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THE ROLE OF LOGISTICS IN GLOBAL VALUE CHAINS: CASE OF MARS LOGISTICS COMPANY

A master's thesis

Supervisor
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VILNIUS, 2021

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INTRODUCTION

The value-chain view of global integration illustrates that access to foreign markets for many sectors is not only accomplished through the design, manufacture, and marketing of new goods. To detect the position of Mars Logistics in the global value chain, observe the supply chain.

To formalize transportation systems, will define the governance of global value chain and value chain activities. Includes the steps that take the product from development to distribution, all in-between for companies that produce goods such as manufacturing functions, and marketing activities.

The trade flows have been growing and need to understand deeply logistics strategies framework. This study includes gaining entrance into the multinational design, manufacturing, and marketing networks of several international logistic companies. Understanding how these value chains work is very critical for developing-country businesses of the way chains is organized. Most of the previous literature in the field (Gereffi&Lee, 2012; Gereffi, G., & Sturgeon, T. J. 2013) is about competitive advantage and value chain management.

This thesis stresses the importance of the integrity of the supply chain**. The research problem** is the how valuable marketing strategy in global value chain with study case on international logistics company is explained. As can be stated theoretically and found on empirical investigations on logistics companies.

The aim of this study to investigate the role of logistics in global value chain based on a study case of Mars Logistics company. In general, the qualitative approach is used. **Research objectives** respectively; to analyze theoretical aspects of global value chains; to analyze concepts of global value chain governance; to provide a methodology of empirical analysis for a logistics company case; to analyze activities of Mars Logistics company; to evaluate the efficiency of logistics solutions in global value chain.

The research method discusses the competitive advantage of Mars Logistics. A research methodology that includes two major points: mapping of the value chain and SWOT analysis. Value chain mapping is the method of defining the geography and activities of the stakeholders involved, from bringing products or services from raw materials to production and then to the customer.

Value chain analysis attempts to evaluate the role complex factors (government, organizations, and inter-firm relationships) play in influencing the location, growth, and competitiveness of a product or service.

The data from the study will be analyzed based on the analysis of qualitative research strategy: Data will be collected by using case study research detailed specifically Mars Logistics chain solutions.

Main instruments: Comparing, evaluating, and understanding supply chain on different issues of a research problem. The above-stated objectives guide the formation and design of cases to acquire desired response data to achieve these objectives.

The thesis structure is chapters in the first two chapters theoretical aspects of global value chain governance are analyzed. In the first chapter the fundamental role of logistics is clear by historical background. In the second chapter focuses on the governance of the value chain. Participation in the value chain generated many opportunities with operation management. Transportation in international supply chain activities effect stands out as an attractive field.

Also discusses the relevancy of value chains activities general overview of participation as a logistic company brings strong empirical evidence is provided in the thesis. The third chapter is an explanation of the methodology to research aim. Empirical research in represented in the last two chapters.

Chapters four and five gather the results from the solutions and evaluate the results gathered and draw conclusions on the research objectives. Firstly, external analysis and internal analysis are used. By concerning the empirical findings of Mars Logistics company, external factors (value chain mapping, competitor) and internal factors (quality of product, and brand association) are integrated into the SWOT matrix. Finally, the conclusion is outlined includes tools and processes findings of previous chapters and recommendations for further studies.

The last chapter will hold the empirical findings in section and the theory mentioned are merged and linked together to determine the relationship between them. In the end, the SWOT matrix would be used to present the outcomes of the analysis.

1 LITERATURE REVIEW ON GLOBAL VALUE CHAINS

The first chapter focuses on logistics, which has long been known for its steady growth and tremendous transformation of its status and identity. The research objective in here correctly understanding logistics definition and global value chain to use the efficiency of production so that the organization can achieve the maximum value at the lowest possible cost.

Define the supply chain will guide to acknowledge of logistics company explanation the history of globalization, the first derivative of globalization caused competition throughout the industry. Competition has become a developmental stage and the second spin-off is one of the key characteristics of the global value chain (GVC).

In addition to personal goods, with the spread of global value chains, some countries have begun to focus on all stages of production. In trading countries, the idea of a commodity chain later became a "value chain." An important implication of the new global value chain paradigm is that people must transcend industry to understand trade and production patterns.

The GVC literature insists on business functions, that is, activities in the supply chain, such as R&D, procurement, operations, marketing, and customer service. Understanding of countries tend to focus on specific business functions that involve specific tasks, rather than specific industries.

'Competitive advantage cannot be understood by looking at a firm. It stems from the many discrete activities a firm performs in designing, producing, marketing, delivering, and supporting its product.'[1] The interactions that occur among manufacturers, buyers, intermediaries, suppliers, distributors, service providers, and so on are known as global value chains. They have become increasingly crucial in the development of an economy.

'Over the past 2 decades there has been a growing internationalization and fragmentation of the value chain of firms. While firms were previously conducting many activities within their boundaries and even in proximity, the value chain has been fine-sliced and broken up as activities that were previously collocated have been relocated across organizational or geographical boundaries.'[2]

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[1] R. Sersland, 'Competitive Advantage Creating & Sustaining Superior Performance', *Transportation Journal (American Society of Transportation & Logistics Inc)* 26, no. 3 (Spring 1987): 63.

[2] Breaking up the Global Value Chain: Opportunities and Consequences, accessed 16 November 2021, https://web-s-ebscohost-

Since then, the term has become commonplace in conversations about trade in general. Globalization was first defined in 1985 as a process in which a group of developing countries embraces an "economic development model" in which international trade is substituted by manufacturing through GVCs.

Global value chains (GVCs) were first characterized in 1995 as networks of companies with similar structures operating in the same economic sectors in different geographical areas, as well as equivalent technological capabilities, product ranges, and organizational styles. GVCs had become a generally established idea in academics and the policy sector by the early twenty-first century.

'GVCs have become the main channel of transfers, such as capital, knowledge, technology standards, and value-added services.'[3]Chapter will follow global value chain, each link in the chain is performing an operation, and different roles add different values to each link in the production and supply process. In these links, more unique advantages can be obtained, which is to understand the market.

1.1 Historical backgrounds of globalization

Throughout history, numerous innovations have made international fragmentation of output more convenient. Globalization itself is the key factor that has generated international fragmentation. Two critical developments that sparked the unbundling of globalization have also influenced trade across countries. 'Historically, collocation and agglomeration have been very strong integration mechanisms between different activities, where coordination and exchange of knowledge are facilitated both inside the firms and among firms in clusters.'[4]

The first breakthrough was the steam revolution, which triggered the decoupling between the user and the manufacturer. The use of steam, which makes transport simpler, has eliminated the need for the manufacturer to be close to the customer or to the natural resources used in production.

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com.skaitykla.mruni.eu/ehost/ebookviewer/ebook/ZTAwMHh3d19fMTUwNTQzMF9fQU41?sid=549f6ce4-9b7a-46e2-b7b1-803b0c00fa05@redis&vid=9&format=EB&ppid=pp_123.

[3] Global Value Chains - an Overview | ScienceDirect Topics, accessed 16 November 2020, https://www.sciencedirect.com/topics/economics-econometrics-and-finance/global-value-chains.

[4] Held, D., McGrew, A., Goldblatt, D., & Perraton, J. (1999). Global transformations: Politics, economics and culture. Stanford, CA: Stanford University Press.'Breaking up the Global Value Chain : Opportunities and Consequences'.

The second revolution that introduced globalization was the rapid growth of communication and information technology that made it possible for companies to manufacture different parts of the product at different locations within and between countries. Information and communication technologies have, reduced the cost of delivery to firms since the 1980s.

This was the second unbundling of globalization. In terms of international competitiveness, the impact of two unbundling on globalization are distinct from each other. The first unbundling of globalization generated competition across the industry.

The rivalry has been converted into the stage of development phases, with the second unbundling being one of the key characteristics of the Global Value Chains (GVC). In addition to goods, several countries have begun to specialize in various phases of production with the spread of GVCs. 'Producing goods or extracting commodities in such environments is cheaper and helps firms maximize profit, but it lacks many of the environmental advantages of more localized production such as having firsthand knowledge of environmental externalities.'[5]

In the light of all these changes leading to globalization, the GVC idea originated at the end of the 1970s under the name of commodity chains. The key concept of product chains was to observe all the phase and transition that the input goes through before it becomes a successful consumption. Because of the growing interest in and influence of complex trade. Trade-in nations, the idea of the commodity chain was later turned into a ''value chain.''

The value chain is represented as the collective effort of an organization to bring a product or service from its formation to its intended destination through various phases of production. These actions also include a combination of product concept creation, the physical transformation of raw material into a finished product, transmission to final customers, and even the final disposal like used goods defined as a value chain. The nature of global value chain means a global supply chain which is engaged in the global movement of these resources and goods.

Simple terms, the value chain is the series of input activities that a business carries out to gain wealth for its valued customers. It sounds like a mouthful, but it is quite plain. For any business to make profits, they, therefore, need to produce a product. This also includes the evaluation of natural resources for producers or simply packaging and selling for stores.

[5] Singer A. and Ven, H.,'Beyond Market, Firm, and State: Mapping the Ethics of Global Value Chains', *Business & Society Review (00453609)* 124, no. 3 (September 2019): 325–43, https://doi.org/10.1111/basr.12178.

1.2 Evolution of global value chain

Over the past three decades, the global economy has undergone a major change. And the evolution of global value chains can be traced back to the 1970s when national growth policies have changed from import-substituting industrialization to export-oriented industrialization throughout the developing world.

'Upgrading through global value chains (GVCs), or moving to higher value activities, has become important for economic development and job creation in the global economy, where competition remains intense, and production has become fragmented and geographically dispersed.'[6]

At the end of the 1970s, even though there was a widespread change in national development strategies from import-substituting industrialization to export-oriented industrialization across the developing world, with some commodity chain work and it first emerged as regional supply chains in East Asia with foreign firms taking the lead in the area and triggering flying trend.

'However, the past decades of economic globalization have witnessed the emergence and growing complexity of global value chains (GVCs) that are messier and more difficult to characterize.' [7]Most of the manufacturing processes are vertically fragmented worldwide, products and services are manufactured in separate stages located in various countries and assembled either sequentially along the supply chain or in a final location. 'Regarding the specific channels of global value chain improvement, most scholars hold that international trade and international investment are the main ways to realize the integration of industries into global value chains and promote industrial upgrading.'[8]

[6] Cattaneo, O., Gereffi, G., Miroudot, S., & Taglioni, D. (2013) Joining, upgrading and being competitive in global value chains: A strategic framework. World Bank Policy Research Working Paper 6406, The World Bank, Washington DC. Retrieved May 10, 2014 from http://wwwwds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2013/04/09/000158349_20130409182129/Rendered/PDF/wps6406.pdf.

[7] Gereffi, G. (2014). Global value chains in a post-Washington Consensus world. Review of International Political Economy, 21(1), 9–37. https://doi.org/10.1080/09692290.2012.756414

[8] Lichun, X. et al., 'Advances in the Global Value Chain of the Shipping Industry', *Journal of Coastal Research* 106 (2 June 2020): 468–72, https://doi.org/10.2112/SI106-105.1.

The growth of GVCs is interlinked with the strong expansion of international trade, in particular parts and components, foreign direct investment flows, mainly from multinational companies, which are key players in the activity of these networks.

As a result, global value chains have had a profound and long-lasting effect on the world economy, impacting productivity and macroeconomic trends and growing economic interdependence between countries. 'Linking lead firms in GVCs with small and medium suppliers in diverse local contexts is a major business challenge in different types of industries, whether characterized by producer-driven chains like automobiles, electronics or shipbuilding for whom finding and nurturing technically capable local suppliers is a requisite of global supply chain management for manufacturers who play a leading role in determining what and how to produce.'[9]

In the late 20th century, globalization became a catchword for the international economy. It is a truism that nations have become more interdependent through the exchange of goods, services, and financial resources since the 1970s. The rising importance of export-oriented industrialization has made entry into the global economy practically synonymous with success for several countries. However, there is an acute recognition that the benefits from globalization are very unevenly distributed both within and amongst societies.

'As a high proportion of today's world trade is characterized by the vertical specialization at different stages of production across countries, one country's export would require increased labor inputs at upstream and downstream along the global value chain process.'[10]In recent years, there has been an increasing body of work analyzing globalization processes from the point of view of 'value chains.' foreign trade in goods and services cannot be regarded exclusively, or even predominantly, as a multitude of arm's length market-based transactions.

