



On the diversification of international freight forwarders

A UK perspective

Vassilis Markides and Matthias Holweg

Judge Business School, University of Cambridge, Cambridge, UK

Abstract

Purpose – This paper examines the diversification of services and activities by freight forwarders in the UK. Following similar studies conducted in the USA, the paper analyses the trends towards service and revenue diversification that has been observed in this sector.

Design/methodology/approach – The study is based on a survey of 100 UK-based freight forwarders-based and empirically tests the firms' respective revenue generation structures, as well as the range of services offered. The survey is complemented by semi-structured interviews at a further four companies in order to provide additional contextual explanations of the empirical findings.

Findings – The results show that diversification appears to be closely related to both company size and a diversified asset base. The motivation for diversification stems mainly from a perceived erosion of the traditional freight forwarding revenue streams, as companies are seeking higher profit margins outside their traditional core business, while addressing the increasingly comprehensive needs of their customers at the same time. The findings show that, although diversification is much less prominently seen in their revenue structures, companies are quite diverse in terms of the services offered. Service diversification was found to be a strategy predominantly followed by the larger companies with wider asset bases.

Practical implications – The freight forwarding industry is experiencing significant volatility as a result of technological advances, regulatory changes, customer pressures and increased competition. This study provides the empirical clarification needed for freight forwarding companies to derive a business strategy appropriate to their respective settings.

Original/value – Previous studies have largely reported findings from research conducted in North America, which features a structurally very different population of freight forwarders and logistics operators. This study presents the status quo and trends of diversification in the UK, which features a population of considerably smaller firms and thus requires a different decision framework towards adopting a diversification strategy.

Keywords Freight forwarding, Distribution management, Corporate strategy, Diversification, International trade

Paper type Research paper



1. Introduction

With international trade barriers breaking down, firms across industry sectors are recognising the opportunities arising from global sourcing, offshoring, and growing domestic demand in emerging markets. For logistics service providers, this internationalisation of the supply chain has created both challenges and opportunities. Logistics intermediaries focused on international movements including freight forwarders, customhouse brokers (CHBs), non-vessel operating carriers (NVOCCs) as well as export management companies, characterize themselves as “Third-Party Logistics providers” (TPL) – capable of offering complete “solutions” for the movement of international freight (Ran *et al.*, 1993). As a result, previous

distinctions between these different forms of intermediaries seem increasingly blurred the more of these added responsibilities are taken on.

The primary logistics middleman for cross-national trade has traditionally been the international freight forwarder (IFF), or in colloquial terms, the “shipping company”. In the recent past, the forwarding industry is experiencing tremendous volatility (Murphy and Daley, 2000; Armbruster, 2003) as a result of consolidation and restructuring in the sector. The evolution of the concept of “total logistics” and the subsequent emergence of larger and highly diversified providers has even led some experts to go as far as predicting that small and medium-sized forwarders are “doomed to extinction” (Schwartz, 1998). Others advocate that the traditional forwarder will cover a niche in the freight services market by offering value-added services such as customs clearance, logistics management, information technology and special freight handling (Chandler, 1994).

As Murphy and Daley (2000) argue, this changing role could be attributed to shifting market trends, including:

- the globalisation of production;
- the deregulation and dismantling of institutional obstacles to competition;
- increased competition between transport modes;
- technological change; and
- the outsourcing of the logistics function.

This study sets out to investigate the diversification of the freight-forwarding sector in the UK. Specifically, we investigate to what extent IFFs have diversified in terms of their revenue generation and service offerings. Furthermore, we aim to identify the link between revenue and service-based diversification, and the structural and perceptual differences between those companies that have diversified, and those that have not. In terms of structure, the paper initially presents a discussion of the current academic debate of the diversification phenomenon, before presenting the research approach and method adopted in this study. Subsequently, the findings will be presented, which are placed in context to the studies by Murphy and Daley (1995, 2000) on freight forwarders in the USA, before concluding.

2. Diversification of the freight forwarding sector: a literature review

Diversification as strategy has been widely discussed in the strategy field, where the majority of studies have examined the performance consequences of diversification – even though the nature of this relationship still remains largely unresolved (Park, 2002). Early studies have argued that diversification was valuable: from a conceptual perspective, increasing levels of diversification should have a positive influence on performance due to economies of scope and scale, market power effects, risk reduction effects, and learning effects (Rumelt, 1974; Bettis, 1981; Christensen and Montgomery, 1981). In contrast, more recent research has found that conglomerate firms have significantly lower profitability (Varadarajan and Ramanujam, 1987; Davis *et al.* 1992). The wide belief that diversification is inefficient is also partly attributed to its contradiction to one of the oldest economic theorems that argues that specialization is productive (Matsusaka, 2001). It has also been shown that highly diversified firms have less market power in their respective markets than more focused firms (Montgomery, 1985). Product diversification has been found to be negatively related to

firm value (Lang and Stulz, 1994; Servaes, 1996) and to occur in firms with less managerial and shareholder equity ownership (Denis *et al.*, 1997).

In terms of related and unrelated diversification, it is asserted that a related product diversifier can transfer the learning effects from one business line to another (Qian, 1997; Geringer *et al.*, 2000). Building on the work of Chandler (1962), Wrigley (1970) and Rumelt (1974) found that in his sample of 246 firms:

- the related diversification strategies outperformed the other diversification strategies on average;
- the related-constrained diversification strategy yielded the highest performance on the average (in related-constrained firms all component businesses are related to each other whereas in related-linked firms only one-to-one relationships are required); and
- the unrelated diversification strategy produced one of the lowest performances.

In accordance with this argument, the industrial organization literature (Williamson, 1981; Jones and Hill, 1988) also emphasizes the synergy effect from diversification among related businesses (Qian, 1997).

