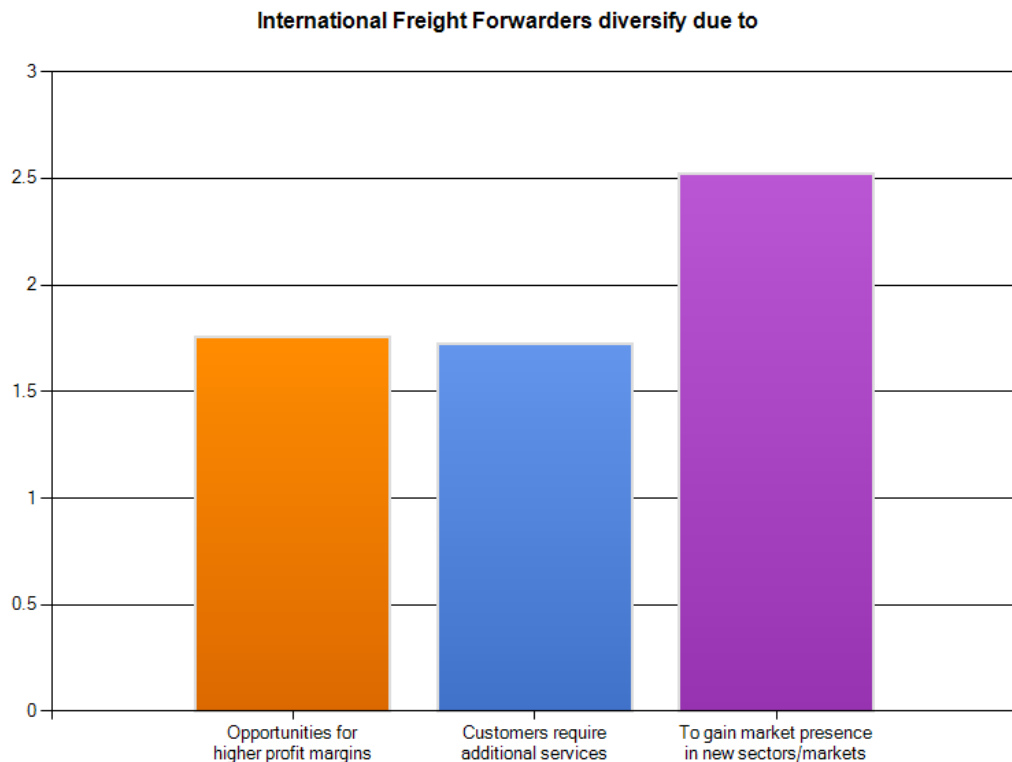
Source: Own elaboration, Originally adopted from Markides and Holweg (2006)

The individual analysis of the responses received was done for all three different sized company groups and the average of these answers were calculated. Analysis of the table above concludes that “high customer service levels” was perceived as the most important strategy, followed by “cost leadership” and “wide range of services”. The “niche expertise” was perceived as the least important strategy when all the answers were pooled together. The perceptions however did differ according to the size of the IFFs. While all three different sizes agreed that having a high customer service level is the most important driver, the large IFFs regarded having a wider range of services to be more important while this was seen as the least important driver for the small IFFs.

In addition to the question regarding their view on the drivers of competitive advantage, IFFs were asked to express their opinions regarding a number of questions specific to the service diversification strategies.

The IFFs were first asked about “Why IFFs diversify their services?” Again, they were given four choices and were asked to rank these choices on a scale of 1-4, where 1 was the most important factor and 4 was the least important factor. The given choices were: Opportunities for higher margins, customers require additional services, to gain market presence and other to be presented by the respondent.