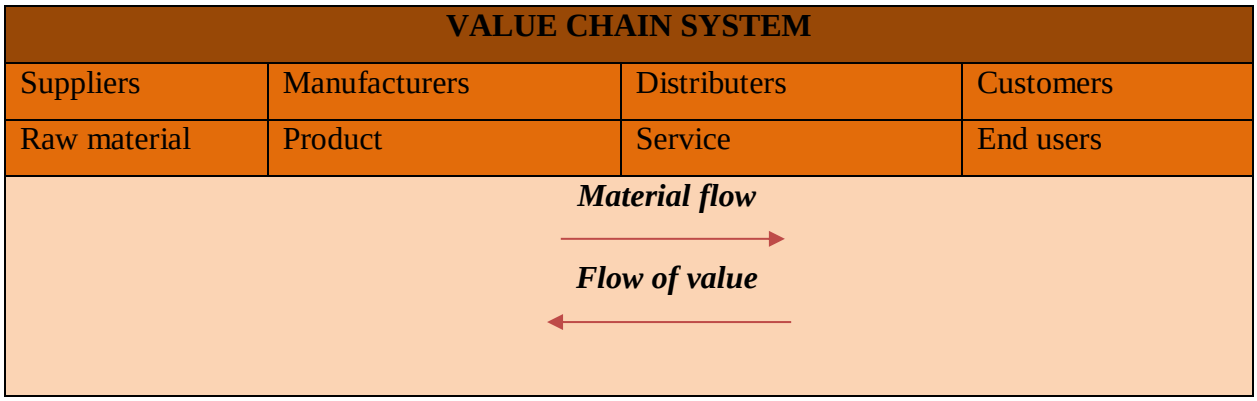
A significant part of global trade is conducted within multinational corporations or through governance structures that bind firms together in a variety of procurement and contracting arrangements. Research carried out in specific industries, such as clothes, electronics, and agricultural commodities, provided useful insights into the role of leading firms in the construction of these chains.

[9] Contreras, O. F., Carrillo, J., & Alonso, J. (2012). Local entrepreneurship within global value chains: A case study in the Mexican automotive industry. World Development, 40(5), 1013–1023. Coslovsky, S. V. (2014). Flying under the radar? The state and the enforcement of labour laws in Brazil. Oxford Development

[10] Guijun L., Wang F., and Pei, J. 'Global Value Chain Perspective of US–China Trade and Employment', *World Economy* 41, no. 8 (August 2018): 1941–64, https://doi.org/10.1111/twec.12545.

The leading firms are primarily based in developed countries and include not only global producers, but also major retailers and brand-name companies. They have a significant role to play in specifying what is to be made, how, and by whom. 'There is a growing concern, however, that economic upgrading—countries and firms moving to higher value activities in GVCs with improved technology, knowledge, and skills.'[11]

In global capitalism, economic activity is not only multinational in nature, but also global in the organization. 'Internationalization' refers to the geographical expansion of economic activity across national borders. As such, this is not a modern phenomenon. Indeed, it has been a significant part of the global economy since at least the 17th century when colonial powers begin carving the globe in search of raw materials and new avenues for their export earnings. 'Globalization' is much more recent than internationalization since it means practical convergence of globally distributed activities. The following figure shown Value Chain System to gain understanding visually. 'They can engage in higher value-added activities, such as product development and design, which they would have less chance to do in global chains.'[12]



Source: Composed by author, based on source: Mereru W Rundassa, D.Azene, Published in 2018, Global Value Chain Evolution, Feature and Literature Review.

Fig. 1. Value Chain System.

If globalization throughout the productive sphere means the coordination and integration of globally dispersed operations, then the value-chain perspective is an efficient way of conceptualizing the forms that integration takes. It transfers the emphasis from production alone

[11] Gereffi, G. (2005). The global economy: Organization, governance, and development. In N. J. Smelser & R. Swedberg (Eds.), The handbook of economic sociology (2nd ed., pp. 160–182). Princeton, NJ: Princeton University Press.

[12] Gereffi, G. and Lee, J., 'Economic and Social Upgrading in Global Value Chains and Industrial Clusters: Why Governance Matters', *Journal of Business Ethics* 133, no. 1 (January 2016): 25–38, https://doi.org/10.1007/s10551-014-2373-7.

to the whole range of operations, from architecture to marketing, and troubleshoots the issue of governance: how chains are structured and controlled.

'Governance is a centerpiece of GVC analysis. It shows how corporate power exercised by global lead firms actively shapes the distribution of profits and risks in an industry, and how this alters the upgrading prospects of firms in developed and developing economies that are included as well as excluded from the supply chains that constitute each industry.'[13]

This helps us to raise questions about the winners and losers in the process of globalization, how and why the benefits from globalization are distributed, and how the number of winners can be increased. At the same time, understand that there are many downsides to globalization, including declining prices for producers and cases where the product or process upgrades do not necessarily lead to improved profits and sustainable incomes.

1.3 Main features of global value chain

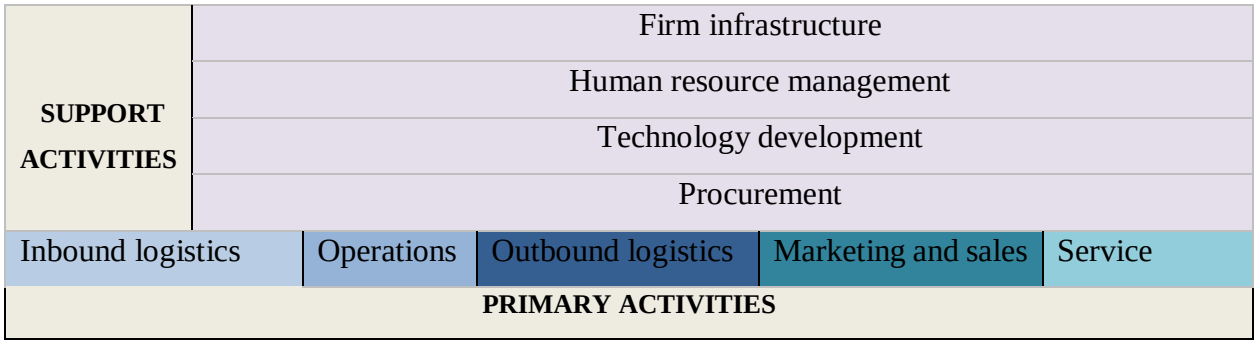
In global value chains, each chain connection carries out an operation and different roles add different value at each point of the production and supply process, where they can obtain more unique strength and are an important GVC analysis system for understanding the market competition. 'The GVC approach provides a holistic view of global industries from two vantage points: governance and upgrading. The governance of GVCs focuses mainly on lead firms and the way they organize their supply chains on a global scale, while upgrading involves the strategies used by countries, regions, firms, and other economic stakeholders to maintain or improve their positions in the global economy.'[14]

In the activities of value chains, there is a flow of physical products that allows the participating countries or organizations to improve their supply chain system to improve their competitiveness the stream of finance to improve their financing system and the flow of information including communication and information transfer, which lead participants to ways to add value. 'In the GVC framework, a key determinant of upgrading outcomes is the governance structure of global

[13] Gereffi, G., & Lee, J. (2012). Why the world suddenly cares about global supply chains. Journal of Supply Chain Management,48(3), 24–32.

[14] Gereffi, G. (2005). The global economy: Organization, governance, and development. In N. J. Smelser & R. Swedberg (Eds.), The handbook of economic sociology (2nd ed., pp. 160–182). Princeton, NJ: Princeton University Press.

value chains. Governance structures are complex, and they include international as well as national regulations, and both public, private, and social forms of governance.'[15]



Source: Composed by author.

Fig. 2. Value Chain Linkages.

Figure 2 is showing value chain linkages, countries grow and expand with GVC-driven development by changing to higher-value-added tasks and bringing more technology and know-how into all their agriculture, manufacturing, and production of services.

GVCs are an important engine of growth in productivity, job creation, and improved standards of living. Countries that accept them are rising more rapidly, importing expertise and technologies, and boosting employment.

'GVC scholars tend to focus on how external conditions and pressures, particularly by global buyers and through a variety of public and private governance processes, facilitate the diffusion of global standards and affect economic and social upgrading in developing countries.'[16] GVCs provide the ability for countries to leap-frog their phase of growth. As a result of clear compassionate value chain system will lead advancement and asset.

1.4 Theoretical frameworks of logistics

'International means that it will deal with transactions involving individuals or firms in more than one nation. Logistics means the organized movement of goods, services, and, sometimes,

[15] Barrientos, S., Gereffi, G., & Rossi, A. (2011). Economic and social upgrading in global production networks: A new paradigm for a changing world. International Labour Review, 150(3–4),319–340.

[16] Gereffi, G., & Sturgeon, T. J. (2013). Global value chain-oriented industrial policy: The role of emerging economies. In D. K. Elms& P. Low (Eds.), Global value chains in a changing world (pp.329–360). Geneva: World Trade Organization, Fung GlobalInstitute and Temasek Foundation Centre for Trade &Negotiations

people.'[17] Logistics has known for ages a solid growth and a dramatic shift in its position and identity. Nowadays it is viewed as a key element in affirming a competitive sustainable advantage and therefore becomes a highly strategic for businesses that needs more and more capital.

Growing significance given the efficiency of transport, the speed, the quality factors and the capacity to aspects and definitions, linked to the term, in an inclusive yet adaptive manner, so that it incorporates all the main elements and represents minor variations in the meaning of the scope of the term. 'The logistics sector has a significant role in facilitating trade, reducing transport costs and stimulating economic growth.'[18]

From my point of view transport logistics is a vital part of provide adjusted services. To deter the dispersion of their properties and to ensure the highest returns on their investments, a significant number of businesses have challenged their methods of planning and maintaining their supply chains, opting for the outsourcing of or part of their supply chain. The refocusing of the industrial sector on their core business has encouraged the outsourcing of the logistic role in a direct contribution to the development of a market for freight forwarding.

Logistics is the entire operation of the management and organization of physical flows and information within the company, as well as between the company and its partners. Transport is a crucial component of this. It also involves demand forecasting, purchasing, processing, sourcing, planning, development, customer and supplier relations, storage, handling, assembly, packaging, product packaging and support functions related to these activities. 'Logistics is a discipline that involves mental and behavioral change perfectly adaptable and applicable to all activities of daily living. The concept of Logistics gives rules that allow management to follow, assess, prioritize and control all the elements of supply and distribution that affect customer satisfaction, costs and benefits.'[19]

[17] International Logistics, accessed 17 December 2020, https://web-s-ebscohost-com.skaitykla.mruni.eu/ehost/ebookviewer/ebook/ZTAwMHh3d19fNzI5NDFfX0FO0?sid=0e1161d3-1079-424f-a28a-32ead82f47f7%40redis&vid=7&format=EB&rid=1.

[18] Bugarčić, Z., Skvarciany, V. and Stanišić, N., 'Logistics Performance Index in International Trade: Case of Central and Eastern European and Western Balkans Countries', *Business: Theory & Practice* 21, no. 2 (July 2020): 452–59, https://doi.org/10.3846/btp.2020.12802.

[19] Logistics: Perspectives, Approaches and Challenges, accessed 14 December 2020, https://web-s-ebscohost-com.skaitykla.mruni.eu/ehost/ebookviewer/ebook/ZTAwMHh3d19fNzU1ODQ1X19BTg2?sid=03b5e262-b17e-4edb-9162-f637ae8cab33%40redis&vid=15&format=EB&rid=1.

To ensure a deeper understanding of the nature of logistics in the management of an organization, it is important to study its meaning, as well as to define a brief history that will allow for its development and its current situation.

The idea of logistics dates to ancient times when Greek methods of logistic procurement and organization have been developed for the purpose of to support their military operations. In addition, many big empires have named logistics officials. Thanks to these military roots, logistics have been established. In fact, prior to the 1950s, logistics still applied to military principles.

Logistics was more considered in the 1970s as an internal operation of the organization, whose main task was to optimize the resources they consume locally rather than globally. The introduction of ideas such as just-in-time causes one to think about the flows that contribute to a redefinition of logistics in the 1980s.

This principle has become a cross-cutting mechanism which on a horizontal level, allows the coordination of the other functions and on a vertical level, encourages constant dialogue between the operational and strategic levels of the organization. Since the early 1990s, the pursuit of measures to minimize costs and increase service quality has led to thinking about the supply chain as a whole and not just inside the business.

'International logistics is more difficult to manage than domestic logistics because the assumptions made by managers may not be as reliable, situations are generally less stable, the geography is much broader, and monitoring logistics processes is more complex.'[20]As a result, in this time, the logistic function manages both internal and external relations between the functions and the companies involved in the logistic process to ensure not only the consistency of the physical flows but also the versatility and reactivity of the process.

In terms of transport logistics, keywords such as 'transfer of goods,' 'physical transfer of goods,' 'physical distribution function,' 'transfer of goods from one place to another and 'transfer of goods' are most widely referred to in empirical literature as well as with practitioners.

These keywords include, for the most part, the transport of goods. Others also include terms from the fields of planning and managing the transport of goods, such as effective delivery, planning, management, and execution of the transportation of materials, managing the physical

[20] Wood, D.F., *International Logistics*, vol. 2nd ed (New York: AMACOM, 2002), https://search.ebscohost.com/login.aspx?direct=true&db=e000xww&AN=72941&site=ehost-live.

flow and maintaining and maximizing transport flows. ‘A positive effect on exports and trade facilitation can be achieved by improving logistics performance.’[21]

'Logistics can be observed as integrated information, packaging, warehousing and transportation system that meets the requirements regarding time, quality, quantity and cost, actually, all performances that are crucial for competitiveness.'[22] This is due to the growing number of logistics-related that have a major effect on the evolution of logistics, such as the industry, the product and service life cycle, consumer needs and the area of operation to which the logistics role is applied.

