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Bolloré Logistics Canada and the Use of Incoterms in International Maritime Shipping

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1. Introduction

Marc Gagnon, a recent graduate of HEC Montréal, was hired by the sea freight[5] export department at Bolloré Logistics Canada,[6] an international freight forwarder. During his first day on the job, he received a call from one of the clients in the customer portfolio assigned to him that very morning. The client briefly introduced himself and explained that he was negotiating with a potential buyer overseas. Marc did his best to understand the situation, but found it difficult to grasp the context of the client's questions, which were highly technical: "Which Incoterm should I use for this transaction? How much should I bill my customer for the shipping fees?"

Incoterms are used in global trade to establish the respective responsibilities of the parties. An acronym of INternational COmmercial TERMS, Incoterms constitute a set of rules developed by the International Chamber of Commerce (ICC) and consist of a codified definition of the rights and obligations of buyers and sellers in international transactions. They also standardize the risk transfer and cost transfer points associated with the goods being shipped. Incoterms enable the parties to answer three important questions: Who will bear the costs of carriage? At what point does the transfer of risk occur (loss or deterioration)? Who is responsible for the import and export customs formalities? (Hien *et al.*, 2006)

In an effort to provide his client with accurate answers, Marc asked for a few minutes to analyze the situation. As a newcomer to the company, he knew how crucial it was to build trust and credibility with his clients. A bad or incorrect recommendation could throw his abilities into question. He rang off with the client and began taking stock of the information he had just received. Slightly panicked, he wondered how to proceed in order to deliver sound advice to the client.

[1] Translation from the French of case #9 50 2016 002 "Bolloré Logistics Canada et l'utilisation des Incoterms en transport maritime international".

[2] Winner of the 2017 Best Case Award of the *International Journal of Case Studies in Management.*

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[5] Exhibit 1 presents the global maritime shipping industry.

[6] Formerly SDV Logistics Canada. The change in name took effect on February 1, 2016.

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This case is intended to be used as the framework for an educational discussion and does not imply any judgement on the administrative situation presented. Deposited under number 9 50 2016 002T with the HEC Montréal Case Centre, 3000, chemin de la Côte-Sainte-Catherine, Montréal (Québec) H3T 2A7 Canada.

2. Bolloré Logistics Canada

Bolloré Logistics Canada is an international freight forwarder[1] and part of the transportation and logistics division of the Bolloré Group, a conglomerate of French companies headed by Vincent Bolloré. Freight forwarders provide transport solutions to their clients by coordinating the modes of transportation used, customs clearance and documentation, port handling, and supervision of all shipping aspects. To do so, they normally draw on a global network of offices and agencies.[2] The Bolloré Group includes a communications division, a new technologies division, and a transportation and logistics division. The latter is divided into three distinct subdivisions: Bolloré Energy, which specializes in petroleum product logistics, Bolloré Logistics, which includes Bolloré Logistics Canada, and Africa Bolloré Logistics. In fact, the Group is very active in Africa, with 250 subsidiaries in 44 African countries. It operates 14 container terminals on the African continent as well as rail lines in Cameroon, Côte d'Ivoire and Burkina Faso.[3]

In 2014, the Bolloré Group employed 54,312 people and reported annual revenues of 10.6 billion euros.[4] The transportation and logistics division accounted for 5.6 billion euros in sales. The businesses in this division employed a workforce of 35,000 and ran a network of 600 agencies in 102 countries. The Group's freight forwarders shipped more than 500,000 tons of air freight per year and the equivalent of 790,000 20-foot-long containers (6.096 metres). This unit of measure is known as a twenty-foot equivalent unit or TEU. In addition, the businesses offered their clients 3,500,000 square metres of warehouse storage space in some 30 countries.

Bolloré Logistics Canada, a subsidiary of Bolloré Logistics, brings together 300 employees, including 150 at its head office in Montreal. The company also has offices in Toronto, Quebec City, Vancouver and Calgary. It is comprised of a number of departments: air transport, marine transport, road transport, and customs brokerage. It also owns a warehouse of approximately 97,000 square feet (9,012 square metres). The maritime transport department is divided into two groups – import and export – and the services it offers focus primarily on the direct shipment of full container loads (FCL). The department also offers a consolidated shipment service. In this respect, Bolloré Logistics Canada acts as a consolidator for multiple shipments known as "less than container load" (LCL). Another key component of the company is its project department, which handles all cargo that cannot be transported in a standard container, such as breakbulk or oversized. This department offers customized services that range from consolidation and the chartering of entire vessels to the shipping of cargo in specialized containers (open top, flatrack, etc.). It manages both air and maritime shipments for clients who for the most part do business in the mining and energy industries.