**Table 6 Why does IFFs diversify? (1: most important, 4: least important)**

Source: Own elaboration

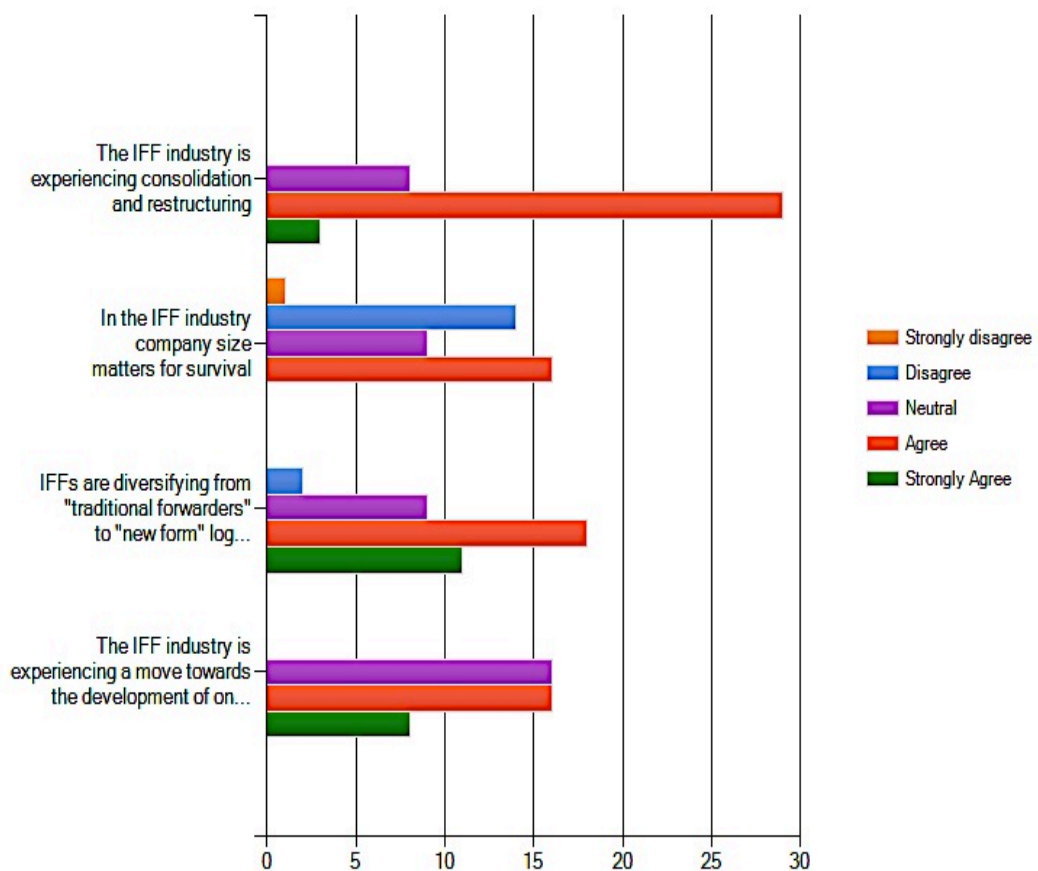
As presented in the chart above, the IFFs believe that they need to diversify because the customers actually demand and require additional services from them. This was perceived only slightly more important than the prospect of using diversification to achieve higher profit margins. Using service diversification to gain market presence in new sectors was seen as the least important motive for service diversification. Although it was an option for the respondents to provide an alternative additional driver for diversification, none of the respondents choose to provide an alternative reason to why firms pursue such strategies.

### **6.2.3 Contemporary Issues**

Lastly, the IFFs were asked to state their opinions regarding a number of statements regarding the contemporary issues and trends that they are facing. The chart 7 below provides a visual representation of the questions and the responses received.

The first statement given to the respondents was “The IFF industry is experiencing consolidation and restructuring”. While no body disagreed with this statement, a vast 80% of respondents either agreed or strongly agreed that consolidation and restructuring is actually happening. The remaining 20% choose to stay neutral with their opinion regarding this statement.

### The IFF industry is experiencing consolidation and restructuring



**Table 7 Contemporary issue statements results**

Source: own elaboration.

The second statement respondents were asked to provide their viewpoint was the “company size matters for survival in the IFF industry”. While only 2.5% of respondents strongly disagreed, with a further 35% disagreeing, it is hard to reach a conclusion here as another 22.5% remained neutral, while 40% of the responses agreed that size is important for survival. However, it was generally the smaller forwarders who disagreed with the statement, arguing that there will always be a place in the market for smaller IFFs as larger IFFs often use them due to the local expertise they have and further stating that some customers actually prefer a more personalized transport service offered by smaller IFFs.

The third statement was “IFFs are diversifying from traditional forwarders to new form logistics providers”. Here, the vast majority of the respondents either agreed or strongly agreed with the statement, which totaled up to 72.5% of the responses. The remaining 22.5% stated that they are neutral and a small 5% disagreed.

The last statement read, “The IFF industry is experiencing a move towards the development of one-stop service companies”. Here, almost half of the respondents,

40% choose to neither agree nor disagree, while a total of 60% agreed or strongly agreed with the statement.

The final section of the questionnaire featured two open-ended questions to give the respondents the opportunity to give their unguided view regarding the diversification concept. The first of two open-ended questions asked the respondents “How would you propose a freight forwarder moves from the forwarder status to that of a logistics provider”.

Some of the interesting replies received are given below:

- “It depends on market presence and expected skillset of current customer base. If the customer expects simple skills they will not have high expectations; if the customer is high-end and expects more advanced skills, forwarder needs to answer that by more flexible thinking and by offering solutions even before questions are being asked”.
- “This can be done by either investing in new services or cooperation with existing service providers”.
- “Offer a wider range of services and think as the customer”.
- “Vertical integration to “own” the supply chain”.
- “By investments in partnership with other forwarder/logistics providers”.
- “In many cases, the change to logistics provider is a presentation difference where operations can be adjusted when required”.

From the given responses, it can be concluded that majority of the respondents see the service diversification as an important step to become a logistics provider.

The second open-ended question asked “What would you respond to claims that freight forwarding is a fading profession, the provision of total logistics services being its successor accommodating the needs of international trade?”