Since transportation also ensures the use of space and time, key words such as "optimal delivery times" and "time-based services." Such key terms such as "minimal costs," "high efficiency and efficiency," "cost-effective organization" and "minimal human resources" must also be included in the transport and logistics system.

In view of the contradictions in the existing body of literature and in business usage, there is a need for a clear and common description of the word 'transport logistics.' Must include different supply chain, which effectively organizes, handles optimize and eventually carries out the physical delivery of products and information across the upstream and downstream chain in an effective and efficient manner.

‘Transport is a part of integrated logistics management and is of crucial importance as such. It is not only limited to flow of goods across space and is not only a connective function in the fields of delivery of raw materials for manufacturing needs and for distributing final products. It is a part of adding value, which is included into strategic management and decisions through transport logistics.’[23] Its operations and roles go beyond the conventional transport role in such a way that they often require integration with other functions of the supply chain, such as warehousing, accounting, and marketing or customer relations while taking into consideration the organizational, economical, commercial, and operational aspects of the process as a whole.

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[21] Shepherd, B. (2017). Infrastructure, trade facilitation, and network connectivity in Sub-Saharan Africa. Journal of African Trade, 3(1–2), 1. https://doi.org/10.1016/j.joat.2017.05.001

[22] Puertas, R., Martí, L., & García, L. (2014). Logistics performance and export competitiveness: European experience. Empirica,41(3), 467–480. https://doi.org/10.1007/s10663-013-9241-z

[23] Topolšek, D., Čižiūnienė, K., and Ojsteršek, T.C., ‘Defining Transport Logistics: A Literature Review and Practitioner Opinion Based Approach’, *Transport (16484142)* 33, no. 5 (15 December 2018): 1196–1203, https://doi.org/10.3846/transport.2018.6965.

1.5 Nature of logistics and supply chain management

Logistics and Supply Chain Management (SCM) has been far from activities which have a significant impact on society's standard of living. In western developed societies, need to expect excellent logistics services and are only likely to notice logistical and supply chain issues when there is a problem.

To understand some of the implications of logistics services for example difficulty in shopping for food, clothes, and other products if logistics and supply chain networks do not have any of these items conveniently. A challenge to find the correct size or design if it is logistical and supply chain networks do not have a large mix of goods, colors, etc.

These are only a few of the problems that are sometimes taken for granted that show how logistics affects many aspects of our everyday lives. The numerous activities related to logistics and SCM also have an impact on environmental sustainability, and this chapter offers an overview of the logistics and SCM and their impacts. 'Logistics influences the global economy and organizations in two ways. First, a firm incurs many expenses, one of these being logistics costs. Economic decisions are affected by these expenses and by logistics costs, and vice versa. Second, logistics facilitates the sale of goods and services and the associated customer service, including various economic transactions.'[24]

Logistics had to do with the procurement, maintenance, and transportation of military equipment, and personnel. Although a few writers started talking about swapping one expense for another before this time, such as shipping costs with inventory costs and addressing the company's advantages in delivering the right items to the right location at the right time, the organization within the traditional company was divided around the activities currently associated with logistics.

Logistics management tools typically include inbound and outbound transportation management, warehousing, materials processing, order completion, logistics network architecture, inventory management, and supply/demand maintenance. 'Logistics, which includes the

[24] Lambert, D.M., Stock, J.R. & Ellram, L.M. 1998. Fundamentals of logistics management. Boston: Irwin/McGrawHill.

integration of many activities and elements, has become significant in each phase of the system/product life-cycle.'[25]

Planning and management of third-party logistics network operators, also covers, to varying degrees, sourcing and procurement, production planning and scheduling, packaging and assembly, and customer support. Until the beginning of the New Millennium, the point of purchase was the point of sale, the retail store, or some other form of outlet. Rapid developments in technology providing online shopping or other services across the Internet of Things have now checked and validated the definition of the point of consumption.

They were primarily linked to individual tasks, such as transport and purchase. Little effort was made to incorporate and balance activities later known as logistics activities that were in cost and/or service conflict. As a result, there was not much incentive for administrators to think about wider logistics principles. 'In the fierce competition, the goal of the logistics service demand side is to obtain the most satisfactory logistics service at the lowest cost, and the goal of the logistics service supply side is to obtain the satisfaction of the logistics demand side while obtaining relatively high profits.'[26]

Therefore, SCM is considered an integrative role with primary responsibility for linking major business functions and business processes to a coherent and high-performing business model within and across organizations. It incorporates all the above-noted logistics management practices, as well as manufacturing operations, and facilitates the integration of processes and activities.

Physical distribution continues to emerge as a field of research and practice, which is the organization of more than one activity connected with the physical delivery of the commodity to the marketplace.

Activities such as transport, inventory management, storage and location of facilities were addressed in the light of the overall cost approach. The focus was on the outbound movement of goods by the company and little attention was paid to inbound movements.

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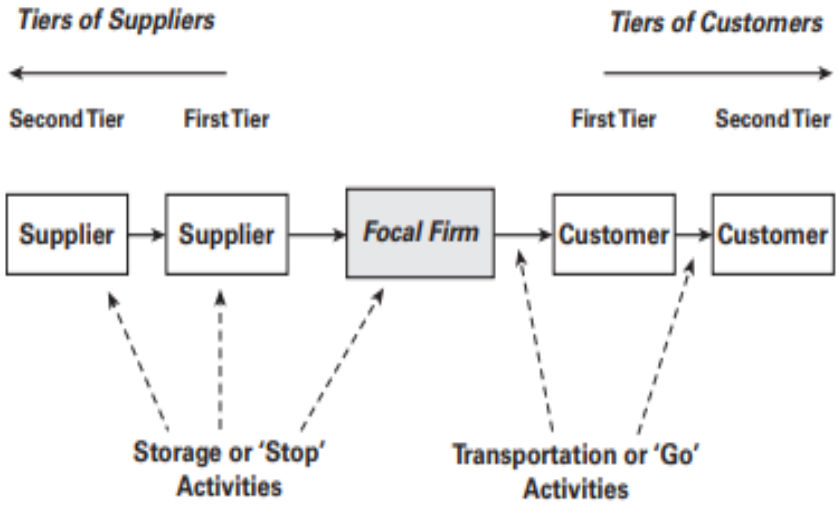
[25] Blanchard, B.S. 1992. Logistics engineering and management, 4th ed. Englewood Cliffs, New Jersey: Prentice-Hall

[26] Wang, N., Yinzhen, L., and Cunjie D., 'Decision-Making Approach of Two-Sided Matching of Supply and Demand of Logistics Service Based on the Uncertain Preference Ordinal', *Mathematical Problems in Engineering*, 14 October 2020, 1–12, https://doi.org/10.1155/2020/5480842.

In 1964, the scope of physical delivery was extended to include physical supply and was called business logistics. Using the descriptive name Business Logistics was not only an effort to differentiate the name from military logistics but also an attempt to concentrate on the logistic activities that took place within the organization.

Purchasing was not widely regarded, nor was it produced. On the other hand, there was a similar movement among those involved in buying practices. Whereas the transaction was originally considered a purchase operation, attempts have been made to extend the reach to include many of the operations common to physical distribution but associated with the company's inbound side.

This extended reach was reflected in names such as procurement and materials management. Consider whether SCM is simply a re-labelling of logistics due to a lack of awareness by scholars and practitioners of what supply chains are and what supply chain managers are doing, the intersection between logistics and supply chain management reflects a large strategy for all business processes.



Source: Grant David B, Trautrims Alexander, Wong Chee Yew, Sustainable Logistics and Supply Chain Management 2nd Edition, 2012.

Fig. 3. A Simplified Supply Chain.

As shown at Figure 3 first-tier clients and suppliers, the immediate customers, and suppliers of the company under consideration (the focal firm) are known. The first-tier client of the first-tier client and the first-tier supplier of the first-tier supplier are the second-tier client and supplier of the focal company, respectively.

Between each node of the supply chain, where the node is a focal company, supplier or consumer, products are transported by means of transport or 'Go' activities. In addition, in storage or 'Stop' operations, goods are stored and/or processed at each node. ‘Supply chain management (SCM) encompass logistics, operations and materials management, marketing, purchasing and information technology to strategically optimize organizational.’[27]

The first to emerge with its outbound focus as it accounts for about two-thirds of logistics costs and was considered a component of the essential components of the marketing mix (product, location or physical distribution, promotion, and price).

Business logistics was soon to follow, with its wider reach that involves inbound movement. To see the fit with current views and to offer an indication of potential directions, it is beneficial to look at what was envisioned by early advocates of the areas. ‘The ability to acquire and share information on both operational and environmental conditions in a timely manner is important for SC recovery.’[28]

Physical distribution is typically related to a company's outbound product movements, this concept reveals a wider notion involving both inbound and outbound movements. In terms of both physical supply and physical distribution, business logistics, but they also acknowledged that logistics takes place throughout the supply channel, from supplier to final customer.

While early concepts indicate a wide scope for physical distribution and logistics, the focus was on coordinating within the function between the operations, with little emphasis on coordinating within the business or among external channel participants between the other functions. This much wider reach of restricted implementation undoubtedly had to do with the technical constraints of information technology at the time and the complexity of managing through areas of responsibility.

A direct reference to buying and production was most noticeably absent from early descriptions. While they may have been inferred, they were seldom treated in education or practice in logistics.

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[27] Devaraj, S., L. Krajewski, and J. C. Wei. 2007. “Impact of EBusiness Technologies on Operational Performance: The Role of Production Information Integration in the Supply Chain.” Journal of Operations Management 25 (6): 1199–1216.

[28] Sheffi, Y. 2015. “Preparing for Disruptions Through Early Detection. MIT Sloan Management Review 57 (1): 31–42.

As previously suggested, marketing considered a physical distribution to be part of the marketing mix, but the greater interest seemed to be in transactional channels while short shrift was given to physical distribution. Production, on the other hand, stated that logistics operations were part of the product function. Utilities for time and location are typically referred to as physical delivery or logistics operations.

Marketing and production roles were developed within the company, and they claimed to be physical distribution, their lack of attention contributed to the creation of physical distribution as a separate entity and as a new role within the organizational structure of a company.

Management of the supply chain can be interpreted as having three dimensions. These are administration of activities and procedures, inter functional cooperation, and coordination between organizations. Control of operations and procedures is more of what logistics have been doing.

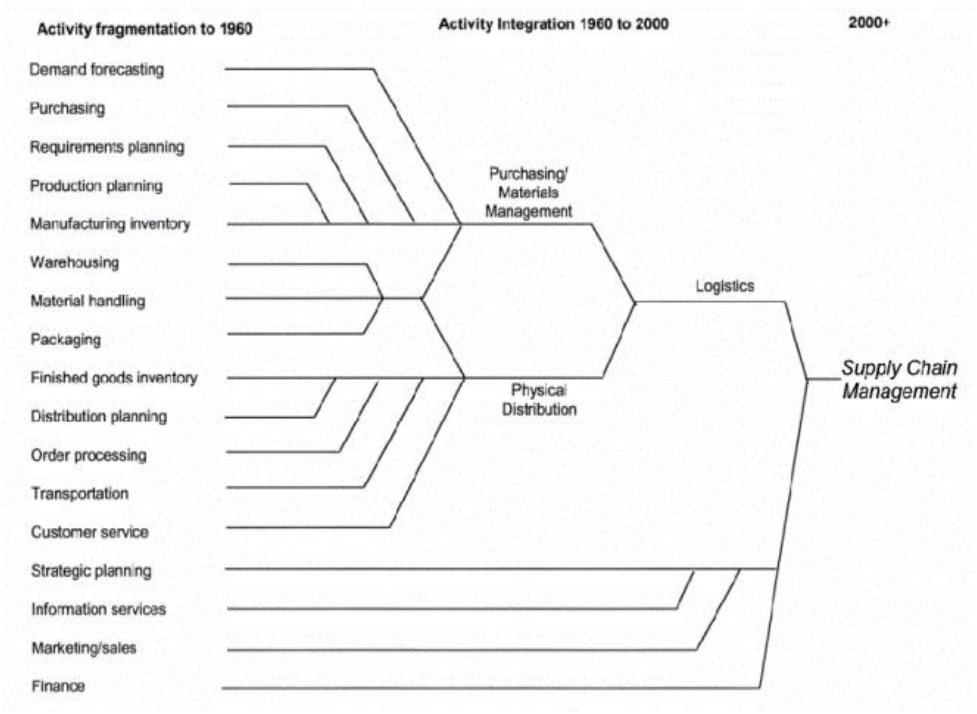
That is the management of activities that are under the responsibility of the logistics function, such as transport, inventories, warehousing, and order processing. International collaboration refers to collaborating and developing partnerships, such as marketing and finance, with other functional areas in the same business.

'Technological advances adopted by organizations should, therefore, be able to address various needs and it is crucial that business decisions made maximizes the value of technologies amidst growing competitiveness. In addition to that, disparate systems in SCM provide limited transparency and visibility of information.'[29] A diagram of the sort shown in Figure 4 is constructed by those who assume that supply chain management is evolutionary.