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[1] Exhibit 2 presents the freight forwarding market.

[2] Rushton, Croucher, and Baker (2014)

[3] Bolloré Group (website)

[4] *Idem*

3. International Maritime Shipments

Case 1: Atlas Mining and the Amiko Mine in New Caledonia

The call Marc received was from the sales representative for the Asia and Pacific region at Atlas Mining, a Quebec SME based in Trois-Rivières and specializing in mining equipment. The client had explained to Marc that he was involved in negotiations with a new customer abroad, the large Amiko nickel mine in New Caledonia. The merchandise being shipped was mining equipment with a high ex-factory value (approximately $300,000), as it consisted of parts used to sort nickel from waste rock. The sales terms were as follows: 100% payment prior to shipping. The Atlas Mining representative outlined this to Marc and asked him to recommend an Incoterm and provide a quote to forward the shipment under the recommended Incoterm. Somewhat in a panic, Marc jotted down all of the information provided by the representative and said he would call him back with the Incoterm recommendation and estimate.

Atlas Mining had never done business with the Amiko Mine before, which is why the sales terms required that the mine pay 100% of the value of the merchandise prior to shipping. Sales terms depend on a variety of factors, such as the level of trust between the two parties, the status of the relationship, the products involved, and even the buyer's financial capacity. A large seller doing business with a small but regular buyer will be more inclined to offer better payment terms. And while the sales terms and Incoterms are decided independently of one another, in this transaction the mine would be responsible for the merchandise as soon as it was ready for shipping. This was a calculated decision by Atlas Mining, as it preferred to handle the shipping for merchandise sold to its regular customers and leave its occasional customers with sole responsibility for transporting their orders. This allowed the company to lower the transportation risks involved in shipping to a customer whose working methods it was still unfamiliar with. In fact, this strategy was introduced following a problem recently encountered by Atlas Mining. A newly hired sales representative had mistakenly applied the DDP Incoterm to the sale of tools that measure precious metal percentages. However, the country of destination had restrictions on the importing of this type of equipment. Upon arrival of the vessel at its destination, local customs authorities refused to clear the container, placing it instead in a bonded warehouse. In order to resolve the problem, Atlas Mining had had no choice but to hire a local customs broker. Once the applicable documentation had been submitted to customs and the container released, Atlas Mining had to pay a surcharge to the shipping line (due to the container being used longer than the timeframe covered by the maritime cargo price) and to the bonded warehouse. The company was also obliged to compensate the receiver of the goods, because delivery was delayed by more than two weeks. For this reason, Atlas Mining now handled shipping only for those customers and destinations with which it had experience.

Furthermore, the Amiko Mine is located in New Caledonia, more than 14,000 kilometres from Trois-Rivières. In addition to the distance, the time zone difference is considerable; when it is noon in Montreal, it is 4:00 a.m. the following day in New Caledonia. As a result, it would be difficult for the buyer, from his office in New Caledonia, to coordinate the shipment while it was still in Canada. The main problem for the Amiko Mine was therefore starting the export process, i.e., positioning the container. This crucial step can become complicated. Generally speaking, once merchandise is ready to be shipped, the company responsible for it (according to the Incoterm used) must hire a road transport operator to drive to the port, pick up an empty container from the shipping

line used, bring it to the merchandise loading location, such as the seller's plant, then transport the full container back to the port. The potential problems associated with this step revolve around the need to coordinate the many stakeholders. For example, certain ports and plants require that transport companies make an appointment in order to relieve congestion at their facilities. Missing a scheduled pick-up or drop-off time can mean missing the vessel's departure. This triggers additional costs, as the container must then be stored in a warehouse to await the next departure. The transit time may also be greatly affected, because if the container misses a transshipment arrangement at a port of call, the delivery timeline is extended even further. So if the mine itself were to coordinate the transport of the merchandise, which road transport operator would it select to drive the container from the Atlas Mining plant to the port of Montreal? How would it ensure from so far away that the container had been properly delivered for shipment on the planned vessel? The solution might be to hire a freight forwarder in Canada in order to delegate this task to a local firm. But the problem would then involve choosing the right forwarder. How could Amiko be sure that the amount charged by the forwarder was reasonable? How should responsibility for any missed appointments be shared between the Amiko Mine and the local freight forwarder?