Some of the interesting replies received are given below:

- “I disagree, I believe it depends on who your clients are.”
- “There will always be companies that lack specific knowledge of shipping/transport/customs and will turn to a forwarder that appeals to them. Larger operations do indeed look for the one-stop support.”
- “Local knowledge of the markets remains important, large IFFs often use local partners in niche markets.”
- “I disagree. There will always be room for smaller players, rendering a more personal service. Customers want to have a personal contact and do not want to be contacted for this purpose by someone from a remote location who they don’t have an ongoing relationship with.”
- “Freight forwarding will always be part of international trade.”
- “I do not agree, there will always remain a strong requirement for also regular freight forwarding companies.”
- “As logistics is a very important part of the supply chain of any company that operates globally, I would take it a step further that in the near future fully integrated global LSP’s will be owned/be part of the bigger companies of the world.”
- “I disagree. Offering the right nich(es) will do. Size matters for buying power, but service in the end pays”.

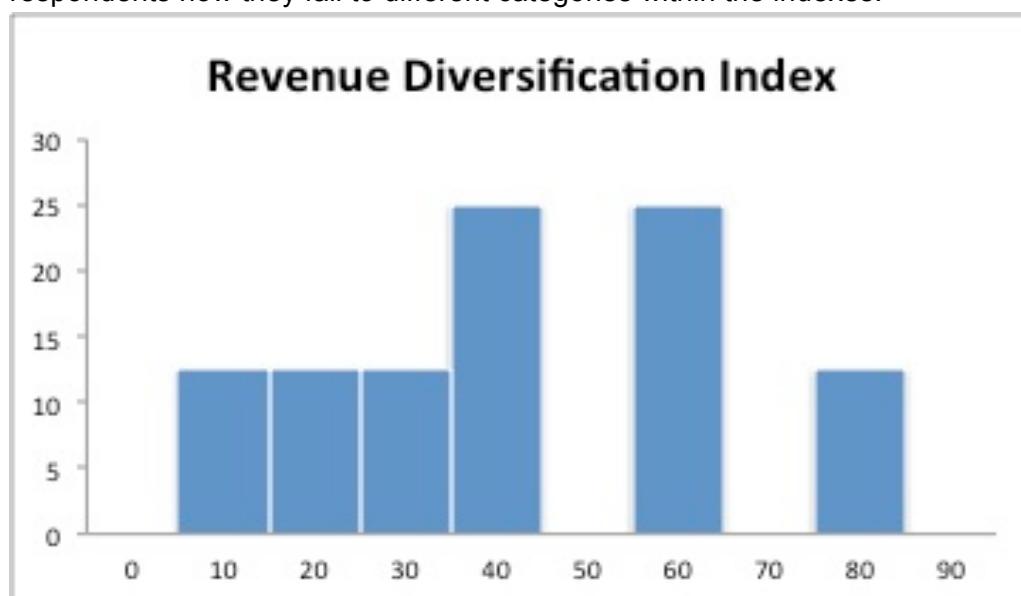
From the given responses, the respondents seems to reach the consensus that IFF is not a fading profession, and there will always be a need for their services due to their knowledge of local markets. Although it is stated that size may matter for buying power, the nice expertise and personalized service offered by smaller IFFs seem to be appealing for certain customers utilizing their services.

#### **6.4 A quantitative view of diversification**

The qualitative and descriptive aspects of the results have been analysed in the previous sub-section. The following chapter will take a quantitative approach to describe the diversification phenomenon in the Dutch IFF sector, and answer the main research question as well as the sub-questions formulated using various quantitative analysis methods. Namely, this subchapter will present the service and revenue diversification indexes (histograms), a correlation (regression) analysis, and t-tests on a various aspects of the diverse and non-diverse companies.

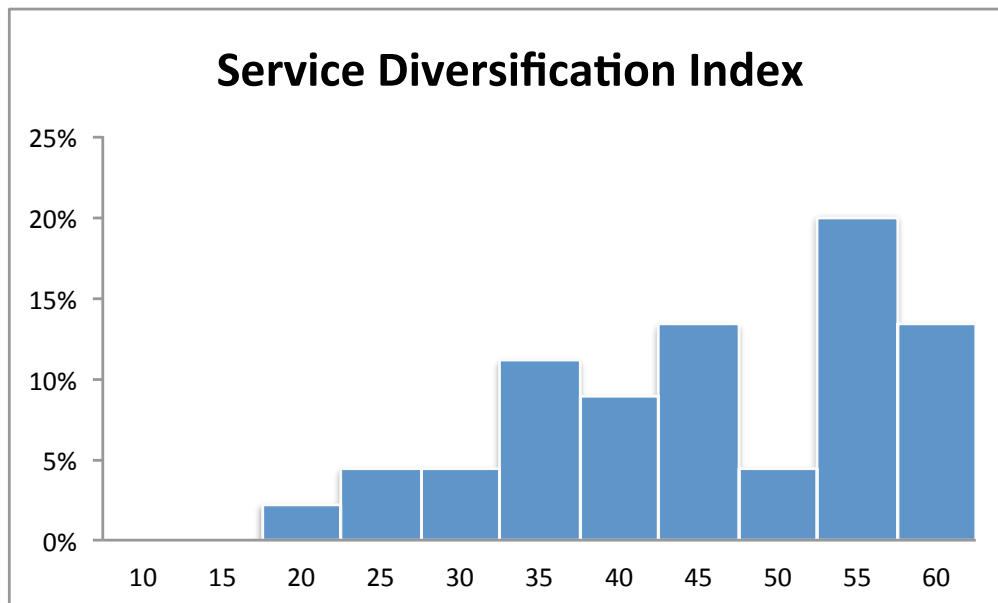
##### ***Main RQ 1: How diverse are the companies in the Dutch IFF industry?***