As far as unrelated diversification is concerned, previous research found a correlation between failures of diversification and failure to establish relatedness among various business lines at the corporate level (Grant, 1988; Narasimhan and Kim, 2002). In contrast to Rumelt's work, Michel and Shaked (1984) found that unrelated diversifiers outperform related diversifiers. Reconciling the two views, other research suggests that each form of corporate strategy is associated with a different set of economic benefits (Teece, 1982). In the case of unrelated diversification, the main benefits are economies of internal capital markets in that unrelated business units can be monitored more effectively by constraining them to a single internal capital market – rather than by the external capital market en masse (Williamson, 1999). In the case of related diversification, the main economic benefits are *economies of integration* and *economies of scope*. Economies of integration provide the firm with lower costs of production (Klein *et al.*, 1978), lower costs associated to managerial opportunism (Madhok, 2002) and lower costs of writing contracts (Arrow, 1974). Economies of scope include synergies between business units and dominant logic (Dawley *et al.*, 2002). Also, in the strategic management literature, researchers have argued that the primary determinant of firm performance is not the extent of diversification (Lubatkin, 1983; Montgomery, 1985; Palepu, 1985), but the relatedness in diversification, i.e. whether to diversify into related or unrelated industries.

The focus of this study is on diversification of the services and revenue generating activities of IFFs. Here, Murphy and Daley (1995) found that “dramatic changes are occurring in the functions and activities of IFFs” while investigating the expansion of the IFF's services to the provision of “one-stop shopping”. Ozsomer *et al.* (1993) further point out that “recent changes in the IFF environment have witnessed the emergence of new forms of forwarders incorporating a broad spectrum of services under one roof”. This “one-stop shopping” theme is also discussed by Semeijn and Vellenga (1995), albeit in relation to transportation carriers. Ran *et al.* (1993) observed that:

... today many internationally focused logistics service providers, including freight forwarders [...] characterize themselves as TPL capable of offering bundled services for the movement of international freight.

While the academic debate provides the theoretical foundations for the investigation of the dialectics of the diversification and specialisation strategies, it gives little insights into the current trends and developments specific to the IFF industry. Here, although not based on rigorous studies, a review of key industry trade press articles provided additional contemporary insights, specific to the IFF sector. Table I summarises several key statements made in the trade press, which provide further contextual evidence of the sentiments in the industry.

3. Method

The main proponent of the research methodology of this study is the concurrent use of both positivist and interpretive research methods (Brewer and Hunter, 1989; Howe, 1988; Miles and Huberman, 1984; Patton, 1990; Reichardt and Cook, 1979). The quantitative part of the research involved a telephone-administered questionnaire where a stratified random sample of the population of UK IFFs was surveyed. The statistical sample was drawn from companies contained in the latest version of the 2004 British International Freight Association (BIFA) Members' Directory (BIFA, 2004). The BIFA directory was deemed the most appropriate and comprehensive source, containing over 1,000 freight forwarders in the UK along with their address and contact telephone numbers. The membership in the BIFA directory is heterogeneous, yet is based on the common denominator that all companies are engaged in freight forwarding activities, irrespective of any other services that might be offered. Thus,

Source	Excerpt
Schwartz (1998)	"While surrounded by bright prospects for international trade growth, freight forwarders are feeling the strain of more sophisticated market demands . . . some professionals foresee the inevitable extinction of small to medium-sized forwarders."
Burckhardt <i>et al.</i> (1998)	"The freight forwarding industry has not been healthy for some time . . . traditional operators are caught in the middle of the competitor pack with high costs and undifferentiated services."
Story (1998)	"In an attempt to consolidate business opportunities within a shrinking market, freight forwarders are being forced to offer total turnkey solutions. Value-added services once considered peripheral to the selling of space, such as customs agencies, contract logistics, domestic transportation, couriers and computerized track and trace systems are rapidly becoming a minimum point of entry."
Putzger (1999)	"In this age of supply chain management, most forwarders want to be known as logistics providers, emphasizing that they can do a lot more than just getting your freight from point A to B."
Armbruster (2002)	"These are difficult times for small and mid-sized forwarders. As their margins shrink and their big competitors expand globally, many small operators are deciding to seek strength in numbers [i.e. through collaboration]."
Scherck (2003)	"Today, the mid-size forwarder segment faces unprecedented competitive pressure on various fronts . . . smaller players are being pinched by integrated carriers and the newly-entrepreneurial postal systems."
Armbruster (2003)	"Changing times for forwarders: small and medium-sized intermediaries face a difficult business environment."

Table I.
Key excerpts from the
IFF trade press

“pure” freight forwarders are listed alongside of full-service logistics companies, while both provide essentially the common service of freight forwarding.

In terms of sampling methodology, a simple random sampling design (allocating a fixed probability of selection) was not deemed suitable in this case due to the highly skewed representation of company size, and the potential bias in results. Instead, a stratified random sampling design was chosen, which allowed for proportionate allocation of pre-specified variables. Based on an intuitive understanding of the population under study, the number of employees (company size) was used as the defining variable to construct strata from which companies were selected. It was also decided that even though location would not be appropriate as a defining variable for the sampling process, the company’s region was recorded in order to counter a potential regional (geographical) bias. The telephone questionnaire was formulated after consultation with freight forwarders during initial unstructured interviews, following an initial pilot survey with ten companies (also administered via telephone). For the survey, across the strata, a total of 130 companies were randomly selected to form the sample for administering the questionnaire, of which 100 companies did reply (i.e. a response rate of 77 per cent). The questionnaire is appended in Appendix 1.

In a second stage following on from the survey, to further elaborate on the issues identified and place the survey results into context, face-to-face semi-structured interviews with senior managers at IFF companies were deemed essential in facilitating further insight into the subject and in providing the participants with an opportunity to expand on their views and opinions, for which the telephone interviews gave little opportunity. This process involved a written request for personal interviews sent to companies engaged in freight forwarding. A total of four personal interviews were conducted on-site at the freight forwarders locations, which also provided an opportunity for site visits of the companies’ operations. These interviews were not used to generate additional data, but were primarily used to triangulate the survey results, and to develop a deeper contextual understanding.