Marc quickly understood that the Incoterm selected had to reflect the operational reality of both Atlas Mining and the Amiko Mine. It appeared that the buyer in New Caledonia would be unable to coordinate the positioning of the container in Trois-Rivières, given the time zone difference between the two countries. And finally, Marc would have to provide his client with an estimate that took into account the Incoterm he felt was most appropriate.

Case 2: ProLab+ and Clinica Alana

On the afternoon of his second day on the job at Bolloré Logistics Canada, Marc received another call, this time from the operations manager at ProLab+, a pharmaceutical products manufacturer in Sainte Julie, Quebec. The manager explained that he was about to sign a large contract with Clinica Alana, a private medical clinic in Santiago, Chile. ProLab+ is a mid-sized player in Quebec's pharmaceutical industry with 1,000 employees and approximately $100 million in sales. Clinica Alana is a relatively small private clinic with about 50 beds. Its patients are primarily foreign tourists and wealthy individuals. The contract involved the equivalent of two containers of various pharmaceutical products representing two years of supplies for the private clinic, which preferred to renew its inventory with this frequency to take advantage of considerable volume savings. The ex-factory value of the merchandise was approximately US$450,000. The contract stipulated that the products had to be transported in temperature-controlled containers, commonly known as "reefers." The sales terms were as follows: 50% upon signing of the contract and 50% once the vessel had sailed. After explaining the situation to Marc, the manager asked him to recommend an Incoterm and provide an estimate based on his recommendation. Feeling somewhat more at ease than the previous day, Marc offered to call the manager back the next day with all of the information requested.

The manager at ProLab+ was quite comfortable with the merchandise's destination. This was not the first time the company was shipping pharmaceutical products to Chile, despite never having done so for this particular customer. However, this sale worried him somewhat, as the two containers represented an extremely high value. Given that they had to transit through either the U.S. or Vancouver to be loaded onto a vessel for Chile, the manager was concerned that the containers could be opened and the products stolen en route. He was also aware of the high traffic

at U.S. ports, which could ultimately delay delivery of the shipment and displease his customer. Finally, the perishability of the goods posed a risk should the reefer experience a malfunction. In such a case, ProLab+ could be liable for any costs related to such problems if it were responsible for the containers up to their arrival at the port of Santiago. Therefore, to mitigate the risk involved, the ProLab+ logistics manager was seeking to free the company of responsibility for the merchandise as early in the process as possible, ideally upon delivery of the containers to the port of Montreal. However, given the value of the contract, ProLab+ wished to meet its customer's requirements in order to make the sale. In this highly competitive industry, many companies in both Canada and the U.S. battle for the same contracts.

In Chile, the medical clinic had one procurement agent for medical supplies. She had customs certification and experience in the importing of merchandise from North America. When buying products from outside the country, the clinic preferred to arrange its own local transporters, and the procurement agent had developed a good relationship with local transport companies. She could therefore negotiate the best rates to transport the containers from the port to the clinic. Her main concern was the condition of the merchandise upon arrival at its destination. For a small clinic such as theirs, the value of the supplies represented an enormous purchase. It was therefore crucial to ensure that the drugs bought could be administered to patients safely and securely. In fact, two years earlier, the clinic had faced a very costly situation. It had bought drugs from a firm based in the United Arab Emirates. The merchandise was to be transported in reefers from the port of Dubai to Santiago. However, in the middle of the Indian Ocean, the ventilation system had shut down for five hours due to an electrical outage on board the ship. Due to the warm climate in this region of the world, the entire shipment had been compromised, representing a loss of more than $200,000. For its current contract, the clinic was therefore seeking insurance coverage against this kind of risk, but it was unsure which insurer to select. The procurement agent was already busy and had little time to search for and buy an insurance policy. She was also very concerned about costs. Because of its modest size, the clinic had a limited budget. To bring down the transportation costs, the agent hoped to benefit from the large size of the firms it buys its supplies from, notably to obtain the best possible shipping rates. Normally, the more that companies ship large volumes of goods via freight forwarders or shipping companies, the more likely they are to be offered attractive rates. Finally, by issuing a call for tenders, the clinic would be assured of securing its medications at the best price and arranging favourable shipping terms with the vendor.