In addition to the qualitative findings of this thesis regarding the service diversifications of the Dutch IFFs, the quantified findings also supported the high level of diversification existing in the sector. In order to measure how diversified each IFF is, a “diversification score sheet” was adopted from Markides and Holweg (2006) and was modified slightly to fit this thesis. The score sheet (Appendix II) assigned points to the different services IFFs currently offered. After appointing points to every IFF participated in the survey, a service diversification index was created. However, as it the service diversification index will not provide much meaning on its own, a revenue diversification index was also created using the current revenue generation structures from different activities of the sample IFFs. The figures below present these charts and shows, in terms of percentage of respondents how they fall to different categories within the indexes.



**Table 8 Revenue Diversification Index**

Source: Own elaboration



**Table 9 Service Diversification Index**

Source: Own elaboration

As shown on the revenue diversification index, the majority of the revenues are generated from two main sources, while the remainder comes from other revenue generating activities, and in general looks more prominent than the service diversification index. The service diversification index shows that the level of diversification happening but when considered together with the revenue diversification index, it shows that even though the companies are diversified, the main revenues are still generated from their core activities.

It must be noted here that the revenue diversification index has been plotted over the three time frames that was used in this thesis. The IFFs are very likely to have diversified already in the past and started offering services in addition to their core activities. For this reason, they may not require to diversify even further. However, the complementary services offered such as insurance and customs broking are also likely to increase in proportion to the core activities such as air, sea and road freight transport.

### ***RQ 2: Is there a link between a IFFs asset base and service diversification strategies?***

In order to measure and provide an answer for the above research question, a correlation analysis was conducted. Although the survey did not ask some important questions regarding the different types of transport vehicles and the number of warehouses a IFF has, this information was gathered using extensive desk research as I perceived this to be of much importance and value adding for this thesis. The table 10 presents the results of the correlation analysis.

CORRELATION	How much is a company diverse N= 45 in nature, present (service-based)	Number of Employees	Number of Offices	Company Turnover	Number of trucks	Number of Trailers	Number of warehouses
How much is a company diverse in nature, present (service-based)	1.000						
Number of Employees	0.510	1.000					
Number of Offices	0.464	0.753	1.000				
Company Turnover	0.308	0.717	0.485	1.000			
Number of trucks	0.466	0.882	0.647	0.673	1.000		
Number of Trailers	0.267	0.572	0.689	0.506	0.728	1.000	
Number of warehouses	0.396	0.733	0.489	0.707	0.677	0.341	1.000
p Values	How much is a company diverse in nature, present (service-based)	Number of Employees	Number of Offices	Company Turnover	Number of trucks	Number of Trailers	Number of warehouses
Number of Employees	0.000		1.000	1.000	1.000	1.000	1.000
Number of Offices	0.001	0.000		1.000	1.000	1.000	1.000
Company Turnover	0.040	0.000	0.001		1.000	1.000	1.000
Number of trucks	0.001	0.000	0.000	0.000		1.000	1.000
Number of Trailers	0.076	0.000	0.000	0.000	0.000		1.000
Number of warehouses	0.007	0.000	0.001	0.000	0.000	0.022	

**Table 10 Correlation analysis**

Source: Own elaboration

The extend of revenue and service diversification have already been provided in the first question using the indexes. It is however important to explore the relationship of the service diversification with numerous other assets. These assets do in fact differ from company to company and does have an impact on the level of diversification an IFF can pursue. The correlation analysis above compares the level of service diversification with variables such as the number of employees; number of offices, trucks, trailers and warehouses an IFF has as well as their yearly turnover.

As demonstrated in table 10, there is a positive relationship indicating a strong link with the level of diversification a firm pursues with the number of employees it has as indicated with the 0.510 coefficient. This is as expected because it is logical that a diverse company requires more employees to run and carry out the different services they offer. The coefficient of 0.464 also implies that the number of offices an IFF has and the level of service diversification they pursue is also positively correlated with the number of offices they have. Since the larger companies generally have more diversified service offerings, it is also logical to expect that they will have more locations to carry out their activities covering a larger geographical area. It can further be inferred that, the more physical assets a company have, such as the warehouses, trucks, and trailers, the more diversified a firm will be in their service offerings.