The point is that supply chain management is not new, and they agree that many of the ideas championed by current supply chain enthusiasts were among the logistics pioneers. 'It is critical to respond timely to ensure continuity and viability of processes.'[30]

[29] Lai-Wan, W. et al., 'Unearthing the Determinants of Blockchain Adoption in Supply Chain Management', *International Journal of Production Research* 58, no. 7 (April 2020): 2100–2123, https://doi.org/10.1080/00207543.2020.1730463.

[30] Ivanov, D., A. Dolgui, and B. Sokolov. 2019. "The Impact of Digital Technology and Industry 4.0 on the Ripple Effect and Supply Chain Risk Analytics." International Journal of Production Research 57 (3): 829–846.



Source: Ronald H. Ballou Case Western Reserve University | CWRU · Article in Business Administration.

Fig. 4. Evolution of Supply Chain Management.

Inter-organizational coordination has to do with partnering and organizing product flows between channel participants, those businesses that are not owned or run by the immediate company. SCM is also seen as managing product flows through various businesses, while logistics is seen only within the company as managing the product flow operations. This is a variance from the perception of logistics that the early visionaries had.

'Therefore, to produce win-win solutions that facilitate both economic benefits and environmental sustainability simultaneously, firms have begun to place great emphasis on innovation, especially environmental innovation capability.'[31]A contemporary understanding of supply chain management is to regard it as a collection of processes to be managed, where a process is a group of activities relevant to the achievement of a given purpose, such as filling orders.

Primary supply chain management sub-processes based on collaboration with industry leaders down below.

[31] Tang-Ting, W. and Chin-Min, L., 'The Evolution of the Supply Chain Management and the Analysis of Research Trends', *International Journal of Organizational Innovation* 13, no. 3 (January 2021): 300–314.

1. Customer relationship management.
2. Customer service management.
3. Demand management.
4. Order fulfilment.
5. Manufacturing flow management.
6. Supplier relationship management.
7. Product development and commercialization and returns management. Taken together, they represent, in their entirety, supply chain management.

These processes are to be organized through the different layers of the supply chain, from initial suppliers to end users, by cooperation and relationship management. There is a lot of discussion about the advantages of cooperation between channel participants and extending the reach of product flow management to encompass the entire supply chain channel. In fact, the potential for theoretical integration is achieved by few businesses. Around half of the businesses surveyed work for incorporation inside the walls of their own companies. It is not clear if this inter-functional convergence is due to the introduction of large software systems such as SAP instead of to genuine cooperation and compromise.

About one-third of organizations focus their integration efforts on their first-tier suppliers. Beyond that, there is no attempt at incorporation. This may be due to the inherent challenges of effective collaboration and competition-based restrictions, such as the failure to exchange confidential information.

'Supply chain management (SCM) is therefore highly relevant both to successfully competing in today's market and in addressing responsible behavior at all stages of the supply chain. It represents a potentially important discipline for establishing how to integrate environmental and social considerations and practices, to achieve the goal of sustainability.'[32] Although the idea is strong and the advantages are clear, there is no modern concept of reducing costs by using more of a method in decision-making. It was at least reflected in the approach to structures advocated by events in the 1940s and 1950s.

Logistics is now used as a branch of supply chain administration. The scope of logistics is restricted to the limits of a company's operation and mainly concerns activity management, which

[32] Ashby, A., Leat, M., & Hudson-Smith, M. (2012). Making connections: a review of supply chain management and sustainability literature. Supply Chain Management, 17(5), 497-516.

was not the early view. Instead of logistics, inter functional and inter-organizational management appears to be within the expertise of supply chain management. Logistics supersedes physical distribution as an identity name.

Understanding the past and analyzing the present makes it possible to extrapolate to what could be in store in the future for logistics/SCM. All lead to a continued and increasing interest in logistics/SCM through the trend towards increased globalization, free trade, and outsourcing.

In the flow and use of products, there will be a considerable change, all of which will require ever better control of the related supply chain processes. A change in strategy will occur. The focus of logistics/SCM has been on effectiveness in the past.

'The secret to the success of this approach lies in three initiatives: In the first firms replace consensus forecasts with a unified view of demand. In the second they move away from a one-size-fits-all supply chain strategy to a segmented strategy. In the third they create a single plan to continually balance supply and demand and identify and respond to deviations or disruptions.'[33]

The current view is that SCM, a competitive tool, is a new frontier for generating demand. Both views will be relevant, but the new focus will be on developing and running the supply chain to improve the company's profits in a way that maximizes the contribution to profit. This view substitutes the often-used strategic aim of minimizing Supply chain prices, subject to meeting certain customer service criteria, and in the eyes of top management, would be elevated.

1.6 Summary of literature review on global value chains

As a result of this chapter, the global value chain has a large efficiency in the global economy, which affects productivity and macroeconomic tendencies, improves economic interdependence between the countries.

In the global economy, the value chain has become a major driving factor. For years, the value chain has substantial part of global economic activity. The enterprise value chain, which is the "core of the chain" and the main form of production and consumption, is at the heart of the value chain's structure.

[33] Simchi, D. and Timmermans, K., 'A Simpler Way to Modernize Your Supply Chain', *Harvard Business Review* 99, no. 5 (9 October 2021): 132–41.

The global value chain refers to the entire value-creating system's process of turning materials, energy, and human resources into product value. It is one of the most effective methods for encouraging creativity, and it is widely employed in economic, technological, scientific, and social advancement. It's also used to describe a company’s production and value structure. Supply chain management with globalization a keyword for the international economy at the end of the twentieth century.

These improvements have resulted in more specialization in the manufacturing process and, as a result, less reliance on a country's physical proximity and resources. With the growth of trade and the creation of worldwide standards in the late twentieth and early twenty-first centuries, the term "globalization of economies" became widespread. Globalization as a word of economic development has risen in the early twenty-first century because of this concept of increased specialization and interchange.

Although the word is often used to describe current international economies and trends, there is still controversy about its accuracy and definitions. The transfer of products, services, and resources across and between countries and people in the global market is referred to as globalization in a broad sense. Clarified the activities of the value chain allow you to improve the supply chain system to improve the flow of information, including financial flow and communication to improve the financial system, a flow of physical products. The industry is still in the early stages of technological acceptance and development, the rate of change has accelerated.

Globalization has made the economy more interconnected and interdependent. With this part, the objective is literature review acknowledges understanding logistics and supply chain will help to create Mars Logistics analysis. Outlined frameworks and definitions of historical backgrounds of globalization by other authors study to deep understanding and guiding following chapters.

Especially evolution of global value chain and essence of logistics will lead on the following chapter as a global logistics tool. Likewise, theoretical frameworks for logistics as a job inside a company's business operations.

2 THE GOVERNANCE OF GLOBAL VALUE CHAIN

Chapter two make clear how and whether companies can capture value is dependent in part on the production. The objective is to explain and describe value chain, external & internal analysis. Customer analysis, brand association, and service quality are all part of it. 'To ensure long-term competitiveness, companies need to develop the capability to research, plan, and build new business areas.'[34]

The rate of change in logistics is impossible to predict with any accuracy, and while the industry is frequently prone to abrupt huge upheaval, it is largely resistive to technological progress. Technology incompatibility is a fundamental impediment to technological advancement.

When technology is already in place or when others have not yet adopted it, the industry frequently resists change. For the sole reason that its members may be obliged to adopt new technology and concepts, the industry is sometimes resistive to them. Firms' strategic and competitive positions are harmed when they fail to adapt to new technology.

'Logistics services can be essential for continued growth and trade efficiency. High-quality trade logistics, combined with the liberalization of the economic environment, contributes to an increase in trade volume.'[35]Globally successful businesses have recognized the value of logistics as management. The public's knowledge of logistics has grown dramatically, and it now has a direct effect on strategic business decisions.

The knowledge that a company might obtain by investing in logistics does not always equate to increased profits. This understanding will be beneficial to the logistics industry. It will help boost understanding of the logistics industry as well as other industries.

The logistics industry is a fast-paced industry. Industry change is frequently difficult to comprehend and moves at a rapid speed. The rate of technological change in logistics, in particular, can be difficult to forecast and comprehend. Over the last two decades, technology and its impact on the global supply chain have advanced at a breakneck pace.

[34] Dobni, C. B. (2010). Achieving synergy between strategy and innovation: The key to value creation. International Journal of Business Science and Applied Management, 5(1), 48-58.

[35] Hausman, W. H., Lee, H. L., & Subramanian, U. (2013). The impact of logistics performance on trade. Production and Operations Management, 22(2), 236–252.https://doi.org/10.1111/j.1937-5956.2011.01312.x

2.1 Competition on global markets

The purpose of this study is to look at what competitive advantage Mars Logistics can get from external and internal influences, as well as what Mars Logistics can gain from competitive advantage analysis.

'There is no unambiguous causal relationship between the degree of concentration and the intensity of competition.'[36]The growing convergence of global markets through trade has resulted in the disintegration of multinational corporations, as businesses find it beneficial to 'outsource' an increasing share of their noncore manufacturing and service operations both domestically and internationally.

'Governance and upgrading of GVC have emerged as the fundaments of the GVC model. Governance of a GVC covers the forms and methods a firm can employ to manage value activities across organization and space.'[37] As a result, an increasing portion of foreign trade now includes components and other products. The transaction costs method presents several explanations for why companies would carry these operations in-house.

First, the more personalized the product or service, the more likely transaction-specific investments are involved. This increases the possibility of opportunism, which either eliminates outsourcing entirely or makes it more expensive since precautions must be placed in place.

Second, even in the absence of opportunism, transaction costs rise as inter-firm partnerships necessitate greater coordination. Non-standard inputs and integrated product design architectures necessitate more complex design knowledge transfers and, more intensive interactions across enterprise boundaries. Coordination costs rise for time-sensitive sections because different processes must be better synchronized to synchronize the flow of inputs through the chain.

Recognizing the significance of transaction costs does not imply that complex and closely coordinated production processes necessarily result in vertical integration. In certain cases, network actors monitor opportunism through the effects of repeat transactions, prestige, and social norms embedded in specific geographic locations or social groups.

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[36] Haid, A.and Wettig E., 'Global Commodity Markets: Intense Competition Despite Increasing Concentration', *Economic Bulletin (0343-754X)* 37, no. 3 (March 2000): 83.

[37] Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. Review of International Political Economy, 12, 78–104.

How and whether companies can capture value is dependent in part on the production and retention of difficult-to-replicate competencies. Also, the most vertically integrated companies seldom internalize all the technological and management skills necessary to bring a product or service to market.

The variable of frequency is used in transaction cost economics to recognize this fact. If input is needed infrequently, even if it is critical, it will almost certainly be acquired externally. This is primarily a discussion of scale economies. In comparison, the literature on firm skills and learning argues that, regardless of frequency or scale economies, the learning needed to effectively build the capacity to participate in such value chain activities can be complex, time-consuming, and effectively impossible for some firms to obtain. Culture, structures, regional and social environments, changing game laws, and path dependency are all important factors that will affect how firms and groups of firms interact in the global economy.

The simple structure is useful because it isolates key variables and offers a straightforward picture of the fundamental forces at work in particular empirical circumstances. ‘The limits of multinational cooperation in the field of labor standards are a product of the "comparative advantage" of different nations.

Countries differ in their mix of labor and capital, bringing different levels of skill, educational attainment, infrastructure development, and the like to the competitive process.’[38] The global commodity chains paradigm illustrated the role of networks in driving the co-evolution of the cross-border industrial organization by comparing clear collaboration in dis-integrated chains with relationships found within vertically integrated, or ‘producer oriented' chains. ‘Many small, specialized companies at a local and global scale arise where the interdependent relationships require coordination. In such a network of closely cooperating supply chain members, internal operations at multiple site locations are connected by transportation links.’[39] If global customers decided to invest in supplier expertise, they'd have to define the product and process requirements that suppliers would meet, as well as protect that investment by being the dominant customer.

[38] Estreicher, S., ‘“Think Global, Act Local”: Employee Representation in a World of Global Labor and Product Market Competition’, *Labor Lawyer* 24, no. 3 (Winter 2009): 253–65.

[39] Lieckens, K. and Vandaele,N., ‘Differential Evolution to Solve the Lot Size Problem in Stochastic Supply Chain Management Systems’, *Annals of Operations Research* 242, no. 2 (15 July 2016): 239–63, https://doi.org/10.1007/s10479-014-1778-0.

Recognize, as do most other structures that aim to understand business organization from transaction costs to global commodity chains to organizational theory that market-based relationships among firms and vertically integrated firms represent oppose site ends of a continuum of explicit collaboration, and that network relationships constitute an intermediate mode of value chain governance.

The issue of asset specificity, as defined by transaction cost economics, also emphasizes what have been dubbed "mundane" transaction costs, or the costs involved in coordinating operations along the chain. This coordination transaction costs increase as value chains manufacture non-standard products, such as products with integral product structures and time-sensitive performance.