Case 3: Cirque Hémisphère and the Athens theatre

On his third day of work, Marc received another call. This time it was the logistics coordinator at Cirque Hémisphère, a Montreal-based business that produces and sells circus shows in Canada and abroad. Its customers were primarily foreign promoters such as managers of festivals, theatres and cultural institutions. Previously, the Cirque had shipped many of its show materials by air; recently, however, it had been implementing a new planning process for shows to allow it more time to ship materials to promoters. These materials included sets and costumes. Known as show kits, their ex-warehouse value was approximately $100,000. Although the Cirque's offices were in Montreal, the kits were shipped from a warehouse in Boucherville, Quebec. The main advantage of this new approach was that the shipping of the kits was now less urgent. This allowed them to travel as sea freight, which is much less expensive than air freight, and these savings translate into lower costs for show promoters. In fact, it was now three times less expensive for the company to ship this type of large and heavy merchandise. The logistics coordinator was the only employee managing the

shipping of kits and making the artists' travel arrangements (plane tickets, visas, etc.). She had a considerable load on her shoulders, because if the merchandise was not received on time or was damaged en route, the show could not be presented and the company risked losing any future contracts with the customer in question.

Cirque Hémisphère was currently negotiating the sale of a new show to one of the largest theatres in Athens, Greece. The sales terms between the Cirque and theatre were as follows: 33% upon signing of the contract, 33% upon receipt of the kit, and 33% once the final performance had been held.

Given the economic situation of the country, the program director at the Athens theatre was very sensitive to the expense involved in buying a show; fewer and fewer people could afford cultural activities, and ticket sales had dropped. Most of the shows presented at the theatre were European, with particular emphasis on Russian productions. The customer therefore had little experience with the transcontinental shipping of materials. As a rule, if the materials were shipped from within Europe, the manager preferred to receive a turn-key production; he did not want to worry about maritime transport, import procedures or delivery of merchandise to the theatre, as he had little experience or technical expertise in this area. Nevertheless, he knew a few local transport operators as well as customs brokers he could hire to clear the containers in Greece and deliver them to the theatre. He had recently used the services of a local road transport operator for a show kit arriving at the port from Asia. Unfortunately, things had not gone well. Because of the program director's limited knowledge of the transportation business, he had not taken the fuel surcharge into account in the shipping costs. Road haulers never include the fuel surcharge in their rates. It is a percentage added onto the base haulage price, and because the price of gas is factored in, it varies from week to week. Also, when the truck arrived at the theatre, the container took three hours to unload, because the theatre's receiving employees were not ready. Transport companies usually include just one hour of wait time for the offloading of merchandise. In the end, it cost the artistic director 40% more than initially budgeted to transport the container from the port of Athens to the theatre.

For its part, Cirque Hémisphère had never shipped show kits to Greece, and the logistics coordinator was concerned that the country's economic situation could impact the quality of its logistics infrastructures, particularly those at the port. The main risk in her mind was congestion at the port of Athens (the Port of Piraeus), which could delay delivery of the kit to the theatre. Should this happen, the Cirque could be held responsible for any consequences stemming from the delay and could risk missing out on future business opportunities with the same customer. In addition, while attending a networking event hosted by CargoM (the logistics and transportation cluster of metropolitan Montreal), she had spoken with the operations manager of a company that ships cosmetics to Europe. In comparing the sea freight rates they were paying their respective freight forwarders, the coordinator was surprised to realize that the rates being charged by her forwarder were actually quite good. This is because the Cirque was a regular client of the forwarder in terms of the number of containers shipped per year. The cosmetics manager also told her that the import processes in Greece, particularly customs clearance and the payment of customs fees, could be long and complicated. As a result of the discussion, the coordinator, already burdened with her responsibilities, was becoming quite anxious at the prospect of having to manage the customs clearance of the container from Canada. Yet, given the expectations of the theatre with respect to the transportation of the merchandise, she was prepared to accept the risk of being responsible for

it up to its arrival in Greece if it meant winning the contract with the theatre. Indeed, presenting a first show in Greece could enable Cirque Hémisphère to win other contracts in the country.