In our study, diversification is defined as phenomenon that can be observed both on the revenue side, as well as in the service offering. Diversification is understood as relating both to a freight forwarder’s revenue generation structure but also on the range of services offered, as for many logistics companies additionally services might not be separately remunerated, but form part of their “basic” transportation service. Thus, solely considering the diversification of revenue generated would yield a potentially distorted perspective. As the pilot research quickly showed, due to the nature of the contracts, it is difficult for some companies to distinguish the revenue for each individual service, as these are often remunerated in a “packaged” fashion. Thus, we consider both aspects of diversification separately, an approach also adopted in previous studies discussing IFF diversification (Murphy and Daley, 2000). The subsequent analysis thus revolves around two axes, service and revenue diversification.

In order to effectively quantify or measure the diversification of revenue streams, provided the arbitrary nature of the task, an “index of diversification” was constructed. This revenue-based index draws data from questions in the survey on revenue structure, notably, the percentage of revenue generated from sea-freight, air-freight, road haulage, rail-freight, warehousing, insurance, customs clearance and other. These activities were identified during unstructured interviews as the main revenue generating activities for IFFs. Furthermore, the respondents were also asked to provide

data on their past and future projected revenue generation structure. Thus, the revenue-based index was captured in three timeframes, past, present and future. The revenue index is defined as the standard deviation describing the spread of revenue generation among the defined categories.

With regards to the services offered by companies, classifying IFFs along a spectrum of being “diverse” or “non-diverse” according to the range of services they offer, is a more arbitrary task which bears significant risks of subjectivity. For this reason a point-ranking system was introduced, whereby IFFs are assigned points according to the services offered. In this way, the companies can be distinguished in a systematic and rigorous manner. The basic services offered (in terms of road and sea freight, etc.) have already been captured to categorise the firm. In this index, we consider additional diversification into the key services such as import and export, insurance, warehousing and distribution, customs clearance and NVOCC, as well as value-added services such as packing, labelling, IT, consultancy, and web capabilities. Furthermore, more weight is attributed to companies having an in-house capability to offer a service, rather than companies outsourcing these services. It should be noted that the points attributed for each service were decided upon in consultation with freight forwarders through the initial unstructured interviews. The point-ranking system assumes a scale from 0 to 60, the most diverse being 60. More detail on the revenue index used can be found in Appendix 2.

4. Empirical findings and analysis

This section will present the empirical findings and analyses, bringing together the survey findings and the interviews results in addressing specific research questions on IFF diversification. First, the survey respondent profile will be discussed along with a descriptive analysis of the results. Second, the results from the perceptual research will be presented. Third, a quantitative analysis investigates the links between revenue and service diversification, and the difference between diverse and non-diverse companies. Finally, the motives for diversification will be revisited.

4.1 Respondent profile

The findings on firm size are illustrated in comparison to other relevant literature on IFF demographics. Employee groups are modified to match the ones used by Murphy and Daley (1995, 2000); for more detail on the survey see also Appendix 3 (Table II).

It appears that IFFs in the US are on the whole considerably larger than their UK counterparts. This is understandable given the size of the respective economies and the geographical settings. Also, in the US the demarcation point for “small companies” used by the Department of Commerce is 500 employees. In the UK, the Department for

Number of employees	Current study	Percentage of respondents		
		1992	Murphy and Daley 1995	2000
0-9	50.1	26.7	25.2	19.0
10-49	24.9	46.6	45.3	51.9
50-99	11.7	10.9	10.6	12.7
>99	13.2	15.8	18.9	16.4

Table II.
Respondent profile: size
of companies, current vs
previous studies

Trade and Industry sets this demarcation point at 50 employees. However, by either standard the IFF industry in both the US and the UK is characterised by the prominence of small firms.

IFFs are generally considered to be non-asset based operators. In the survey the majority of IFFs do not own any transport assets, however, there is still a significant proportion of companies owning trucks, trailers or vans, while the (capital-intensive) ownership of aircraft and ships was not found, with one exception (Table III).

In terms of the number of offices, IFFs appear to mostly occupy single office locations. The UK's relatively condensed geography means that companies can cover the whole of the country without requiring multiple locations. In terms of warehouses, we found a surprisingly large proportion of companies owning their own warehouse ($n \geq 1$), as (irrespective of the actual number of warehouses) more companies own their own warehouses than those that do not.

The range of services offered by IFFs comprises the most important aspect of this study. Murphy and Daley (2000) associated forwarder diversification with the percentage of revenue generated by forwarding activities and also whether the companies offered CHB and NVOCC services. Here the analysis was expanded to also take into account whether additional services are offered inhouse, or are outsourced to other companies. This expansion was deemed necessary given that many services offered by logistics companies are remunerated as part of the overall transportation service, thus would not account for a separate revenue stream. By considering both the diversification of revenue and services offered, this potential source of distortion could be mitigated.

Furthermore, apart from customs clearance (CHB) and NVOCC services, companies were also asked whether they provided insurance, warehousing and distribution and various other value-adding services such as information technology, consultancy, packing and labelling. Finally, if a particular service was provided, where appropriate companies were asked whether to specify whether these service were provided inhouse or outsourced.

As illustrated in Table IV, the majority of companies offer NVOCC, CHB, packing, labelling, insurance provision, and a substantial proportion of companies also offer warehousing and distribution (W&D). In the Murphy and Daley (2000) study, 81 per cent of companies offered CHB and 57 per cent NVOCC. In both cases, the present study suggests that even more companies have the capability to offer these services in the UK. In examining the degree to which these services are offered inhouse, insurance appears to be a widely outsourced service. CHB, on the other hand, has indeed become a service provided by IFFs internally. Information technology products still seem largely outside the IFFs' scope, even though 17 per cent are offering such services.