When leading companies put new demands on the value chain, such as pursuing just-in-time supply and increasing product differentiation, they increase uncertainty. The introduction of technical standards that codify information and facilitate clean hand-offs between trading partners will reduce the sophistication of information exchanged between companies.

Where these principles apply in the flow of operations helps to determine the corporate breakpoints in the supply chain. As requirements for the hand-off of codified parameters become commonly recognized, the value chain achieves many of the benefits found in the field of modular product design, such as the conservation of human effort by the re-use of device components. Suppliers and consumers can be conveniently connected and de-linked in the context of supply chain modularity, resulting in a very fluid and scalable network structure.

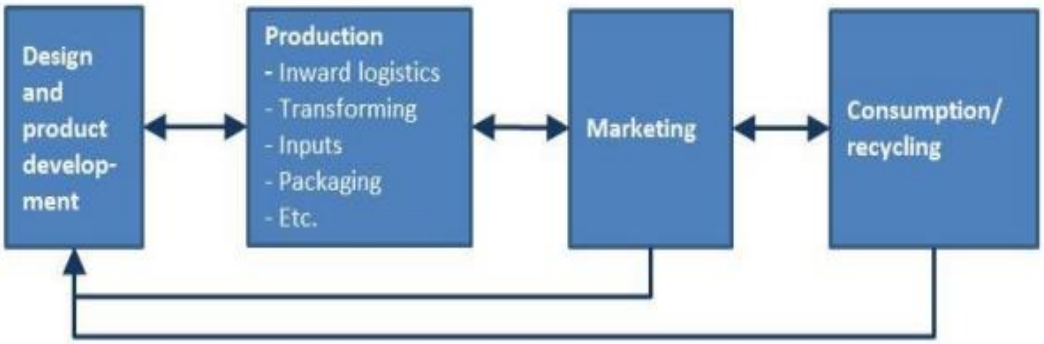
If the conditions are market-like, the mechanism remains qualitatively distinct due to vast quantities of non-price knowledge streaming over the inter-firm frontier, though in codified form. Simultaneously, the introduction of emerging vendors into corporate supply chains raises collaboration problems.

Considering value chain governance three factors are important: The amount of information and knowledge transfer needed to support a specific transaction, especially regarding product and process specifications; The degree to which this information and expertise can be codified, easily distributed, and without transaction-specific investment by the transaction's parties and the strengths of current and prospective suppliers in relation to the transaction's specifications.

2.2 Value chain activities

As previously stated, the value chain refers to the entire set of activities that are needed to take a product or service from creation to distribution to final customers, as well as final disposal after use. Value chains are, of course, much more complicated in the modern world. For one thing, the chain generally has a lot more connections.

Main and support activities are two types of activities that all companies must engage in at some stage. 'The value chain concept emerged and comes through business management after the seminal work of Porter.



Source: Kaplinsky, R. And M. Morris (2001) A Handbook for Value Chain Research, Prepared for the International Development Research Centre, p.4.

Fig. 5. Four Links in a Simple Value Chain.

The term value chain represents a series of activities that provide value to customers in the form of a product.' [40]The value chain concept is based on the process view of companies, which envisions a manufacturing business as a system comprised of subsystems with their own inputs, transformation processes, and outputs. Producers in developed countries are supposed to follow standards that do not always exist in their home markets.

'In the value system, every single firm occupies a particular position within the value chain structure and adds value to the 'inputs' before passing them to the next actor.'[41] As a result, a disparity remains between the skills needed for the domestic market and those required for the international market.

[40] Walsh, P.R. (2011). Creating a ''values'' chain for sustainable development in developing nations: Where Maslow meets Porter. Environ Dev Sustain., 13, 789–805. DOI 10.1007/s10668-011-9291-y

[41] Jaligot, R., David, C.W., Christopher, R.C., Berti, S., & Joachim, S. (2016). Applying value chain analysis to informal sector recycling: A case study of the Zabaleen. Resources, Conservation and Recycling, 114, 80–91.

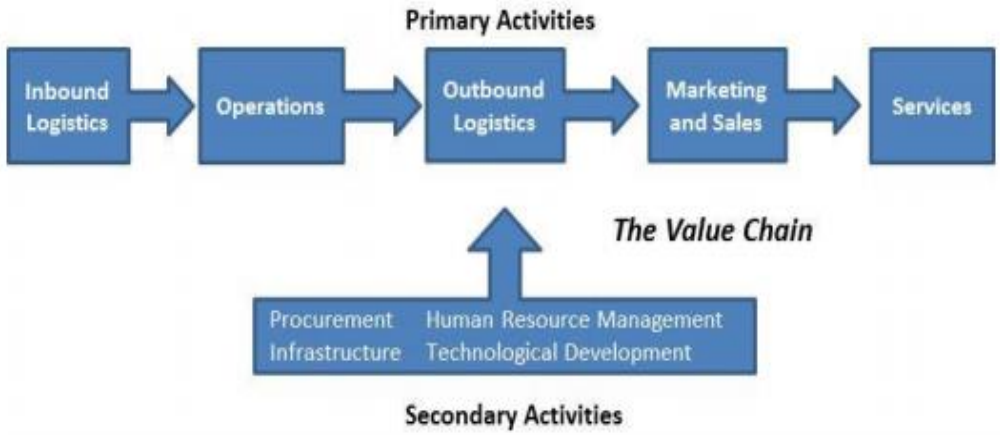
Porter divides a business's activities into two groups, "main" and "service," which have different sample activities. There are five components to primary operations, all of which are necessary for adding value and gaining a competitive advantage: Receiving, warehousing and inventory management are also part of inbound logistics.

Procedures for turning raw materials into a finished product are included in operations. Outbound logistics refers to the tasks involved in getting a finished product to a customer. 'The lack of access to potential markets is the principal reason for value creation and value capture inabilities of firms from rural with limited access to transport.'[42]

Advertisement, promotion, and pricing are both techniques used in marketing and sales to increase exposure and attract the right customers. Customer support, maintenance, repair, refund, and exchange are examples of service systems that keep goods running smoothly and boost the customer experience.

Procurement refers to the process by which a business obtains raw materials. Infrastructure covers a company's processes and the composition of its management staff, such as planning, accounting, finance, and product quality.

The aim of support activities is to aid in the efficiency of primary activities. When any of the four support activities become more effective, it helps at least one of the five primary activities. Porter clearly captured drawing activities in the following figure.



Source: Drawing on Porter, Michael E., and 'Competitive Advantage'. 1985, page 99.

Fig. 6. The Value Chain Activities.

[42] Tutuba, N.B.;'Commercialization Inabilities of Rural Value Chain Activities in Emerging Markets: The Theory of Constraints Approach', *Journal of Management Policy & Practice* 22, no. 2 (March 2021): 72–82.

2.3 Global logistics strategy tools

Globally successful businesses have recognized the value of logistics as a management feature. The public's knowledge of logistics has grown dramatically, and it now has a direct effect on strategic business decisions. Companies are also identifying the logistics function's unique scope of responsibility and aligning their service networks to meet the needs of customers. Reduced delivery times, adherence to predetermined delivery dates, and completeness and quality of delivery are all essential requirements for increasing customer satisfaction across logistics services.

At the same time, global megatrends such as rising and increasingly fragmented global distribution networks, skill shortages, and cost pressure provide logistic managers with fresh and evolving demands on company network competences. Today's logistics administrators face more diverse developments in business growth than ever before.

Company should think about competition in a positive way, this means the company must find that way to produce the goods or services in a unique way and to be a company that offers something different from all other products available on the market. 'The company must focus on how to be a unique company, to produce unique products, to create unique value and have a benefit on the society and this will lead to an advantage over its competitors.'[43]

For decades, logistics, in particular, has undergone significant changes to meet changing demands and influences. Logistics is becoming increasingly relevant as more tasks are delegated to logistics in the future. Future trends must be forecasted to be better prepared.

The global logistics world is becoming increasingly complex, with a variety of key parameters defining the global landscape. The rate at which these parameters change is breathtaking, and it is causing the logistics environment to become increasingly complex.

2.3.1 Network forces

The vertical and horizontal inter-organizational forces of the network are referred to as network forces. Customers, retailers, and distribution service providers who work in the supply

[43] Vacar, A., 'Logistics and Supply Chain Management: An Overview', *Studies in Business & Economics* 14, no. 2 (August 2019): 209–15, https://doi.org/10.2478/sbe-2019-0035.

chain are also included. ‘The degree of multimarket contact between two firms determines the extent to which they are direct competitors’[44]

a) Increased customer expectations: As businesses expand, new global customers present a lucrative opportunity, but serving these customers comes at a high cost. For companies accustomed to delivering traditional logistics solutions to a homogeneous regional customer base, a global customer base poses a new set of challenges.

Customers are looking for more personalized and dynamic solutions in addition to perfect orders and high delivery reliability. The top priorities listed by managers are "meeting consumer needs," "on-time delivery," and "green logistics." As a result, supply chain sustainability is critical for both meeting consumer demands and enabling consistency in the customer order process.

b) Networked economy: The second most critical development is the networked economy, which allows companies to understand that their fate is intertwined with that of those in the network. There has been an influx of new consumer channels that are not well defined and are interconnected with each other.

Enterprises are supposed to provide extreme levels of flexibility in a networked economy. Manufacturers must be able to adjust to changing product specifications or suppliers. When consumers are given a variety of distribution systems, retailers must grapple with how to meet various types of orders and how to manage inventory behind the transactions.

And e-commerce orders, which are typified by higher volumes, but smaller orders delivered to homes, are more popular. The most important reasons found by executives for collaboration in the supply chain are to enhance teamwork and confidence, as well as to improve synergies and increase creativity.

Companies are trying to build new models of logistics value and creativity, and an open and trusting dialogue where both parties can freely share ideas for development is essential for survival. Reliable partners must also be known.

[44] John W. U. et al., ‘Competitor Analysis and Foothold Moves’, *Academy of Management Journal* 55, no. 1 (February 2012): 93–110, https://doi.org/10.5465/amj.2008.0330.

c) Cost pressure: Customers expect good service levels, high and fast logistics capabilities, and low-cost creative goods. The strain of the last five years has led many businesses to make cost reductions, and additional savings need more sophisticated approaches.

The age of shifting supplies to developing countries to leverage low-cost labor is coming to an end, as savings are not as easy to find as they once were five to eight years ago. Organizations find that they really need to start adopting analytical tools to design their logistics networks that capture multiple cost drivers.

Logistics costs are higher in sectors such as retail, fast-moving consumer products, chemicals, textiles, oil, and mining/materials. Not surprisingly, these companies have a strong interest in improving their logistics network. Logistics costs for stationary retailers are higher than for mail-order retailers.

The pressure to minimize costs and working capital is part of the global landscape that is likely to remain. Organizations must also find creative ways of offering new solutions to complex customer needs without raising costs.

2.3.2 External forces

External forces reflect changes beyond the inter-organizational network, over which organizations have little to no influence. The three main external powers will be addressed in the following section:

a) Globalization of logistics networks: multi-sectoral organizations continue to follow global growth strategies that concentrate on expansion into new regions such as Brazil, Russia, India, and China are main targets.

As businesses continue to grow their global presence, global networks face obstacles due to government regulatory powers, channel fragmentation, and inadequate logistics infrastructure. The increasing probability of interruption of the supply chain from any number of potential nodes along the supply chain further complicates the logistic climate.

Organizations will need to continue to explore networked solutions in reaction to the continued growth of their global presence, which is likely to continue due to the attraction of massive mass markets in emerging countries.

b) Talent Shortage: Lack of talent as a vital obstacle to logistic growth and improvement. Talent shortages are one of the most important issues on the horizon for global organizations in all the regions surveyed.

This will take place not only in manual processes (truck drivers, warehouse personnel, inventory processing, speeding up) but also in a management capacity as customers, planners, analysts, organizers, warehouse managers and delivery managers.

c) Volatility: Volatility applies to significant shifts in consumer demand rate, product or service mix, government legislation, new entrants, replacement products, short product life cycles, and specifications for rapid network nodal change and redesign.

The complexity of government regulations is growing, particularly in the areas of logistics regulations, protectionist policies, commodity regulations, customs enforcement, trade, local content issues and security requirements.

The regulatory barrier is a moving goal that is constantly evolving, but fines and penalties for non-compliance are on the increase.

These regulations make it more difficult to satisfy increasing consumer expectations for timely product delivery and make it more difficult to prepare based on usual lead times, inventory requirements and schedules.

2.4 External analysis

An effective external review should be guided and purposeful. As shown in Figure 7, external analysis can influence strategy by providing optional strategic alternatives and even influencing specific decision-making among them. 'The competitive dynamics literature examines the moves that rivals make as they maneuver for advantageous market positions. The progress made toward understanding rivalry has been substantial.'[45]

An external review can indirectly contribute to strategy by recognizing risks and opportunities, as well as strategic uncertainties that can affect strategic outcomes. Strategic uncertainties, on the other hand, are concerned with complex unknown factors that can influence the outcome of strategic decisions.

[45] Chen, M.J. 2009. Competitive dynamics research: An insider's odyssey. Asia Pacific Journal of Management, 26: 5–25.