4. Logistics Costs

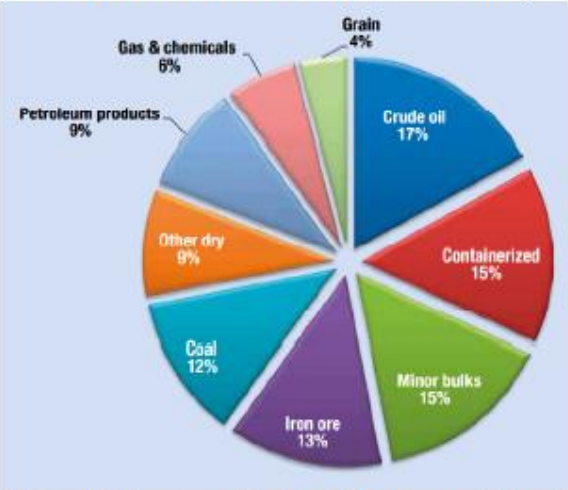
After contacting the various shipping lines, road haulers and customs brokers, Marc obtained the following information:

Point of origin	Trois-Rivières	Sainte Julie	Boucherville
Destination	Voh, New Caledonia	Santiago, Chile	Athens, Greece
Equipment	40'	40' Reefer	40'
Pre-positioning	CAD 690	CAD 360	CAD 360
Outbound customs clearance	CAD 50	CAD 50	CAD 50
Sea freight / Port of unloading	USD 5,970/ NOUMEA	USD 5,676/ SANTIAGO	USD 2,454/ PIRAEUS
Terminal handling charges	USD 870	USD 270	USD 390
Inbound customs clearance	USD 150	USD 234	USD 270
Delivery	USD 1,230	USD 786	USD 1,074
Insurance	USD 1,181	USD 1,746	USD 398

Exhibit 1
The global maritime shipping industry

Maritime shipping is the backbone of globalization. Some 90% of international trade involves sea transport.[1] The volume of merchandise moved by sea has increased steadily since the 1960s, reaching 9.84 billion tons in 2014, most of it bulk goods. The transporting of containers has grown by an average of 8% annually since 1980. It should be noted that while containers represent just 15% of the volume of global seaborne trade, they account for 60% of the value of goods transported, or more than $4 billion.[2] In 2014, this represented 171 million TEUs.[3]

Figure 1: Structure of international seaborne trade, 2014[4]



Source: United Nations Conference on Trade and Development Secretariat (UNCTAD)

The first use of maritime containers dates back to 1956 in the United States. This marked the beginning of the golden age of the seaborne trade industry, and with it came globalization, because it simplified the transport of goods. Today, however, intra-Asia traffic ranks first (21% of containerized volume transported), followed by the Asia-Europe route (16.5%), Asia-Indian subcontinent (6.5%) and North Atlantic (5.5%). For this reason, the main container terminals are located in Asia.

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[1] Rushton, Croucher, and Baker (2014)

[2] World Shipping Council (website)

[3] United Nations Conference on Trade and Development (UNCTAD), 2015

[4] "Minor bulks" include agricultural products, metals and minerals, and semi-finished goods. "Other dry bulk" includes general cargo such as machinery, vehicles, etc.

Table 1: Ranking of the 10 top container terminals based on their TEU traffic, 2014

Rank	Port	Country	TEU traffic (2014)	Percentage change from 2013
1	Shanghai	China	35,290,000	-3.62
2	Singapore	Singapore	33,869,000	3.89
3	Shenzhen	China	24,040,000	3.27
4	Hong Kong	China	22,200,000	-0.68
5	Ningbo	China	19,450,000	12.10
6	Busan	Korea	18,678,000	5.61
7	Guangzhou	China	16,610,000	8.50
8	Qingdao	China	16,580,000	6.83
9	Dubai	EAU	15,200,000	11.43
10	Tianjin	China	14,060,000	8.15

Source: Adapted from UNCTAD Secretariat data

As a globalization tool, the seaborne trade industry is largely dependent on world economic growth and the expansion of international trade. In 2008, the global GDP fell 1.9%, with worldwide trade volumes subsequently decreasing 13%.[1] Industry revenues dropped, vessels were docked, and sea freight rates came down. In fact, the average price of transporting petroleum products by ship declined 40% between January 2008 and January 2009.[2]

Today, the industry is defined by three factors: differentiation, economies of scale and restructuring.[3]

To begin, the main shipping lines implemented differentiation strategies based on vertical integration, primarily by involving themselves in port terminal and inland carrier operations in order to consolidate the transport chain under their leadership.