There are further positive relationships between these key variables. For instance, there is a strong link between the yearly turnover company makes and the number of employees they hire as indicated with the coefficient of 0.753. The number of employees a firm has is also positively correlated with the number of trucks a company have. The more trucks a company owns, the more employees they are expected to hire. The relationship also applies to the number of warehouses and the number of employees a company have. The relationship of the number of trucks and the number of warehouses is also strongly correlated represented by the coefficient of 0.677. Finally, it can be concluded that the assets a company have and the level of service diversification they offer is mostly correlated, while the strength of positive correlation varies depending on which key variables being investigated.

### ***RQ 3: What is the relationship between company structure and perception for diversification?***

As demonstrated in the answer to the previous research questions, most of the IFFs are quiet diversified in terms of their service offerings. The distinction of the most diverse firms from the least diverse firms can be made from the service diversification index and the diversification score sheet used. This was achieved by arranging the sample of IFFs in a descending order and dividing the sample into four quartiles where top quartile represents the “most diverse” IFFs and bottom quartile represents the “least diverse” IFFs. This was done to be able to understand the different perceptions these companies have for diversification and adequate T-test analysis were conducted to reveal the differences for a number of variables between these two different groups. As part of the t-test analysis the following general hypothesis were set to test the significance of relationships.

$H_0 = \mu_1 = \mu_2$  meaning that diverse and non-diverse companies have the same mean variable.

$$H_1 = \mu_1 > \mu_2 \text{ or } \mu_1 < \mu_2$$

For each of these variables analysed, rejecting the null hypothesis ( $H_0$ ) signifies that there is no statistically significant difference between the diversified and non-diversified companies. Similar to the structure of the qualitative analysis, the t-tests was done first on the asset structure of the two groups investigating the key variables such as the number of employees, company age, turnover and physical assets such as the number of offices and the number of types of different transport assets they have. Secondly, the same test was used to identify the differences in perceptions for the two groups of IFFs by looking at the answers they gave to the competitive advantage driver questions. Lastly, a further test was conducted to find out the further differences in their perceptions by their viewpoints regarding the four statements they were given at the survey questionnaire.

The table below presents the t-test results for the asset structure. As demonstrated, the null hypothesis is rejected for all the variables meaning that the diverse and non-diverse companies didn't have the same mean variables. In fact, there was evidence to the 99% confidence level (0.01) that, for all the variables the means

were greater for the diverse companies then the means for non-diverse companies. The result for the “number of type of transport assets” were supported at the 95% confidence level (0.05).

This can lead to an important conclusion that, the companies that are older with many years of experience, higher number of employees, turnover, number of offices and different types of transport available are significantly more likely to diversify their services more.

		Age	Number of employees	Turnover (millions)	Number of offices	Number of type of transport assets
Diverse	Mean	75	1256.3	7,409.5	13.7	2.1
	Standard deviation	50	1397.8	14,948.7	13.1	0.3
Non-diverse	Mean	27	8.6	8.9	1.4	1.5
	Standard deviation	16	4.8	15.4	0.8	0.9
T-value		3.02	2.96	1.64	3.13	2.15
Degrees of freedom		20	20	20	20	20
P-value		0.03	0.04	0.09	0.03	0.02 *
Decision at 0.01 level		Reject H0	Reject H0	Reject H0	Reject H0	Reject H0 at 0.05 * significance level

**Table 11 T-test results for asset structure**

Source: Own elaboration

The table below presents the T-test results for the different viewpoints on the drivers for competitive advantage. As demonstrated, the null hypothesis is accepted for all the variables meaning that the diverse and non-diverse companies had the same mean variable. In fact, there was evidence to the 99% confidence level (0.01) that, for all the variables the means were greater for the diverse companies then the means for non-diverse companies.

		Competitive Advantage Drivers ( 1-most important, 4- least important)			
		Customer Service	Cost	Range of Services	Niche Expertise
Diverse	Mean	1.45	2.91	2.27	3.36
	Standard deviation	0.69	1.14	0.65	1.03
Non-diverse	Mean	1.82	2.45	3.18	2.64
	Standard deviation	1.17	0.69	1.08	1.12
T-value		-0.89	1.135	-2.397	1.587
Degrees of freedom		20	20	20	20
P-value		0.192	0.135	0.013	0.064
Decision at 0.01 level		Accept H0	Accept H0	Accept H0	Accept H0

**Table 12 T-test results for Competitive Advantage Drivers**

Source: Own elaboration



Both diverse and non-diverse companies perceived the customer service levels to be the most important competitive advantage driver. While the diverse companies perceived the “range of services” to be the second most important driver, non-diverse companies perceived this as the least important. Furthermore, the non-diverse IFFs valued “cost” to be the second most important driver while the diverse companies ranked it as the third most important. Lastly, the diverse companies perceived the “niche expertise” as the least important driver while the non-diverse firms perceived it as the third most important driver.

Overall, the differences in the perceptions of perceptions between the diverse and non-diverse companies did not have a statistical significance. However, as expected, diverse companies ranked having a larger range of services much more important at 2.27 overall, while non-diverse companies perceived it as the least important factor ranking it at 3.18 overall. This is an important indication in terms of the perceptual viewpoints of the diversified and non-diversified IFFs.