Asset	Min	Max	Average	Standard deviation
Trucks	0	300	14.9	37.6
Trailers	0	700	33.5	101.4
Vans	0	30	3.7	6.6
Ships	0	6	0.1	0.7
Aircraft	0	0	0	0
Warehouses	0	8	1.1	1.7
Offices	1	30	3.2	4.9

Table III.
Firm asset base by type

Service	CHB (per cent)	Insurance (per cent)	Packaging (per cent)	Labelling (per cent)	NVOCC (per cent)	IT (per cent)	Consulting ^a (per cent)	Warehousing distribution (per cent)
Inhouse	48.0	19.5	42.9	39.0	58.4	16.9	39.0	48.1
Outsourced	40.3	77.9	37.7	41.5	N/A	N/A	N/A	N/A
Not offered	11.7	2.6	19.4	19.5	41.6	83.1	61.0	51.9

Note: ^aFor a fee

Table IV.
Services provided

Surprisingly, a great number of IFFs (39 per cent) offer consultancy for a fee. Finally, packing and labelling seem to be a service in which IFFs have expanded, with a great proportion of them having in-house capability.

In terms of turnover, companies were asked to not only provide a figure for yearly total turnover, but also to break this turnover down into the categories of:

- airfreight;
- seafreight;
- railfreight;
- road haulage;
- warehousing;
- CHB
- insurance; and
- other.

These categories were decided upon after consultation with IFFs to avoid overlapping figures. Admittedly, some services may contribute to a number of these activities, so for any of these aggregated contracts respondents had to assign revenue proportionally to overlapping services and activities.

As one would expect, company size is clearly related to the volume of turnover. The majority of small IFFs generate between £1 and £5 million, medium-sized between £20 and £50 million and larger forwarders over £100 million revenue per annum (Table V).

The results from the survey clearly indicate the dominance of air, sea and road freight revenues when compared with the rest of the categories. Even though sea freight continues to be the dominant source of revenue, a surprisingly high proportion of the IFFs revenues stems from road freight. Indeed, the UK features a growing road haulage sector, transporting increasing freight volumes to and from continental European countries (although profit margins remain low in this segment of the market). The remainder of the activities generate a much smaller proportion of revenue, warehousing and the “other” category being the only activities showing projected increases over time. Projected revenue for the next 5-10 years include a further rise of 10 per cent in warehousing and an increase in the “other” category of 7 per cent. Even though rail freight revenues appear to have increased, overall contribution is at a very low level.

4.2 Perceptual analysis

On the interpretive side of the questionnaire, companies were asked to rank what they perceived offered them competitive advantage in their industry, the four choices being:

Time frame	Air (per cent)	Sea (per cent)	Rail (per cent)	Road (per cent)	Ware housing (per cent)	CHB (per cent)	Insurance (per cent)	Other (per cent)
Past 5-10 years	20.5	29.0	1.0	23.8	7.8	7.9	6.6	3.1
Currently	20.6	27.9	1.8	22.5	8.5	7.7	6.6	4.4
Expected in next 5-10 years	20.7	26.7	1.8	22.4	9.6	7.4	6.6	4.7

Table V.
Percentage of revenue
generation by service

- (1) cost leadership;
- (2) customer service levels;
- (3) widest range of services; and
- (4) niche expertise.

These strategic choices were decided upon in consultation with IFFs during the pilot study, and also mirror previous studies (Murphy and Daley, 2000, p. 166) (Table VI).

On a scale of 1-4 (1 being the most important and 4 being the least important), customer service ranks as the most important consideration in acquiring competitive advantage in the industry. The second most important is cost leadership, then range of services and last niche expertise. It is most interesting to note that this ranking remains the same irrespective of the size of the company responding.

Apart from their view on the drivers of competitive advantage, respondents were also asked to express their opinion on a range of basic statements related to the diversification theme. As far as consolidation is concerned, there was a strong consensus among the respondents that there is indeed consolidation underway in the IFF industry with only 2 per cent actually disagreeing with the statement. The issue of a critical minimum size though is not as clear. Closer examination of the responses revealed that smaller companies predominantly disagreed with the statement in comparison with the larger companies, an outcome which is intuitively understandable. The most important statement, notably whether IFFs are diversifying to “new form logistics providers” found a strong sense of agreement of 99 per cent. Further, this is the statement with the highest proportion of respondents choosing the “strongly agree” category (18 per cent). Finally, the statement on the “one-stop” concept also presents a clear case of agreement, with only 8 per cent disagreeing. Admittedly, statements 3 and 4 are closely connected with the logistics concept ultimately also translating into the “one-stop” concept, partially explaining the similar pattern in the respondents’ views.

As an extension to this question, respondents either agreeing or strongly agreeing with statement 3 were asked to rank what they considered as providing incentives for a company to diversify. Owing to the nature of the survey, it was not possible to compile a long list of diversification drivers and administer this over the telephone, and instead the survey concentrates on the most basic factors. Based on the unstructured interviews three basic diversification drivers were decided upon as:

- (1) opportunities for higher profit margins;
- (2) customers require additional services;
- (3) to gain market presence in new emerging sectors or markets; and
- (4) some other factor to be proposed by the respondent.

Strategy	Overall	Company size		
		Small	Medium	Large
Cost leadership	2.3	2.2	2.3	2.3
High customer service levels	1.6	1.6	1.6	1.3
Wide range of services	2.9	3.0	2.5	2.6
Niche expertise	3.2	3.1	3.6	3.3

Table VI.
Key strategy factors,
ranked by importance (1:
most important, 4: least
important)

Companies were given the opportunity to provide any additional driver, which they considered to be important in option (4). However, in conducting the survey only three respondents actually provided alternative drivers, notably: “diversification is a market trend” “it is a means to differentiate from other IFFs” and “diversification may be induced by partners or agents”. Focusing on the drivers presented in the survey and ranking 1 as the most important and 3 as the least important. Overall, to gain market presence in new sectors – does not appear to be the least important factor in considering diversification to the provision of logistics services (36 rankings as “least important”). The other two drivers seem to have more or less equal importance (21 and 23 rankings as “most important”, respectively), the provision of additional services to customers was only marginally perceived as the most important diversification driver.