[1] Yercan and Yildiz, 2012

[2] Adapted from UNCTAD, 2009

[3] Song and Panayides, 2012

Table 2: Excerpt from the ranking of the top 50 shipping lines according to market share, 2015[1]

Rank	Shipping line	Country of registration	Market share (%)	TEUs	Vessels
1	Maersk Line	Denmark	13.45	2,526,490	478
2	MSC	Switzerland	13.22	2,483,979	451
3	CMA-CGM	France	8.00	1,502,417	375
4	Evergreen Line	Taiwan	5.08	954,280	204
5	COSCO	China	4.55	854,171	158
6	China Shipping	China	4.00	751,507	136
7	Hapag-Lloyd	Germany	3.90	732,656	145
8	Hanjin Shipping	Korea	3.41	640,490	104
9	MOL	Japan	3.19	599,772	111
10	APL	Singapore	2.91	545,850	96

Source: Adapted from UNCTAD Secretariat data

For example, Maersk operates one of the terminals at the port of Rotterdam as well as the European Rail Shuttle (ERS), which links the port of Rotterdam to Germany, the Benelux countries, Italy and Central Europe. This kind of differentiation enables shipping lines to provide value-added services and reduce the number of suppliers in this previously fragmented supply chain.

To achieve economies of scale, shipping lines have taken to using progressively larger container ships. Also, by introducing a network of intercontinental hubs, they have been able to increase the frequency of their operations and deploy transshipping strategies. The average container ship capacity of the main lines was 997 TEUs in 1982, 1,732 TEUs in 2000 and 3,394 TEUs in 2014.[2]

Container ship MSC Oscar, owned by Swiss firm Mediterranean Shipping Company (MSC), is currently the largest such vessel in the world, with a nominal capacity of 19,224 TEUs.[3] MSC Oscar operates on a 30 to 35-day frequency along the Asia-Europe route. Container ships of this size provide shipping lines with economies of scale by distributing the fixed costs of operating a vessel among the thousands of containers loaded, thus bringing down the cost of the sea freight. However, this also means that shipping lines must maximize the number of containers they carry. During the 2008 global economic crisis, the growth rate of containerized transport dropped by half, threatening the business model of shipping lines.

Accordingly, shipping lines have gradually restructured their routes, deploying their transportation networks as hubs within which high-capacity ports are used to consolidate container ships from various routes and serve regional destinations. This means that container ships such as MSC Oscar are used on intercontinental routes linking two hubs, while smaller vessels shuttle containers from

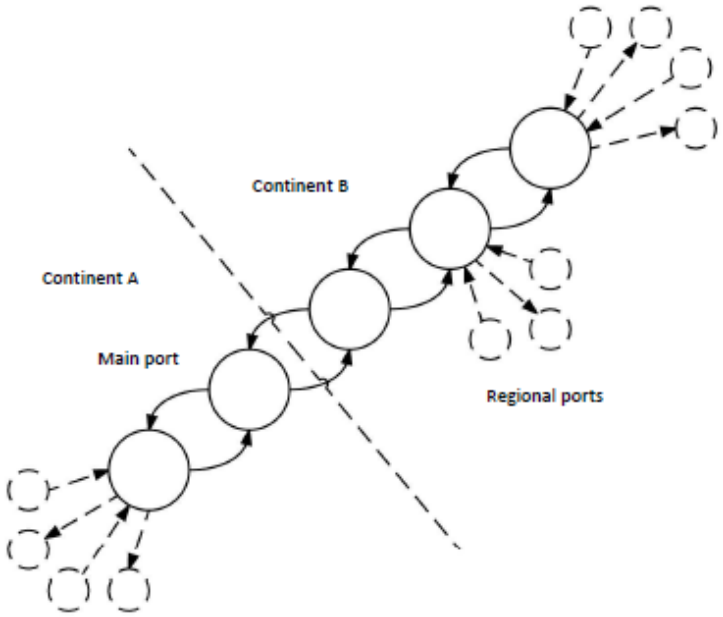
[1] Countries of registration of the three largest lines: Denmark (Maersk), Switzerland (MSC), France (CMA CGM)

[2] Tran & Haasis (2014)

[3] Mediterranean Shipping Company (website)

these hubs to their final destination, much like the hub-and-spoke networks used by the air transport industry.