Finally, the table 11 below presents the t-test results the IFFs gave to the four statements given in the questionnaire. For this test, the response choices, strongly disagree, disagree, neutral, agree and strongly agree were converted to the numerical values of 1,2,3,4,5, in the same order (1- strongly disagree, 5- strongly agree).

The statements that were used in the questionnaire are the following;

Statement 1: the industry is experiencing consolidation

Statement 2: in the IFF industry company size matters for survival

Statement 3: IFFs are diversifying from "traditional forwarders" to "new form logistics providers"

Statement 4: the industry is experiencing a move towards the development of "one-stop" service companies".

As demonstrated, the null hypothesis is rejected for all the statements except the first statement.

Both “diverse” and “non-diverse” IFFs agreed that the IFF industry is in fact experiencing consolidation. The T-test results could not reveal a statistically significant difference in their mean variable therefore null hypothesis was accepted here. For the remainder of the statements, the null hypothesis were rejected as the mean variable of the diverse IFFs were greater than their non-diverse counterparts. For instance, there were big differences in perception regarding the statement two which was about the impact of company size for survival. While the diverse firms believed that size does matter for survival, the non-diverse IFFs mostly disagreed.

For statement 3, the diverse firms mostly agreed that the traditional IFFs were being transformed to modern logistics service providers. The non-diverse firms mostly remained neutral about this statement.

For the final statement, the diverse IFFs very strongly agreed that there is a strong trend in the IFF industry towards one-stop service companies, while the non-diverse firms again remained largely neutral.

IFF Industry statements (1-Strongly disagree, 5- strongly agree)					
		Statement 1	Statement 2	Statement 3	Statement 4
Diverse	Mean	4.09	3.64	4.27	4.55
	Standard deviation	0.54	0.67	1.01	0.82
Non-diverse	Mean	3.45	2.18	3.09	3.09
	Standard deviation	0.52	0.6	0.7	0.3
T-value		2.811	5.333	3.191	5.521
Degrees of freedom		20	20	20	20
P-value		0.11	0	0.005	0
Decision at 0.01 level		Accept H0 at 0.05 level	Reject H0	Reject H0	Reject H0

**Table 13 T-test results for 4 statements**

Source: Own elaboration

## 6.5 Comparison of findings with the theory

In terms of the market structure, the results of the survey questionnaire revealed that the Dutch IFF sector is in fact very fragmented, showing similarities to the US and UK IFF industries. The 50 largest IFFs in the Netherlands owned less than 50% of the total market share and DHL, which is the largest IFF in the Netherlands, owned only about 4% of the market.

The results also showed that companies preferred to pursue “related” diversification strategies to “non-related” diversification strategies. This could be explained by the companies’ intentions to make use of synergies that would be created by expanding into niche services closer to the core services they provide. The theory also confirms that companies do indeed aim to benefit from economies of scale, make use of common inputs, transfer knowledge, and enjoy synergies that are created by expanding their service portfolios (Qian, 1997).

In terms of the revenue generation structures, in both diverse and non-diverse IFFs, the core activities such as road, ocean and airfreight carriage were the main sources of revenues. This is in-line with the findings of Markides and Holweg (2006) who carried out a similar study examining the diversification activities of the UK based IFFs. Pope and Thomchick (1985) also found that revenue generation structures did not reflect the diversified service portfolios IFF have as most of their revenues were coming from the core activities.

In terms of the asset base, even though the IFFs are generally known to have asset-light business models, a considerable proportion of the Dutch based IFFs reported to own their own fleet of trucks that they use to carry out the actual carriage

function, which is a characteristic of “hybrid” IFFs. Although the IFF theory suggests that the function of such firms are organization and consolidation of transport where the actual transport is realized by carriers, Dutch IFFs differed from the general norm and reported to operate trucks, trailers and warehouses to realize the road freight transport. Few of the larger forwarders also reported to operate their own vessels and cargo aircraft, but these forwarders could be classified as multinational conglomerates which operate all over the world and have very deep pockets.

This thesis confirmed that the company size and firms asset base is an important indicator for the level of service diversification pursued by firms. Furthermore, largest firms, with more buying power and wider asset bases did in fact got engaged more in service diversification, which was again in line with the theory. The more diversified firms had wider asset bases, employed more people, generated more revenues, had multiple office and warehouse locations and relatively larger fleets of trucks.

The theory suggested that the main motive behind pursuing such strategies was to improve profitability and respond to the comprehensive needs of the customers. The findings of the survey re-confirmed that these are indeed the two most important motives for engaging into service diversification activities. By providing more personalized and value added services, Dutch IFFs realize that they can improve their profitability and differentiate themselves from the competition. Finally, theory suggests that there is a strong movement towards the “one-stop” logistics concepts. The findings confirm that this has now become the reality, and the IFF sector is in fact in transition, experiencing consolidation and re-structuring, which is transforming them to new form logistics service providers, realizing the “on-stop” logistics concept.