The last part of the survey included two open-ended questions intended to stimulate discussion on diversification in the IFF industry. Those who believe diversification is indeed happening in the industry were asked to expand on what they consider a freight forwarder actually does in his organization when “diversifying”. The rest of the respondents were asked to respond and expand on a statement that “freight forwarding is a fading profession, the provision of total logistics services being its successor”. For the first question, responses are illustrated as a collection of proposals discounting duplicate arguments. From this collection, key themes can be identified. For the second question, responses are illustrated with the use of the most popular quotes from the respondents.

From the responses it is clear that a range of conceptual definitions exist about the nature of diversification, and especially about the logistics concept. To a certain extent it appears that the diversification into a “logistics provider” is regarded as an evolutionary step towards becoming a more sophisticated operator. Several key themes could be identified in this discussion:

- *Cutting-edge IT.* Respondents emphasized the importance of information technology in diversifying to a logistics provider. The implementation of “track and trace” inventory control software and online presence are only some of the IT proposals brought forward.
- *Strategic partnerships within the supply chain.* Building strong relationships with carriers, agents, partners and customers was considered essential in adopting the “logistics” concept.
- *Emphasis on knowledge and expertise.* Logistics providers are generally understood as having the right expertise and multi-skilled personnel to offer a wide range of services.
- *Extended geographical coverage, service offerings and value-added services.* The adoption of logistics was seen as requiring a more global and total approach in terms of geography and services offered, the latter also relating to the provision of a wide range of value-added services.

Interestingly, there was also a strong perception that “logistics service provider” was a re-labelling of the existing IFF. Typical statements from the interviews include: “all this hype about logistics ... we are still doing the same as we did, its just that its called logistics now” or “yes we want to expand our portfolio of services, does this mean we are not forwarders now and we are logistics providers ... I think not” and “what is fading is

the word forwarding and not the profession as such". The general understanding from logistics-sceptics is that the term is widely used as a marketing tool rather than signifies any kind of change in the industry. Many of them perceive logistics as a passing phase, which will ultimately fade as some other terms have done previously. Others viewed "logistics" as a strategic choice, with the alternative being niche specialization.

4.3 A quantitative view of diversification

After having presented the descriptive analyses of the respondent profile and the perceptual analysis of diversification, this section will provide further quantitative evidence of the diversification phenomenon, by investigating the three research questions into the state of diversification, the link between service and revenue diversification, and the differences in strategic direction between diverse and non-diverse companies:

RQ1. How diverse are companies in the IFF industry?

As discussed above, diversification is examined in terms of revenue and also in terms of the range of services offered. Figure 1 shows the probability density function for both indices.

The chart illustrates what proportion of firms (in terms of percentage of respondents) fall into the various ranges of the revenue and service diversification index. As can be seen, the service diversification is more prominent than the revenue diversification. Thus, although a wide range of services is offered by the majority of IFFs, the revenue is still attributed to few or single sources, hence the asymmetry of the revenue diversification index. For those companies that already are diverse in terms of the revenue diversification index, there is a further interest to investigate the time frame over which this diversification took place, effectively the revenue diversification trend. Given that the revenue diversification index was computed with three time frames (past, present and future) it is possible to plot the index over time. In this context, the past time frame covers the past 5-10 years and the future time frame projects the next 5-10 years. Arguably, an investigation of the diversification trend further back in time bears the problem that respondents might not have accurate information on their revenue generation structure far back in time. Similarly, the projecting the revenue structure of in 5-10 years time is equally unscientific, nevertheless the perceptual element in this exercise bears the most interest. To what extent have companies observed a diversification of services and revenues, and are they expecting this trend to continue?

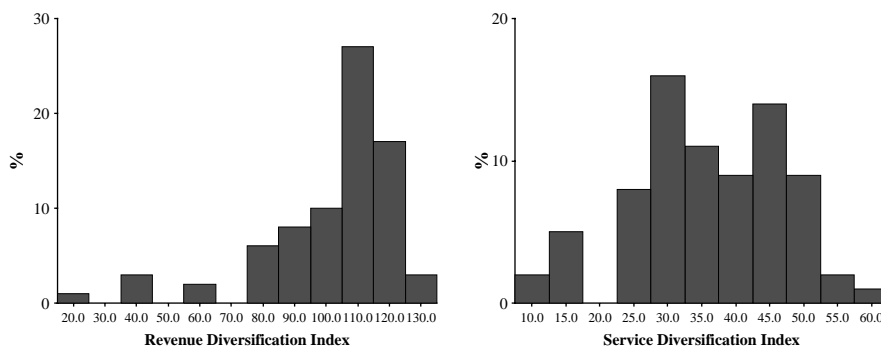


Figure 1. Probability density functions for revenue and service indices

As far as revenue diversification is concerned, there does not appear to be a clear increasing trend in the revenue index, showing only a marginal increase. On average the revenue diversification index increases from 0.608 in the past to 0.658 in the present, and remains level for the future. Hence, it appears that companies are already quite diverse in terms of revenue and have only diversified marginally in the past 5-10 years. This also partially explains the negative skewness in the current revenue diversification index distribution.