Figure 3: Diagram of the trunk and feeder network



Source: Adapted from Song and Panayides, 2012

This type of network enables shipping lines to expand their geographic coverage by operating along routes that may not have been profitable previously and in doing so adjust their offer to the evolving demand. A 2003 study showed geographic coverage as a key comparative advantage of the shipping lines.[1]

Restructuring has also taken the form of mergers and acquisitions among shipping lines. For instance, in 2006, lines P&O of the UK and Nedlloyd of Holland merged. Following this, the new entity was acquired by A.P. Møller-Maersk, the industry-leading Danish group. Shipping lines are also restructuring through alliances. One example occurred in 2011, when Orient Overseas Container Line (OOCL), a Chinese company based in Hong Kong, announced the creation of the G6 Alliance, which brought together lines such as Hapag-Lloyd, Hyundai Merchant Marine and Mitsui O.S.K. Lines in order to consolidate the use of the partner companies' container ships on the Asia-Europe route.[2]

Generally speaking, the three industry trends of the global containerized seaborne trade industry described above have generated tangible benefits that include lower operational costs, less duplication in transport infrastructures, reduced transit time, and improved coordination among the industry's various stakeholders. However, these trends have also led to problems, such as greater organizational complexity within the industry, higher associated management costs, less flexibility in the transport chain, and the ensuing layers this adds to the decision-making process. The creation of alliances, for example, has not necessarily proven to be a vehicle for increased collaboration among the member shipping lines. In 2007, the new company formed by the merger of P&O and Nedlloyd decided not to use the terminal at the port of Amsterdam operated by Nippon Yusen Kaisha (NYK), despite the two lines being part of the Grand Alliance, because Nedlloyd had invested in one of the terminals at the port of Rotterdam, a major competitor of Amsterdam. This decision generated additional costs for both firms.[1]

The shipping lines are not the only players in the global maritime trade industry. Shipping agents such as McLean Kennedy in Montreal help the lines operate their vessels. They provide crewing services, arrange for necessary repairs, and act as intermediaries between the line and customs and port authorities at the ports of call. Their services might, for example, include providing tugboats or pilots as needed.

Port operators run the port terminals. They load and unload the containers and bulk cargo. At the port of Montreal, for instance, many terminals exist and are operated by a range of firms, including Montreal Gateway Terminals (MGT), Termont and Logistec, to name just a few. Port operators normally manage specialized terminals. Montreal offers container, grain and petroleum terminals. These operators should not be confused with the port authorities. The Montreal Port Authority (MPA), for example, is an autonomous federal agency that builds and maintains infrastructures, which it leases to port operators.

The International Maritime Organization (IMO) is a specialized United Nations institution charged with ensuring the safety and security of shipping and the prevention of marine pollution by ships. In December 2015 during the Paris climate change conference, the IMO demonstrated that it was the only organization to have adopted energy efficiency measures that are legally binding for the entire industry. By 2025, all new vessels will be 30% more energy efficient than those built in 2014.[2]

Finally, freight forwarders play a key role in the global transportation business. They oversee and manage the movement of cargo from its point of origin to its destination on behalf of their clients. Unlike shipping lines or other transporters, freight forwarders do not own transport equipment or infrastructures. Their function as intermediary between their clients (whether importers or exporters) and the transport companies is evident in the main tasks they perform: paying freight charges, tracking shipments, making recommendations as to the best route, and preparing the required documentation.[3]

Exhibit 2
The freight forwarding market

Over the past two decades, international freight forwarders have faced significant changes brought about by deregulation, globalization and new technologies.[1]

Table 3: Ranking of international freight forwarders by revenues (2013)

Rank	Forwader	Country	Revenues (billions of €)	Growth 2012-2013 (%)
1	RZD	Russia	30.8	+9.3
2	DHL	Germany	28.3	-3.0
3	DB Schenker	Germany	19.7	-3.0
4	BNSF	United States	16.6	+2.3
5	Union Pacific	United States	16.5	+1.6
6	Kühne + Nagel	Switzerland	14.0	+1.7
7	Nippon Express	Japan	10.6	-15.8
8	SNCF Geodis	France	9.1	-2.9
9	CSX Corp.	United States	9.1	-1.0
10	Norfolk Southern	United States	8.7	+10.3

Source: DB Schenker

Following a period of deregulation in the transport industry that extended from 1970 until the 1990s, laws such as the 1998 Ocean Shipping Reform Act (OSRA) in the United States and the abolition of liner shipping conferences[2] by the European Commission in 2008 radically changed the freight forwarding market.[3] OSRA authorized shipping lines to sign confidential contracts with their customers, making disclosure of sea freight rates to the U.S. Federal Maritime Commission optional in order to increase competitiveness in the industry. This enabled freight forwarders to negotiate sea cargo rates with shipping lines based on the volume purchased. Shipping higher volumes of freight gives forwarders an advantage during their negotiations with the lines. The market therefore has become less stable for low volume forwarders, some of whom have since been acquired by larger freight forwarders.