## **Chapter 7. Conclusions and Recommendations**

### **7.1 Conclusions**

The economic environment is volatile and this volatility is especially apparent in the IFF industry. This volatility is being caused by the regulatory changes, advancements in ICT, increased customer demands as well as the increased competitive pressure being put on the IFFs. In addition to market volatility, there are many more trends that are impacting the profitability of the IFFs both in the Netherlands and in the IFF sector globally. Different companies are taking different approaches to deal with the volatility and respond to changes happening in the sector. While some companies are seeking service diversification strategies the others may choose to focus on a particular service and become a specialist in that particular service. The results of this study confirm that IFF are and will continue to be an important intermediary in the global transport chains. The current transition they are facing should not be seen as a decline of their importance but as an evolution that is currently transforming the IFFs.

This thesis has provided an investigation on the diversification strategies pursued by the IFFs operating in the Netherlands. In a nutshell, here are the main findings of this thesis.

- There are a lot of IFFs in the Dutch market that are pursuing service diversification strategies. However, even though they have diversified service portfolios, their core activities are still their biggest sources of revenue.
- The companies which were established earlier, tends to be larger in size, hire more people and have a large asset base, which are necessary conditions for pursuing a high service diversification strategy.
- Although the younger companies may have the flexibility to diversify, service diversification is correlated with the buying power. Since older companies have more resources to use for service diversification, they generally diversify more than the younger IFFs.
- The diverse and non-diverse companies seem to have similar perceptions regarding the competitive drivers and they both value the customer service level to be the most important factor.
- The diverse companies agreed more that the size matters for survival in the IFF while the non-diverse companies did not. This derives from the differences in their operational dynamics.

One of the main findings was that service diversification exists in the Dutch IFF market. While both small and large firms pursue this strategy, the larger firms will tend to be more diversified since they have more buying power, more access to markets and resources. This finding is in line with the findings of Markides and Holweg (2006) and Murphy and Daley (1995). The smaller companies also embarked on these strategies but to a more limited extent compared to the larger firms. While some small IFFs preferred to focus on niche expertise, other IFFs reported to have the capability to offer diversified services if it is demanded by their clients. In terms of the perceptions of the IFFs, both diversified and non-diversified companies valued the customer service levels as the biggest driver of

competitiveness. The perceptual findings did not present a conclusion with consensus regarding the relationship of firm size with the survival of the IFFs, but the answers to the open-ended question suggested that size does not actually matter for survival but can matter for buying power, which is also linked to the relationship between size and diversification strategy pursued. The transitions of traditional IFFs to LSPs were a generally accepted statement that also confirmed that IFFs are currently undergoing a restructuring phase. Lastly, it can be concluded that the decreasing profit margins due to increased competition is one of the main justifications for pursuing diversification strategies.

## ***7.2 Research Limitations***

One of the main limitations faced during this research was during the data acquisition phase, particularly in the survey questionnaire. Although every effort was made to increase the credibility, professionalism and confidentiality, it was very difficult to achieve the desired response rate. The sample size was significantly reduced due to the auto-rejections from the companies' e-mail security systems. In addition to this, some of the e-mail addresses acquired from the FENEX database was out dated, meaning that more manual search was needed to be done to replace the out dated e-mail addresses with the official ones from company websites. Another reason for IFF professionals' reluctance to respond to the survey questionnaire, which only took 4-6 minutes to be completed, was the possible lack of incentive for them. Although I offered to post copies of my completed thesis, a part of the sample was not convinced to be a part of this study. There were also professionals who were very interested in the outcome of my thesis which was very encouraging at the times when I was struggling to get the desired response rates. Finally, some of the respondents left some of the questions asked in the survey unanswered. The only two questions where this happened was when they were asked about their yearly turnover and the future revenue generation structures from different parts of their business. They considered this information as confidential and stated that they don't disclose them in academic studies.

## ***7.3 Recommendations for Further Research***

During the process of writing this thesis, I was able to identify few aspects of IFF which I could have studied further but was not able to due to time constraints. There were also aspects which interested me but was beyond the scope of this thesis which made it irrelevant to be studied under this academic study.

First of all, the domain of international freight forwarding is understudied, particularly in the Netherlands and the Western and Central Europe. I believe this domain can definitely benefit from more studies done on a variety of aspects. One of the most interesting and promising areas identified was the development of IT systems as common information platforms that could be used by all the actors in the transport chain. I believe this is something that will be critical for all the logistics companies in the future and its prospects, implications and transition process is definitely worth studying.

Secondly, the importance of the Dutch ports not only for the Netherlands but for the whole Europe, as Port of Rotterdam is dubbed to be the “gateway of Europe to the world”, is apparent. This means that the logistics services in the Netherlands have a very important role and purpose, not only serving national markets but the whole Europe. It is difficult to measure the implications of the Netherlands world-class ports’ on the individual IFFs in the Dutch IFF sector, but a study can be beneficial to see how does the geographical involvement of a world class port impact the LSPs and IFFs in the area. A potential research project can study the impacts of the Dutch ports on the firm size of the Dutch IFFs, LSPs and explore the role of large ports for developing logistics clusters in an area.