One source of uncertainty could be technological advancements, while another could be the levels of technological growth and cost/benefit achieved by competing technologies.

There are three options for dealing with these uncertainties:

1) The strategic decision must be made quickly to avoid delays in decision making, which could be expensive and dangerous.

2) Information gathering, it is important to gather all types of information to minimize uncertainties.

3) Scenario analysis is an alternate method or solution for dealing with potential future uncertainties. One form of scenario analysis is known as "strategy-developing scenarios," and its aim is to provide insights into possible strategic contexts, which are then used to analyze current business strategies. Customer and competitor analyses are the first step in conducting external research. Since consumers not only assist businesses in correctly defining markets, but they are also a source of relevant operational opportunities or risks.

2.4.1 Competitor analysis

Understanding competitors, as well as consumer research, has been identified as a critical point of market activity in the business sector. Typically, competitor analysis begins by identifying current and future competitors, but potential competitors are often invisible and difficult to recognize.

'Aiming at gaining of competitive advantages the companies choose various technologies to achieve their goals. Being provided with the correct and valuable information is the one of the most important factors in such fight.'[46]

There are many factors that influence competitor behavior. For example,

1) Scale, growth, and profitability

2) Goals and dedication

3) Technique for Image and Positioning

[46] Gaidelys, V. and Dailydka,S., 'Use of "Knowledge House", DWS, DMS and DSS Methodology by Completing a Competitors' Analysis in the Railway Sector', *Journal of Business Economics & Management* 17, no. 6 (December 2020): 1022–51, https://doi.org/10.3846/16111699.2016.1251963.

4) New and previous methods

5) Price.

6) Organization and Culture.

7) Strengths and Weaknesses These elements may be analyzed indirectly by distinguishing and grouping competitors into strategic groups.

Similar competitive strategies, distribution channels, communication strategies, price, location, and competencies, such as brand partnerships, logistics, capacity, or research and development, can be grouped together. Further analysis and data collection are needed to understand competitors.

The competitor's official website is a rich and accurate source from which people can obtain brief information about the competitor. However, more accurate knowledge is difficult to obtain, necessitating private correspondence or market analysis.

2.4.2 Value chain mapping

In essence, a company is a set of activities carried out to develop, manufacture, sell, distribute, and maintain its goods. 'Thus, value chain research is crucial to identify the main actors of the chain and map the value chain.'[47] The purpose is to produce the products in such a way that they have a greater value to customers) then the original cost of manufacturing these products. The added value of income can be considered and is sometimes referred to as 'margin'.

When assessing the origins of competitive advantage, a comprehensive way of evaluating all these internal activities and how they interact is important. The value chain of Michael Porter helps to disaggregate an enterprise into its strategically important operations, thereby providing a concise description of the internal organization.

Having to look at top manufacturers and main product lines is also a successful starting point for businesses in the manufacturing sector. Identify the actors and then trace and map the product flows within the chain and provide an easily understood representation of the defined

[47] Dabesa, W. and Fikiru, T.G.,'Analysis of Beef Cattle Value Chain and Value Addition Activities: Empirical Evidence from Toke Kutaye and BakoTibe Districts, West Shewa Zone, Oromia National Regional State,

chain actors and the associated product flows. Mapped value chains would help analysts gain a clearer understanding of the players in the chain, their relationship, and economic activities.

Building a better view of the key inputs and outputs of your company offers useful information for the creation and reporting of sustainability programs. Corporate Responsibility Practitioners are designing sustainability-specific value chain maps to systematically determine the effect of the business during product sourcing, transport, growth, use and disposal.

Phase typically starts by grouping the company's main supplier groups with customer groups representing the company's key business inputs and outputs. Seeing at top manufacturers and main product lines is also a successful starting point for businesses in the manufacturing sector. Instead, service-based companies may explore the organizations impacted by their services.

Other useful resources available include a list of key stakeholders and a map of your locations. 'This may be construed as a modest shift away from purely market-based transactions and toward administered transactions. Yet there remains ample room for variation on the spectrum between market and administered transactions.'[48]

When a value chain is formed to evaluate environmental, social, and economic effects, organizations can typically be grouped by sector, but often other aspects should also be considered. The theory is that groups with approximately the same total impacts should be grouped. Customer groups should be split into different nodes when creating a sustainability value chain map since the effect of the product would be different in both cases.

Mapping does not demonstrate the complexities of the value chain, the shifts, and the patterns of the chain. The map is a static snapshot of the value chain structure and cannot accurately reflect variables that affect the behavior of individual value chain participants.

It does not reveal the requirements and opportunities of the end market. The map shows final product markets and, at times, segmented distribution networks, but this does not clarify the structure or dynamics of the end markets.

[48] Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. Review of International Political Economy, 12(1), 78–104. https://doi.org/10.1080/09692290500049805

Value chain is described by significant inputs and outputs and the nodes reflect entities with the same corresponding effects, it can be used to define the key environmental, social, and economic impacts produced by company.

2.5 Internal analysis

Internal analysis will assist businesses in determining whether the current strategy is appropriate or if it needs to be modified. Internal analysis does, without a doubt, address company performance, such as brand association and product quality.

'The customer is central to an organization and assessing customer satisfaction is a vital element in any strategy for business performance improvement; this makes customer satisfaction a driver of survival, competitiveness, and growth.'[49]

Internal analysis is the process through which strategists look at the firm's marketing and distribution, R&D, production and operations, corporate resources and staff, finance, and accounting elements to see where the firm has significant strengths and weaknesses.

Internal diagnosis is the process by which strategists evaluate how to take advantage of opportunities and respond to challenges presented by the environment by leveraging strengths and correcting weaknesses to achieve long-term competitive advantage.

2.5.1 Product quality

A product or service should be compared to its competitors as well as customer expectations. Quality has been a critical factor in-market success. The reason Japanese companies are so successful is that the quality of their products is quite high and always meets the expectations of their customers.

There is no way to determine how well a product or service works unless it is used. There are some methods for evaluating a product or service based on specific characteristics. For example, the quality of a bus or train may be concerned with the time of departure or arrival.

There are additional dimensions involving product and service quality concepts. Following figure drawing by author shown quality dimensions.

[49] Hoe, L. C., & Mansori, S. (2018). The effects of product quality on customer satisfaction and loyalty: evidence from Malaysian engineering industry. International Journal of Industrial Marketing, 3(1), 20-35.

Quality Dimensions	
Reliability	Responsiveness
Access	Credibility
Communication	Safety
Environmental impact	Durability

Source: Composed by author.

Fig. 7. Quality Dimensions of Goods & Service.

Safety and environmental impact address the fact that the products should not end up causing personal injury or have a negative impact on the environment, and thus a protection strategy should be attached to those damages. 'Maintaining product quality in a changing marketplace has become increasingly strenuous for manufacturers.

This growing challenge has made it a requirement for owner managers worldwide to persistently improve their quality performance.'[50] Durability refers to the ability of the goods to be used and delivered without being damaged. While credibility concerns whether the supplier can be trusted. The ease with which the supplier can be contacted is referred to as access. The consistency of performance is referred to as reliability. Communicate with the customer in a clear and understandable manner, responsiveness as a willingness to assist the customer.

2.5.2 Brand associations

Customers who have had previous experience with a brand's products or services are asked to rate it. A good association may help to improve a company's reputation. A company's image can be estimated. The most basic method is a structured survey in which customers are asked on a regular basis about their user experience and how much a brand means to them.

By doing that, the company will be able to learn more about the performance of its products or services from the perspective of its customers, giving it the opportunity to improve its performance. However, the brand association is not only about the external environment, such as

[50] Teh, P. L., Adebanjo, D., & Ahmed, P. K. (2014, December). Factors affecting product quality and reliability: A comparison of developed and developing countries. In 2014 IEEE International Conference on Industrial Engineering and Engineering Management (pp. 1481-1485). IEEE. doi: 10.1109/ieem.2014.7058885.

customer impressions or brand image, but also about the internal environment, such as employee perspectives and company size.

2.6 SWOT analysis

Traditionally, SWOT analysis is used due to its underlying belief that managers can plan the strategy of a company's resources with its environment. SWOT analysis is rather basic and versatile, which means it only needs people to understand the essence of the company or the market in which it works rather than complex technical skills or training.

Advantages of SWOT analysis improve the efficiency of a company's strategic planning even when marketing information systems are lacking. Ideally, it assists marketing managers in effectively integrating various types of knowledge. It enables collaboration among managers from various functional areas.

As a result, the top management who has the authority to make decisions must use SWOT analysis to determine if the company's or project's goal is attainable and available. If the outcome is negative, another goal will be suggested to replace the previous one.

Furthermore, the traditional SWOT matrix is a classic tool for evaluating a company's internal factors such as strengths and weaknesses, while also considering external factors such as opportunities and challenges to assess their effect on the company's marketing campaign.

SWOT analysis has been used as a managerial method for marketing planning’s analysis has been used as a managerial method for marketing planning, with the key functional approach being to assess the internal and external components.

2.7 Summary of the governance of global value chain

The importance of logistics as a management aspect has been recognized by globally successful firms. The general public's understanding of logistics has exploded, and it now has a direct impact on strategic company decisions. Companies are also defining the logistics function's particular responsibilities and aligning their service networks to fulfill client demands.

The growing convergence of global markets through trade has resulted in the disintegration of multinational corporations, as businesses find it beneficial to 'outsource' an increasing share of their non-core manufacturing and service operations internationally.

The growing variety of solutions offered by logistics-related systems, such as those involved in distribution and fulfillment, e-commerce, or transportation network expansion, can help organizations boost efficiency and flexibility while also improving service and cutting costs.

While the number of participants has expanded significantly in recent years, logistics technology has not kept pace. Despite the evident necessity for the technology to fulfill future needs, many businesses continue to be skeptical of technology and its deployment.

Logistics, in particular, has experienced considerable transformations in recent decades to suit shifting demands and pressures. As more jobs are entrusted to logistics in the future, it will become increasingly important. To be better prepared, future trends must be foreseen.

In essence of this chapter outlined a company as a set of activities carried out to develop, manufacture, sell, distribute, and maintain product. When a value chain is formed to assess environmental, social, and economic effects, organizations can typically be grouped by sector, often other aspects should also be examined.

International organizations customers opt to invest in supplier knowledge, they must specify the product and process standards that suppliers must achieve, as well as preserve their investment by becoming the dominant client.

The concept of asset specificity, as described by transaction cost economics, transaction costs, or the costs of coordinating operations along the chain. As value chains produce non-standard products, such as those with integrated product structures and time-sensitive performance, coordination transaction costs rise.

3 METHODOLOGY OF RESEARCH

Third chapter's objective is an explanation of methodology to research aim. The objective of this step is to develop a vision of logistic processes within the framework of the organization unit. Starting with research questions. Qualitative methods useful theories and literature regarding external and internal analysis are discovered in the theoretical structure section to fulfill the function of the thesis work. The empirical data set is primarily focused on interviews. And proposal of value chain mapping will guide for empirical part.

The theory is that groups with approximately the same total impacts should be mentioned. An explanation of qualitative method will guide us to have a clear logistics company analysis by using internal and external analysis.

Moreover, the SWOT matrix is a tool for evaluating a company's internal factors such as strengths and weaknesses, taking into external factors such as opportunities and challenges to assess their effect on the company's global value chain in this study for the Mars Logistics case.

In addition, the organization report and official website are regarded as additional sources of information. Data collections explain primary and secondary data difference. Overall, knowledge from observational studies and the literature is analyzed to address the research questions.

3.1 Research questions

The literature review and analytical studies on Mars Logistics were carried out in this study. The useful theories and literature regarding external and internal analysis are discovered in the theoretical structure section to fulfill the function of the thesis work. The empirical data set is primarily focused on interview. In addition, the organization report and official website are regarded as additional sources of information.

• "What is happening in the supply chain?"

• "Who are the major players involved?"

•"How is the product/service provided to the target market?"

• "What are the distribution networks available to meet those end markets?" Analysts will gain a better understanding of the chain's players, their interactions, and economic activities.

3.2 Qualitative method

Knowledge from observational studies and the literature is analyzed to address the research questions. The marketing strategy of a logistics company is described in this study. The aim of this study is not to develop hypotheses from conceptual work, nor to test established hypotheses by producing the required data; rather, the qualitative approach is primarily used to define and analyze characteristics, attributes, and make distinctions.

There are many approaches that can be used to collect qualitative data, such as formal interviews, reflexive papers, record, and content analysis, and so on. In this thesis, the qualitative approach is used as the analysis method to address Mars Logistics' competitive advantage. To make SWOT analysis had interviews who working at the company and content analysis from company's official website.

3.3 Proposal of methodology for value chain mapping

The value chain mapping was based on a method of approach that was built in literature with no methodology disseminated in the literature. "Planning" will be the first stage of the approach process. Its objective is to identify the organization's strategic information sources, prioritize data collection and define how these data will be collected. Data collection with key individuals. In addition to the literature already presented, the modelling process planned for this first stage is based on a thorough study of the internal documentation of the organization.