In addition, the globalization of supply chains and the opening up of international markets has prompted businesses to divest themselves of logistics activities. This phenomenon has subsequently increased the size of the market for logistics service providers in general, which in turn has benefited freight forwarders. However, the level of competition has also greatly increased as has the demand by customers for end-to-end transportation solutions brought about by the higher proportion of intermodal transport and greater customer knowledge of transport. Moreover, the

[1] Murphy and Daley (2001)

[2] Association of transporters formed to establish common rates and service conditions for the importing and exporting of containerized cargo.

[3] Kunkel *et al.* (2003)

phenomenon of the commodification of transport has also grown, leading customers to consider transport operations as an array of commodities. All of this has led to mounting pressure on the profit margins of freight forwarders.

Finally, new technologies such as the Internet and the track-and-trace systems developed by shipping lines have also transformed the freight forwarding market. These new tools have enabled importers and exporters to conduct certain operations themselves that were previously carried out by forwarders, such as reserving or leasing a container.

Given these new challenges, which have led to more demanding requirements and an erosion of profit margins for traditional activities, freight forwarders have had to adopt new strategies.

The main strategy of freight forwarders has been the diversification of the services they offer.[1] In addition to conducting traditional forwarding operations, freight forwarders have enriched their service offer to include such value-added activities as customs brokerage, NVOCC transport,[2] management and legal consulting services, warehousing, re-packaging and distribution. One example of this is DB Schenker Canada, an international freight forwarder that has developed specialized expertise in warehousing, having acquired 4 million square feet of storage space (371,612 square metres) in Canada, primarily in the Toronto region. This diversification is also evident in the forwarders' sources of incomes: in 1995, traditional activities of freight forwarders in the U.S. represented more than 50% of their total revenues. By 2000, this proportion had dropped to 40%.[3]

On the other hand, some freight forwarders have opted for a completely different strategy, specializing instead in a single destination, one type of merchandise, or a particular market in order to succeed in niche markets. For example, Animal Port Houston provides expertise in the transportation of live animals, offering adapted services such as the preparation of health certificates.

In both cases, the market has seen a consolidation of businesses formed through acquisitions. The 2000 merger of Eagle Global Logistics, a domestic freight forwarder in the United States, and Circle International, a global freight forwarder, created an industry leader with 8,000 employees working at 400 agencies. Also, forwarders such as Bolloré Logistics Canada have responded to the new technological challenges with innovative solutions. Since 2010, the LINK platform enables clients of Bolloré Logistics and Africa Bolloré Logistics to locate shipped merchandise in real time and compile data on goods in transit in order to produce tracking reports.

Forwarders have also put more emphasis on establishing a clear marketing position to improve market segmentation and offer adapted services to their clients. Three main areas exist where freight forwarders can distinguish themselves: value-added activities, low rates and customer

service quality. A U.K. study has shown that among these, price control and customer service are the best ways to gain a competitive edge in the market.[1]

More recently, new players have entered the market, threatening the so-called classic freight forwarding business model. Fledgling companies such as Flexport, a U.S. start-up, have developed platforms that allow exporters, importers and transporters to connect via a single website, effectively replacing telephones, emails, faxes and Excel spreadsheets, long the go-to tools for freight forwarders, with information systems.[2] Other growing companies are also turning to new technologies to create virtual supply and demand meeting places. Hong Kong-based Freightos, for example, enables importers and exporters to search for transport estimates and sort them by rate, mode of transport, and transport time.[3] Xeneta, another start-up based in Oslo, lets businesses compare their transportation costs via a platform that lists them and shares the information among users.[4]

These platforms are carving a place for themselves in the freight forwarding industry by offering such benefits as lower transaction costs, error prevention, more competition among transporters, and improved access to information, all of which pose a threat to traditional freight forwarders.

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