From the personal interviews it transpires that in terms of the revenue generation activities defined, IFFs are already engaged in all of the key activities, sea freight, airfreight and road freight being the most significant revenue generating sources. It appears that companies potentially have diversified even further back in time than the 10-year reference period used in this study. The static nature of the revenue diversification index for the next 5-10 years could also be attributed to a general reluctance by IFFs to invest in “non-core” revenue generation activities. Notably, IFFs do not appear enthusiastic about developing their revenue streams into rail freight, for example, at the expense of the other modes. Similarly, customs clearance has been reported as an activity under severe pressure as a result of the enlargement of the EU and the parallel simplification of customs procedures. Insurance is closely connected to revenues generated by the main modes and has not been reported as an activity where IFFs are willing to diversify apart from the use of insurance for freight movement. Finally, even though there appears to be increased interest in upgrading revenues from warehousing and “other” activities such as courier services, the relatively incremental increases in such activities as compared to the “core” revenue generating activities (sea freight, air freight, road freight) did not offset the generally static revenue diversification trend:

RQ2. The link between service and revenue diversification.

Having examined the extent of diversification in terms of both indexes, the question arises whether there is a statistical link between revenue and service diversification. Furthermore, there is a need to explore the relationship between the two indexes and other key variables: company age, turnover, size, number of offices and the number of types of transport assets. To examine this effect, a correlation analysis was conducted, the results of which are shown in Table VII.

As illustrated, there is a significant positive correlation between the revenue and service diversification indices. Moreover, the correlation table reveals significant links between the service index and the number of trucks, warehouses and offices, as well as company turnover and size. The revenue index only correlates with the number of offices and company size at the 5 per cent level.

Thus, although less prominent than some other correlations, there is a significant link between the range of services offered, and the different revenue streams of a company. Company size plays a further significant role in the proliferation of this diversification, more so on the service side, providing strong evidence that smaller firms do not diversify beyond the current remit. To further test whether this lack of diversification is driven by an unwillingness to do so, or a lack of ability, the following section will investigate the difference in perception of diverse, and non-diverse companies.

RQ3. Testing for differences in structure and perception.

	How much is a company diverse in nature, present (service-based)	How much is a company diverse in nature, present (revenue-based)	Number of trucks	Number of trailers	Number of warehouses	Number of offices	Company turnover
<i>N</i> = 77	1						
How much is a company diverse in nature, present (service-based)	0.388**	1					
How much is a company diverse in nature, present (revenue-based)	0.000	0.124	1				
Number of trucks	0.430**	0.284					
Number of trailers	0.000	-0.134	0.380**	1			
Number of warehouses	0.149	0.246	0.001	0.428**	1		
Number of offices	0.196	0.206	0.807**	0.000	0.681**	1	
Company turnover	0.554**	0.072	0.000	0.332**	0.000	0.832**	1
Number of employees	0.000	0.269*	0.694**	0.003	0.711**	0.000	0.773**
	0.506**	0.018	0.000	0.375**	0.000	0.785**	0.000
	0.000	0.207	0.727**	0.001	0.752**	0.000	0.000
	0.488**	0.071	0.000	0.409**	0.000	0.000	0.000
	0.000	0.240*	0.790**	0.000	0.000	0.000	0.000
	0.490**	0.035	0.000	0.000	0.000	0.000	0.000

Notes: *Correlation is significant at the 0.05 level (2-tailed); ** correlation is significant at the 0.01 level (2-tailed)

Table VII.
Correlation analysis

As already demonstrated, the majority of companies are quite diverse in terms of the defined revenue generation activities. An investigation of the differences between diverse and non-diverse companies based on revenue would not be possible, as the sample size of non-diverse companies would not be adequate to generate meaningful results. However, it is possible to distinguish the most diverse from the least diverse companies in terms of the service diversification index. Thus, the sample is divided into quartiles according to the service index. The upper and lower quartiles represent the most and least diverse companies according to the defined service diversification index, respectively. For each of the two classes summary statistics are calculated on key variables, which are then compared and tested with *t*-tests for significance the hypothesis set as:

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

H_1 . $\mu_1 > \mu_2$ or $\mu_1 < \mu_2$ [1].

Thus, for each variable analysed in the following, a rejection of *H*₀ means that the difference between diversified and non-diversified companies is not statistically significant. The analysis is undertaken in three stages. First, the data are tested for differences in asset structure as well as company size and age, before testing for difference of perception of the drivers for competitive advantage and in the response to four statements.

In terms of age, turnover, number of offices, employees and types of transport assets (Table VIII), there is evidence supported at the 1 per cent level of significance that for all variables the mean is greater for diversified companies than non-diversified companies. Thus, as one would expect, companies with the appropriate experience and suitable size are also the ones diversifying the range of services they offer. Larger companies with a larger asset base are significantly more likely to show a diversification of services.

As shown in Table IX, both diverse and non-diverse companies seem to value customer service level and cost as the two most important factors providing competitive advantage. Also, non-diverse companies gave more importance to niche expertise than the range of services offered. Overall though, both diverse and non-diverse companies rated the range of services as rather low (2.75 and 3.05,

		Age	Number of employees	Turnover (millions)	Number of offices	Number of types of transport assets
Diverse	Mean	47	144.3	47	8	3
	Standard deviaton	42	123	52	9	1
Non-diverse	Mean	17	5	4.1	2	1
	Standard deviaton	9	6	8	1	1
<i>T</i> -value		3.1	66.8	3.6	3.4	7.3
Degrees of freedom		21	19	20	19	32
Decision at 0.01 level		Reject <i>H</i> ₀	Reject <i>H</i> ₀	Reject <i>H</i> ₀	Reject <i>H</i> ₀	Reject <i>H</i> ₀

Table VIII.
T-test results

respectively). Statistically this difference is not significant. Thus, in relative terms, diverse companies rate all four propositions in the same fashion than their non-diverse counterparts.

Even though the results might seem intuitively right, the fact that non-diverse companies do rate the range of services as an equally important (or not important) source for competitive advantage is surprising. Equally, diverse companies value niche expertise, and overall no statistically significant differences between diverse and non-diverse companies could be observed with regards to the perceived drivers of competitive advantage.