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### Appendix I – International Freight Forwarders Survey – NL

#### 1. CONSENT FORM

The purpose of this research project is to provide an overview of the diversification strategies pursued by the international freight forwarders based in the Netherlands. This is a research project being conducted by Yusuf Yusufoglu at Erasmus University Rotterdam. You are invited to participate in this research project because you are a member of Fenex.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time.

The procedure involves filling an online survey that will take approximately 4-6 minutes. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address. The survey questions will be about your company profile, services being offered, revenue structure and the contemporary issues concerning the international freight forwarders based in the Netherlands.

We will do our best to keep your information confidential. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only and may be shared with Erasmus University Rotterdam representatives.

If you have any questions about the research study, please contact Mr. Yusuf Yusufoglu by e-mail at [yusufoglu.y@googlemail.com](mailto:yusufoglu.y@googlemail.com) or by phone at +31611882667 or +905428796006.

**ELECTRONIC CONSENT:** Please select your choice below.

Clicking on the "agree" button below indicates that:

- you have read the above information
- you voluntarily agree to participate
- you are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

☐ Agree

☐ Disagree

**2. What is the name of your company?**

**3. What is the job title for your current position?**

- ☐ Owner
- ☐ Managing Director
- ☐ Manager/Supervisor

Other (please specify)

**4. How many full-time employees currently work for your organization?**

**5. About how many locations does your company have?**

**6. Company turnover per annum (estimate for last financial year)**

**7. What services does your company offer?**

	Freight Forwarding	Customs house broking (in-house or out-sourced)	Insurance Services (in-house or out-sourced)	Non vessel operating common carrier	Value adding services - Packing/Palletizing	Value adding services - Product Modifications	Information Technology
Services offered	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other (please specify)	<input type="text"/>						

Please answer the following 3 questions regarding the revenue generation profile of the services offered by your company. Please note that, for each question, the total of your percentage choices should add up to 100%.

**8. Percentage of revenue generated by (Currently)**

Air freight	<input type="text"/>
Rail freight	<input type="text"/>
Sea freight	<input type="text"/>
Warehousing	<input type="text"/>
Insurance	<input type="text"/>
Road Haulage	<input type="text"/>
Customs house brokerage	<input type="text"/>

**9. Percentage of revenue generated by (5-10 years ago)**

Air freight	<input type="text"/>
Rail freight	<input type="text"/>
Sea freight	<input type="text"/>
Warehousing	<input type="text"/>
Insurance	<input type="text"/>
Road Haulage	<input type="text"/>
Customs house brokerage	<input type="text"/>

**10. Percentage of revenue generated by (in the next 5 years)**

Air freight	<input type="text"/>
Rail freight	<input type="text"/>
Sea freight	<input type="text"/>
Warehousing	<input type="text"/>
Insurance	<input type="text"/>
Road Haulage	<input type="text"/>
Customs house brokerage	<input type="text"/>



Please organise the following statements in order of importance (1 = most important).

### 11. Competitive advantage in the international freight forwarding industry arises through

<input type="radio"/>	Customer Service Level
<input type="radio"/>	Cost
<input type="radio"/>	Range of services offered
<input type="radio"/>	Niche expertise

### 12. International Freight Forwarders diversify due to

<input type="radio"/>	Opportunities for higher profit margins	<input type="checkbox"/> Other
<input type="radio"/>	Customers require additional services	<input type="checkbox"/> Other
<input type="radio"/>	To gain market presence in new sectors/markets	<input type="checkbox"/> Other

Please respond to the following statements regarding the contemporary issues in the freight forwarding sector using the drop-down menu provided.

### 13. The IFF industry is experiencing consolidation and restructuring

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
The IFF industry is experiencing consolidation and restructuring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the IFF industry company size matters for survival	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IFFs are diversifying from "traditional forwarders" to "new form" logistics providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The IFF industry is experiencing a move towards the development of one-stop service companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide your thoughts regarding the following questions in the text boxes provided.

**14. How would you propose a freight forwarder moves from the forwarder status to that of a logistics provider?**

**15. What would you respond to claims that freight forwarding is a fading profession, the provision of total logistics services being its successor accommodating the needs of international trade?**

## Appendix II – Diversification score index

Adopted from Markides and Holweg (2006).

Services	Points
<i>Freight Forwarding Service</i>	
Import	5
Export	5
Both	10
<i>Customs House Broking</i>	
Not provided	0
Inhouse	10
Outsourced	5
<i>Insurance</i>	
Not provided	0
Inhouse	10
Outsourced	5
Operates as a NVOCC	10
Warehousing and distribution	10
<i>Packing/Palletizing</i>	
Not provided	0
Inhouse	2
Outsourced	1
<i>Labelling/barcoding</i>	
Not provided	0
Inhouse	2
Outsourced	1
Consultancy	2
Information Technology	2

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