"Data Collection" is a second stage, consisting of a data collection operationalization of interviews with previously identified questions. The objective of this step is to develop a vision of logistic processes within the framework of the Organization units.

This data collection round consists of two main activities. The first is the introduction of the concept and role of the value chain, with the goal of mobilizing the interviewee to engage in the modelling of the logistic processes in which the interviewee is consciously involved.

The second is the definition of the mission of everyone. Organization unit interviewed to identify the value of the activities performed, as well as the support activities needed to support the primary activities.

Each of the data collection meetings targeted at conducting interviews with a view to consolidating the systemic vision of the logistics of interviewees and identifying the main processes carried out in each organizational unit.

The final step of the solution process is the "Data Consolidation" finalization of the Value Chain Mapping. After this consolidation, the validation was carried out together with the organizational units responsible for the product to validate the completion of the work by interviewee.

3.4 Data collection

Knowledge in the form of facts is a vital foundation for good study. These facts are referred to as evidence, and they enable the researcher to comprehend the issue under investigation. Primary and secondary data were collected to perform important analysis. Secondary information was gathered from scientific journals, related books, and the Internet sources.

3.4.1 Primary data

The data would be much more accurate if collected directly by the researcher. Sibel Aslan the Customer Experience Manager in Turkey and Umit Tokoz who is Mars Logistics Business Development and Networking Manager provided the primary data in the form of answers to a series of questions.

Also, tried to ask questions via e-mail and looked through them to Corporate Communication and Brand Management Manager Kader Ozal. She recommended authors go to Mars's official website to look for information. This information was also carefully examined to get the general perspective of the company. Regarding the understanding value chain, Sibel Aslan was busy to give relevant information.

What is happening in the supply chain? Understanding of the chain's players, their interactions, and economic activities on Mars Logistics international company.

Author had to search and use information from other logistics company, to make a comparison with Mars Logistics. The Business Development and Networking Manager just gave a few sentences to describe them briefly. Overall, the study case explained through support from Sibel Aslan and Umit Tokoz. Mars Logistics' official website also contributes to accomplish this thesis and gain better knowledge problem solutions.

3.4.2 Secondary data

In contrast to primary data, secondary data is information that has already been collected or published. This type of data is the most common type encountered since it consists of all types of written materials such as magazines, books, and the internet.

The Mars Logistics official website has been the valued secondary source to replenish Mars Logistics brand association. In addition, by reading through Mars Logistics transportation introduction (such as Mars air freight service, road & rail service, and sea freight service), the quality of Mars's service can be analyzed.

In terms of Milk Run transportation, helps authors gather efficient service. To get Mars Logistics' competitors' information, the authors also use some useful information from FedEx's official website.

3.5 Limitations

Since the value chain strategy contains numerous issues, the author was unable to identify all success factors in this study. Seeing that, this thesis only presents a very limited part of the supply chain external and internal analysis to describe which can be the key success factors to gain a competitive advantage for Mars Logistics.

In as much as cannot represent or explain why the entire logistic industry can grow so fast and become an emerging industry today. Besides, this thesis focuses on the Mars Logistics transportations which means the author only gathered information from Mars's problem solution cases; therefore, could not reflect the comprehensive views and perspectives of other departments of the company.

3.6 Summary of methodology

The literature review for this study and empirical investigation on Mars Logistics are carried out in this thesis. To suit the purpose of the thesis, the theoretical framework portion contains important theories and literature addressing external and internal analysis. 'Business model innovation for sustainability can drive innovation across internal business functions, across supply chains and, on a broader level, across industries.'[51]

On the other hand, the analytical data set is primarily concerned with finding answers to problems. The business report and the official website are also considered to be additional sources of information. Results of this chapter explained the methods for the empirical part.

[51] Bocken, N.M., Rana, P., and Short, S.W. 'Value Mapping for Sustainable Business Thinking', *Journal of Industrial & Production Engineering* 32, no. 1 (January 2015): 67–81, https://doi.org/10.1080/21681015.2014.1000399.

Regarding this primary and secondary data explained. The marketing strategy of a logistics company is described. The qualitative approach is primarily used to define and analyze characteristics, attributes.

Decided to collect qualitative data, such as formal interviews, reflexive papers, record, and content analysis. In this thesis, the qualitative approach is used as the analysis method to address Mars Logistics' competitive advantage. This approach was split into three key levels: planning, data collection and data consolidation.

Speaking of limitations unable to uncover all success variables in this study since the value chain approach comprises several challenges. As a result, this thesis only mentions supply chain's external and internal study to define which elements can help Mars Logistics acquire a competitive advantage.

The following chapter will show the international logistics company case for this occasion Mars Logistics study case according to the interview answer chapter four will be present on research questions to understand transportation firm.

4 EMPIRICAL FINDINGS ON MARS LOGISTICS

Chapter four objective is to have an empirical result and getting know Mars Logistics. We start from introduction to Mars logistics company and continue with comparison of competitors in Table 1, based on information data from DHL, UPS, and FedEx official websites.

The results of the interviews and secondary information are presented in this section. The empirical findings shift from an exterior to an inward perspective. First and foremost, a quick overview of Mars Logistics is provided. The interviewer next complete and list the answers to the questions about the customer, the rival, and the quality of the service will be seen in this chapter.

One of the biggest differences between modern and traditional logistics is that today's logistics is more integrated into the product lifecycle than in the past. Because of the increased complexity of the logistics chain, many logistics operators find that product information management is becoming more important. 'It has proven to be a necessary instrument to bring new technologies and ideas to the market and serves as a driver of innovation to unlock technological potential.'[52]

Following here Mars Logistics does an outstanding job of analyzing the company's needs and providing logistics solutions that meet the needs of clients. Provide cost-effective logistics support with the 'Milk Run' transport model, Mars Logistics does value added service.

They have developed and introduced a new 'Milk Run' model for the transportation of products. With this model, the logistics service is much more customer-focused, and the customer gets a better insight into the services that are offered. Which Mars developed as a special project for industries where planning is critically explained at this part.

4.1 Introduction of Mars Logistics

Mars Logistics, a group company established in 1989, Mars is one of leading transportation businesses in Turkey.

Structured as an organized company that adopts full-service policy with the companies in the same organization and over 1.500 employees, full equipped infrastructure, and communication network. The number of self-owned vehicles in the fleet reached 2.650 in 2018.

[52] Geelhoed, E. A. (2017). The role of sustainability in business model innovation of start-ups in Indonesia. Multiple case-study design. Published master thesis management of technology, Delft University of Technology- 31 august, 1 - 91.

Mars Logistics group of companies consists of Mars Logistics International Transportation Storage Distribution, Mars Air and Maritime Cargo, Mars Insurance, Mars Logistics S.A.R.L, and Mars Logistics Europa SA companies.

Head office located in Güneşli, Istanbul and local branches in Hadımköy, Tuzla, Tepeören, Esenyurt, Kocaeli, Bursa, Izmir, Manisa, Adana, Ankara, Eskişehir, Mersin, İskenderun, Ataturk Airport, Adnan Menderes Airport, Esenboga Airport and Adana Sakirpasa Airport and international branches located in Barcelona, Madrid, Irun, Luxemburg, Trieste, Guangzhou, and Shanghai.

4.2 Mars Logistics competitors

According to Mr. Umit that a distinction is made between these three businesses (see Table). Several significant concerns are picked up to allow a comparison by considering the characteristics of the logistics industry, such as safety & insurance, company operation, environmental policy, and company structure.

'Should a lead firm prove reluctant to adopt a particular eco-label, activists and consumers can hold them responsible for the environmental indiscretions of suppliers and impose material and reputational costs through boycotts, naming-and-shaming campaigns, or shareholder activism.'[53]The top rivals, UPS, DHL, and FedEx are compared at the table to see how different Mars Logistics is. Comparing with Mars Logistics used other international logistics company's information's by their websites.

'Do lead firms have a moral requirement to respond to pressure and to try and enforce standards on their downstream suppliers? The fact that they have the ability to do so—and, as we discussed below, the fact that there might not be other actors capable of doing so—may suggest that they do.'[54]

[53] Singer, A. and Ven,H., 'Beyond Market, Firm, and State: Mapping the Ethics of Global Value Chains', *Business & Society Review (00453609)* 124, no. 3 (September 2019): 325–43, https://doi.org/10.1111/basr.12178.

[54] Hsieh, N.-H. (2013). Multinational enterprises and incomplete institutions: The demandingness of minimum moral standards. In M. Boylan (Ed.), Business ethics (2nd ed., pp. 409–422). Hoboken, NJ: Wiley. Hsieh, N.-H. (2017). The responsibilities and role of business in relation to society: Back to basics? Business Ethics Quarterly, 27(2), 293–314.

Table 1: The comparison between UPS, DHL, and FedEx

	Number of employees	Position	Insurance and safety	Logistics and service	Sustainable strategy	Company structure
UPS	With 426,000 workers in more than 200 countries, this multinational logistics corporation is one of the largest in the world.	Global freight forwarder with access to almost every kind of aircraft or vehicle anywhere on the planet	Auto liability insurance, estate insurance, freight insurance, and other types of insurance are available.	Shipping, monitoring, essential freight, LCL, and other services are available.	Transportation management; carbon footprint analysis; package design and testing lab.	Domestic Packages in the United States International Packages in the United States Supply Chain & Freight
DHL	With 285,000 workers in 220 countries, it is a major international logistics firm.	In the logistics sector, they are number one.	C-TPAT (Customs-Trade Partnership Against Terrorism); a global network of increasingly safe locations; satellite networks; GPS	Shipping, monitoring, export and import services, freight, and other services are available.	DHL GOGREEN, DHL in-house Carbon Control, environmental management system (EMS), and other initiatives.	DHL Express is a shipping company based in Germany. DHL International Forwarding Supply chain at DHL Mail from DHL
FedEx	80,000 workers in 220 countries	the world's most well-known	Auto liability insurance, land	Provide special items, such as packages,	Earth Smart Solutions, Earth Smart at Work, and Earth Smart	FedEx Express is a service provided by

	make up an internation al major logistics business.	business-to-business delivery service	insurance, freight insurance, and other types of insurance are available.	envelopes, or freight express; freight shipment; and so on.	Outreach are all examples of Earth Smart solutions.	FedEx Corporation. FedEx Ground FedEx Freight

Source: Composed by Ceren Degirmenci, based on DHL official website, UPS official website, FedEx official website.

Big competitors detailed in this table. It is important to understand 'Innovation for sustainability more generally needs to capture the challenges of a complex context and span across company boundaries.'[55]

The youngest company comparing other Mars Logistics founded 1989 started as the name of International transportation Mars. DHL was founded in 1969, according to the company's official website, and it has risen to the top of the industry. UPS was founded in 1907 and is now a leading global freight provider with connections to nearly every kind of aircraft or vehicle anywhere on the planet. FedEx began operations in 1971.

UPS has more staff than DHL and FedEx in terms of scale and number of employees, but the service area is almost identical, encompassing about 220 countries. According to the official websites of UPS and FedEx, both firms provide various types of insurance policy authentication. UPS's risk management department will offer vehicle liability insurance to its customers and other third parties.

Customers receive similar services from these organizations in terms of operation. For example, one of their primary responsibilities is to deliver goods and mail to another location in accordance with customer requirements, whether by air, sea, or land. UPS Critical Freight includes various modes of transportation, including air, surface, charter, and hand carry, as well as advanced tracking through the internet, specialized equipment, and value-added services.

UPS (United Parcel Service Inc) is a parcel delivery corporation which was founded on May 2, 1907, now employs over 100,000 employees in over 200 offices throughout the world. This

[55] Szekely, F,. and Strebel, H., "Incremental, radical andgame-changing: Strategic innovation for sustainability,"Corporate Governance, 13, 467–481 (2013)

company is the world's largest shipping service provider. The company now employs over 100,000 people, operates in over 220 countries, and has over 350,000 delivery stations. The corporation made $31.12 billion in revenue in 2005. UPS's services are divided into two categories: retail services sold in stores and online services.

FedEx has a wide range of shipping supplies available, including corrugated boxes of various sizes, padded envelopes, plastic bubble wrap, mailing tubes, packing tape, and more. FedEx provides a specially made and cushioned FedEx Laptop Box and Small Electronics Box for high-tech products like mobile phones and laptops. DHL can monitor products and mail using a variety of high-tech methods.

Mars Logistics, priority is to provide the best service in line with the “Customer-Oriented” vision and awarded ISO 10002 “Customer Satisfaction” and ISO 27001 Information Security certificates in 2013. In 2014, awarded a validation certificate and certified our environmental sensitivity according to ISO 14064-1 Greenhouse Emissions Calculation standard.

Meanwhile, DHL introduces the GOGREEN software to monitor environmental impact; FedEx creates the Earth Smart Solution to enhance all FedEx products, services, or physical assets, such as aircraft, cars, and infrastructure, to provide direct and concrete advantages to FedEx's organization, as well as the environment, customers, and team members. To address environmental issues, UPS employs carbon impact analysis and package design.

DHL, UPS, and FedEx, as the world's leading 3PL firms, operate through subsidiaries. Furthermore, each subsidiary is assigned to a particular task. DHL Express specializes in express shipments; DHL Global Forwarding specializes in air and sea freight, and DHL Freight specializes in land transportation.