Finally, Table X shows the results of confronting the respondents with four statements, asking for their agreement on a scale of 1-5 (from 1: strongly disagree to 5: strongly agree). Overall, both diverse and non-diverse companies seemed to largely agree on all statements. Nonetheless, significant differences in perception could be observed for statement 2, where non-diverse companies did not agree with the statement that company size matters for survival. This finding is in line with the earlier observation that non-diverse companies seem to be the smaller companies. Also, diverse companies agree more with the statement that the industry is experiencing consolidation; this observation is supported at the 5 per cent level of significance, but not at the 1 per cent level. On statement 3, as would be expected, diverse companies agree to a larger extent with the statement that traditional forwarders are diversifying to new form logistics providers. This observation is again supported at the 5 per cent level. Finally, the complimentary statement 4, that the industry is experiencing a trend towards one-stop companies finds more support from diverse rather than non-diverse companies, a finding supported at the 1 per cent level of significance.

The comparison between diverse and non-diverse companies has indeed generated useful additional insights. Diverse companies appear to be larger in size, older in age, and show a larger asset base. One could have expected younger companies to be more flexible in diversifying, yet it appears that service diversification is related to a greater extent to the amount of resources available. In terms of strategic outlook, both types of companies appear to have the same orientation. Low cost and high customer service levels are the two most important competitive advantage drivers.

		Competitive advantage drivers (1-most important, 4-least important)			
		Customer service	Cost	Range of services	Niche expertise
Diverse	Mean	1.6	2.25	2.75	3.40
	Standard deviation	0.88	0.72	1.02	1.05
Non-diverse	Mean	1.8	2.2	3.05	2.95
	Standard deviation	0.83	0.83	0.89	1.39
<i>T</i> -value		0.7	0.2	1.0	1.2
Degrees of freedom		32	29	34	56
Decision at 0.01 level		Accept <i>H</i> ₀	Accept <i>H</i> ₀	Accept <i>H</i> ₀	Accept <i>H</i> ₀

Table IX.
T-test results

Table X.
T-test results

	IFF industry statements (1-strongly disagree, 5-strongly agree)			
	Statement 1	Statement 2	Statement 3	Statement 4
Diverse	Mean 3.95	3.70	4.00	4.00
	Standard deviation 0.69	0.98	0.86	0.65
Non-diverse	Mean 3.45	2.60	3.45	3.30
	Standard deviation 0.60	0.88	1.05	0.98
<i>T</i> -value	2.4	3.7	1.8	2.7
Degrees of freedom	23	39	34	32
Decision at 0.01 level	Accept <i>H</i> ₀ at 0.05 level	Reject <i>H</i> ₀	Accept <i>H</i> ₀ at 0.05 level	Reject <i>H</i> ₀

Notes: 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

On the key issues facing the industry there is a strong consensus apart from the relevance of company size in corporate survival. The (smaller) non-diverse companies feel that company size does not dictate survival in the industry, an opinion that finds agreement with the diverse companies. The observation that larger, more experienced and resourceful firms are also the most diverse companies has also been expressed in the personal interviews. Interviewees from larger companies contended that diversification required significant investment, at a scale “overwhelming for small operators”. Even though interviewees from larger companies advocated the need for financial backing, resources and expertise to diversify; small operators argued that the small to medium-sized IFF still has a role to play in providing “customised services”.

4.4 On the motives for diversification

Following the quantitative analyses, this section will further develop key notions highlighted in the interviews following the open-ended questions in the telephone survey with regards to the motives for diversification.

The main argument for diversification brought forward by respondents was the perceived erosion of profit margins in the IFF industry. Reasons provided for this erosion included:

- tougher competition due to a large number of operators in the industry;
- the reduction in customs clearance revenues as a result of EU enlargement; and
- increasing demands by customers to provide “more service for less”.

The general understanding is that traditional revenues generated by freight forwarding are decreasing to such levels that operators are having to “reinvent themselves” and seek more profitable activities. The rise of the “logistics concept” gave operators the opportunity to either diversify, or at least advertise that they were diversifying into logistics providers.

Furthermore, diversification was also seen as a necessary step towards fulfilling growing demands by customers for additional services, or even “one-stop” shopping. Interviewees argued that customers are increasingly requiring transportation partners to be capable of handling their every day distribution and supply chain needs, allowing them to concentrate on their core competencies. Interviewees also argued for the need to provide value-added services to customers apart from transportation and storage, such as “track and trace” systems, packaging, labelling, online quotation and cargo booking and consultation. Particular emphasis was added to information technology and the need to have such systems in place as to communicate and transmit real-time information on the movement of cargo to customers.

As far as the future of IFFs is concerned, larger operators seemed to argue for further consolidation, a point accompanied by doubts about the future of the small to medium-sized IFF. In response, the smaller operators argued for their continued presence as the larger companies concentrated on the most important customers and the larger contracts. A frequently mentioned alternative for smaller companies was specialisation into a niche sector. Even the larger operators argued that smaller operators have the choice of specialising, which is seen as lucrative market for a small number of companies.

All respondents associated the logistics concept with a further diversification in the range of services offered. In contrast with the respondents from larger firms, the

smaller operator argued that IFFs are not diversifying into “logistics service providers”. Here, the “full-service provider” concept was often perceived as a “marketing buzzword” much more than signifying any actual change to the IFF’s organization, although a need to seek revenues outside their traditional businesses was acknowledged across all respondents.

5. Conclusions

The past decade has been challenging for the freight forwarding industry, as the profitability of core business areas has been deteriorating. For some companies this has meant a turn towards diversification and the offering of value-added services, embracing the concept of a logistics service provider. For others, a focused strategy on provided specialist niche services in the freight services market has been deemed more appropriate. Moreover, the industry has witnessed a general trend towards consolidation and the subsequent emergence of global logistics operators, putting further pressure on small and medium-sized forwarders. Nonetheless, IFFs continue to be key intermediaries in the international trade (Murphy *et al.*, 1992), and thus the respective development in the IFF industry should be seen as an evolution, and not as a general decay.

The underlying study has provided an investigation into the diversification of the UK IFF sector, complementing previous studies in the US (Murphy and Daley, 1995, 2000). The findings show that, although revenue diversification is much less prominently seen in their revenue structures, companies are quite diverse in terms of the services offered. Service diversification was found to be a strategy predominantly followed by the larger companies with wider asset bases. Diverse companies were on average older, had more employees and number of offices, greater turnover and invested in a wider array of transport assets. Both diverse and non-diverse companies considered that cost leadership and customer service were the dominant competitive advantage drivers even though non-diverse companies argued that the range of services offered was less important than having niche expertise. Both types of IFFs agreed that there is a general consolidation trend in the IFF industry. The larger IFF companies in particular stated a trend towards diversifying into “logistics service providers” and a move towards the development of “one-stop service” companies. In contrast with diverse IFFs, non-diverse IFFs did not agree with the statement that in the IFF industry company size matters for survival. This was somewhat to be expected as diversification was shown to positively correlate with company size. Finally, the interview respondents stressed the erosion of profit margins as a vital motivation for diversification in the IFF industry, a notion strongly echoed in the interviews conducted.

In conclusion, the UK IFF industry is experiencing significant volatility as a result of technological advances, regulatory changes, customer pressures and increased competition. The distinctions that once existed between international logistics intermediaries are increasingly blurred as the logistics concept has been widely embraced in the international trading community. Nevertheless, the IFF industry is still very much characterised by small companies, some of which do not appear to be willing to embrace diversity as strategy. In the same way larger forwarders see diversification as strategic development, specialisation into niche sectors is also regarded as a way towards providing opportunities within the sector.

Note

1. The alternative hypothesis is that the population from which the sample with the highest average comes has the highest mean.

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Appendix 1. Survey questionnaire

Company name, location, number of sites, number of employees. Main services offered.

Contact name and details.

1. Position/job title:

(1) Owner (2) Managing director (3) Director (4) Manager/supervisor (5) Other_____

2. Services offered:

a. Freight forwarding (international/cross-border shipments):

(1) imports (2) exports (3) both

b. Investment in assets (number)

trucks_____trailers_____ vans_____ containers_____ warehouses_____

vessels_____aircraft_____ other_____

c. Customs house broking (inhouse or outsourced)

(1) No (2) Yes-inhouse (3) Yes-outsourced

d. Insurance services (inhouse or outsourced)

(1) No (2) Yes-inhouse (3) Yes-outsourced

e. Non vessel operating common carrier

(1) No (2) Yes

f. Warehousing and distribution

(1) No (2) Yes

g. Value-adding services (inhouse I or outsourced O)

(1) packing/palletizing I/O/No (2) labelling/re-labelling bar-coding I/O/No

(3) product modifications I/O/No (4) consultancy Y/No

(5) Information technology Y/No (6) Other_____

3. Company turnover per annum (estimate for last financial year): _____

4. Percentage of revenue generated by:

(__ currently__ in the past 5-10 years__ in the next 5 years)

a. Airfreight_____ b. Seafreight_____

c. Railfreight_____ d. Road haulage_____

e. Warehousing_____ f. Customs house brokerage_____

g. Insurance_____ h. Other_____

5. Organise in order of importance (1=most important) – competitive advantage in the IFF industry arises through:

a. Customer service level_____ b. Cost_____

c. Range of services offered_____ d. Niche expertise_____

6. Responses to contemporary issues in the freight forwarding sector:
(Rate from: strongly disagree – disagree – neutral – agree – strongly agree)
- The IFF industry is experiencing consolidation and restructuring
 - In the IFF industry company size matters for survival
 - IFFs are diversifying from “traditional forwarders” to “new form” logistics providers
 - The IFF industry is experiencing a move towards the development of one-stop service companies
7. IFFs diversify due to (rank by importance, 1=most important):
- Opportunities for higher profit margins
 - Customers require additional services
 - To gain market presence in new sectors/markets
 - other _____
8. How would you propose a freight forwarder moves from the forwarder status to that of a logistics provider?
9. 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 2. Description of the service index

The service index gives points according to the services offered by the respective company. The categories and weightings were drawn up in consultation with the four IFF companies visited during the pilot phase of the project.

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/palletising</i>	
Not provided	0
Inhouse	2
Outsourced	1
<i>Labelling/barcoding</i>	
Not provided	0
Inhouse	2
Outsourced	1
Consultancy	2
Information technology products	2
Web capability	2

Table A1.
Service index

Appendix 3. Survey respondent profile

This section further describes the respondent profile in terms of firm age, turnover, and UK geographical spread. The respondent profile is linked to the US study conducted by Murphy and Daley (2000) where appropriate.

Year founded	Percentage of respondents	
	Current study	Murphy and Daley (2000) study
Prior to 1900	3.9	5.1
1900-1939	1.3	27.0
1940-1959	10.4	10.2
1960-1979	23.4	45.9
1980 and beyond	61.0	21.8

Table AII.
Company age

Turnover (t) ^a	Company turnover			
	Total	Small companies (0-49) ^b	Medium companies (50-249)	Large companies (250 +)
$t \leq 0.5$	5.2	7.1	0	0
$0.5 < t \leq 1$	24.7	25	0	0
$1 < t \leq 5$	27.3	39.3	6.7	0
$5 < t \leq 10$	13	14.3	13.3	0
$10 < t \leq 20$	7.8	5.4	26.7	0
$20 < t \leq 50$	15.6	8.9	46.7	16.7
$50 < t \leq 100$	1.3	0	6.7	16.7
$t > 100$	5.2	0	0	66.7

Table AIII.
Company turnover

Notes: ^ain million £; ^bno of employees

Corresponding author

Matthias Holweg can be contacted at: m.holweg@jbs.cam.ac.uk

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