According to the Business Development and Networking manager customers like staff’s attitude since their logistics family. Even they are in the big competition in worldwide Mars Logistics gain trust of their local customers and has place among international logistics companies.

Mars Logistics offers high-tech services, including container-based delivery, and international logistics. Through careful planning, can create an integrated process for each client. They can make sure all activities on the client's account are carried out in time.

4.3 Quality of service

'Customer preference is regarded as a customer's manifestation of wants in terms of product characteristics and prospective product opportunities; it is therefore a requisite consideration in the creation of design concept.'[56] Air, ocean, road, and rail are the primary modes of transportation.

Mars Logistics' broad range of distribution services enables it to meet a wide range of requirements and needs by combining technical experts' ideas with cutting-edge technology, while also benefiting its customers.

Additionally, when speaking with customers, the Mars Logistics team is very polite. Our interviewee, for example, has been extremely gracious in accepting our invitation. Despite her busy schedule, she always responded to our questions on LinkedIn with a friendly demeanor.

Sibel Aslan also claims that Mars Logistics will be the best choice because of its high-quality operation. Provides a few examples of the advantages Mars Logistics can provide to customers: Mars Logistics consulting services provide professional advice on all tariffs, import VAT (value-added tax), excise duties, and security issues.

Complete accountability in the supply chain; Bonded warehouses to facilitate import, export, and transit operations, among other things. 'Most companies care about market share even more than about customer satisfaction. This is a mistake. Market share is of reverse logic, which is a review of past indicators.'[57]

Mars Logistics values has three main keywords harmony, pioneering spirit and sincerity. Following table drawn by author regarding the result of interview responses reflect quality of services objectives of Mars Logistics.

[56] Cao, D., Ramani, K., Li, Z., Raskin, V., Liu, Y., & Li, Z. (2010). Developing customer preferences for concept generation by using engineering ontologies. Volume 3: 30th Computers and Information in Engineering Conference, Parts A and B.doi:10.1115/detc2010-28499.

[57] Liu Ying-Yen, 'The Leisure Industry Environment Enhances Service Quality and Strengthens Competitive Performance - the Green Olive Tours Co. Case', *International Journal of Organizational Innovation* 14, no. 2 (October 2021): 10–21.

Table 2: The objectives of service quality

OBJECTIVES	ACTIVITIES
Customer Orientation	Using the "Win & Win" philosophy, view and meet existing and potential customer needs.
Learning and Development	To ensure quality improvement by gathering knowledge and changing attitudes in a way that promotes change and improvement.
Employee Satisfaction	To meet and surpass our employees' needs. For enabling social communication, increase social sharing and ensure mutual respect among employees.
Teamwork	To work together to solve challenges and celebrate successes.
Respect for the Environment and Society	To become attentive to societal expectations and environmental conservation in processes.
Reliability	Keeping promises to clients, not lying, and adapting to ethical values.
Cooperation Enhancement	To collaborate with vendors, agencies, non-governmental organizations, and others from which provide services in line with the "Win & Win" principle and to ensure reciprocal improvement in our cooperation.
Taking Charge	To take on even the most demanding tasks, pushing our skills and capabilities to their limits.

Source: Composed by Ceren Degirmenci.

4.3.1 Road Freight

With a fleet of 2.650 self-owned vehicles, one of Turkey's newest and largest fleets, provides complete/partial import/export road transportation for key foreign trade industries, including automotive, textile, retail, construction, cosmetics, and oil.

Mars Logistics provide perfect road freight service in terms of speed and service quality through our fleet of environmentally friendly vehicles, all of which comply with Euro 6 standards and can be monitored online for 24 hours by a satellite tracking device, with the vast service network, and worldwide powerful agencies, their specialized team that adopts customer satisfaction and customer-oriented solutions.

Mars Logistics also offers customers special logistics benefits in the textile and ready-made clothing markets, which are the locomotives of foreign trade in Turkey. Produce quick and unique solutions for ever-changing creations, and provide transportation, as well as door-to-door or added-value services like labeling, alert system installation, and other services, through trucks designed specifically to transport hanger textile products. On request, Mars Logistics will provide quality control services with advanced equipment and qualified staff, as it aims to relieve its customers' burdens.

With a fleet of 2.650 self-owned trucks, Mars Logistics provides excellent road freight service. All of trucks are ADR-compliant. Brands that have high expectations for fleet, replacing or adding new trucks in accordance with needs. As a leading, environmentally conscious logistics provider, Mars Logistics has a mission of fleet selection, and all of trucks are environmentally friendly trucks with Euro 5 and Euro 6 engines that emit low emissions.

The fleet is one of Turkey's youngest, with an average age of 2.7 years, and is ideal for modes of transportation that require different equipment, such as Intermodal Transportation and Hanger Transportation. Through a GPRS-GPS satellite tracking system installed in all fleets, the customer can follow up the currently progress of cargo for 24 hours in 7 days online or by IOS and Android systems and view and download relevant documents. Increase truck, driver, and cargo protection and operational productivity while reducing transit times using the satellite tracking system.

Provide regular in-house instruction to drivers on technical topics such as Occupational Health and Safety, truck, and freight safety, and so on. Mars Logistics, with its versatile fleet

management system, numerous route options, and various modes of transportation, offers logistics support on time.

Source: Mars Logistics official website.

Fig. 8. Mars Logistics Countries Where They Provide Road Transportation.

4.3.2 Air freight

The vision states on their official website as 'To become a brand that maintains its position as leader in logistics, creating differences and growing continuously.'[58]Mars Air & Sea Cargo, a founding member of WIN (Global Independent Network), a multinational network of 280 offices and 6405 staff in 72 countries across five continents, works with all airlines around the world thanks to IATA and FIATA certificates.

Mars Air & Sea Cargo offers consolidated, express, door-to-door, export transportation, total transportation, and multi-modal transportation services through a global network of agencies, trained employees, and a strong infrastructure. Mars Logistics provides aircraft charter, 3rd country transit transportation, degradable and hazardous goods transportation, and contract services with space guarantee with ship owners across a worldwide active efficient network, all built on the concept of being a strategic business partner for customers.

[58] Mars Logistics Official Website 'About Us' accessed 21 November 2021, https://www.marslogistics.com/en/about-us.

4.3.3 Sea freight

Mars Air & Sea Cargo generates cost-effective logistics solutions for door-to-door and port-to-port transportation through WIN's global network. Mars Air & Sea Cargo delivers complete (FCL) and partial (LCL) cargo to desired location in the most cost-effective, convenient, and easy way by any transportation system such as regular, open top, reefer, flat rack, high cube, tank container, etc.

According to the Mr Umit, they can reach all seaports in the world. Mars Air & Sea Cargo, with its professional staff of employees trained in their sector, also provides FCL and LCL shipping, Special Container Shipment, Heavy tonnage transportation, and out-of-gauge shipment services in the most cost-effective manner.

Mars Air & Sea Cargo offers Intermodal Transportation, Multimodal Transportation, 3rd Country, and Transit Transportation on a regular schedule, as well as contract services with space guarantee with ship owners and provides quick and reliable logistics support.

4.3.4 Railway freight

As part of rail freight, Mars Logistics offers customers cost savings and secure transportation services with round trips from and to Germany, Austria, the Czech Republic, Slovakia, Poland, Hungary, and other European countries.

Implement large projects by rail freight that are environmentally friendly, provide service at set times, and have a low risk of disruption. Often, provide customers with cost-effective rail freight options for heavy materials. In addition, Mars Logistics offers Individual or Group Wagon Organization, Block Train Organization, Railway Container Operation, Terminal Handling, and Rail Freight Consultancy services.

4.4 Modes of transportation

Truck, ship, train, and plane shipments are the four-basic means of transportation in logistics. While each of these forms of transportation has its own set of advantages, determining which is best for your company requires careful analysis.

Following part explain in comprehending the forms of transportation used by Mars Logistics. Stated from official website they described ‘Optimum time and maximum environment-friendly solutions.’[59]

4.4.1 Intermodal transportation

Mars Logistics provides door-to-door delivery service by using different modes of transportation to add value and minimize costs through Intermodal transportation service. Intermodal transportation is a mode of transportation that employs the use of the same transport vehicle or container as well as two or more modes of transportation. During mode changes, none of the cargoes in the vehicle or container are subjected to any handling procedures.

Moving large-sized commodities in the same steel-based containers through two or more modes of transportation is referred to as intermodal transportation. It's a common method of transporting things in today's world. Instead of changing items from one vehicle to the next during their voyage, deals with these standardized containers. This procedure has several advantages, including better product safety and speedier delivery.

They introduced Intermodal Transportation with the slogan "Optimum time and maximum environmental friendliness," and they conduct timely distribution, low-cost advantage, and effective and environmentally friendly logistics. Maintain a reduction in carbon emissions and avoid the release of 13000 tons of carbon dioxide per year.

Intermodal transportation service provides customers with frequent transportation, regular loading and unloading options, and fixed price advantages. Furthermore, since all wagons are available in the same place, control and simple follow-up are ensured, and intermodal transportation service is less affected by adverse weather conditions than other transportation networks.

4.4.2 Project transportation

Mars Logistics provides customer-specific solutions through specialist project transportation personnel and our extensive network of agencies. Plan large and bulky cargoes with a knowledgeable team in accordance with customer expectations and provide dependable and cost-effective services.

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[59] Mars Logistics Official Website ‘Intermodal Transportation’, accessed 21 November 2021, https://www.marslogistics.com/en/intermodal-transportation.

Mars Logistics aims to be a solution partner in project transportation for customers by providing the following services at high quality standards:

- Transport of Refinery and Fuel Processing Plants.
- Transport of Factories, Power Plants, and Pipelines.
- Transport of Stream and Gas Turbines.
- Transport of Heavy and Out-of-Gauge Cargoes.

Turnkey Project Solutions, offer customers Full & Part Vessel Chartering services suitable for cargoes and Intermodal & Multimodal Transport, Seaport Services, Supply of Handling Equipment, Road Permit, and Supply of Escort Vehicle and Exclusive Storage for the project, as well as all added value services including distinctive applications.

4.5 Milk Run transportation

Mars Logistics does a job of analyzing the sector's needs and providing logistics solutions that meet the needs of customers. Provide cost-effective logistics support with ‘Milk Run' transport model, which Mars developed as a special project for industries where planning is critical. Milk-run, a well-known transport approach utilized successfully in practice, is used in this study to simultaneously minimize transportation and inventory costs in a just-in-time generation environment.

Milk Run Transport, named after milk distribution in the United States of America, is focused on the truck collecting the same or different cargoes from various points according to a specific timetable, delivering these cargoes to one or several points, and collecting empty containers during the deliveries. Following the completion of all deliveries, collect and return the empty containers in the opposite direction. Milk Run transport makes the process more effective by saving time and labor by accurate and timely preparation.

Mars Logistics, with a large service network, powerful suppliers, and 2650 self-owned vehicles, provides efficient Milk Run transport service, especially in regions where the automotive industry is dominant. They are the industry leader in Automotive Milk Run transport, with a 51 percent market share based on the number of cars available in Turkey.

With a designed routing scheme in the Milk Run Transport model, meet the shipment needs of customers while ensuring the most efficient utilization of transport vehicle capacities and the most productive use of storage areas in regular shipments.

The expected shipment lines, arrange 100 thousand trips a year for each customer while working 24 hours a day, six days a week. The Milk Run transport model also provides benefits such as the prevention of potential harm during loading or carriage, the removal of the need to repeat quality control procedures at the producer's plant, cost savings, and production acceleration. Mars Logistics successfully can apply this model to do this, the organization offers two types of Milk Run Transport, depending on the needs of the consumers. At the following table because of our interview answers Milk Run operation and Milk Run planning detailed by author:

1. Map of the route (Milk Run Operation)	2. Service Planning (Milk Run Planning)
The Milk Run Operation is a route-based shipping business that transports car parts between multiple sites in accordance with customer demands. This service package is utilized as a regular mode of transportation. This transportation service could take the shape of one of the following: • Transport of one-way shipments via defined routes, based on customer requests. • Transport of multi-way cargo via set routes, based on customer requests. • Shipments are transported to various facilities and locations based on client needs.	This service involves transporting car parts between different places in line with the customers' demands, while considering the transportation vehicles, the customers' wants, and all other facets of the transportation company. Features are included in this service: • Cost-cutting for customers in terms of logistics. • Cost-cutting in the transportation sector. • Cost-cutting in the service industry. • Delivery of the Milk Run Planning transportation service. • Milk run planning, delivery, and execution.

Source: Composed by author.

Fig. 9. Milk Run Transportation System on Mars Logistics.

Milk Run Planning shall be done to the greatest extent possible as a service that provides a solution for the customers' demands, employing both planning tools, such as route optimization methods, routing schedules, delivery of car parts, and freight computation, and tools for service cost optimization. Shipment route optimization, or routes established for the transportation of car parts between multiple places.

4.6 Summary of empirical findings on mars logistics

Since 1989 Mars Logistical has provided all logistics services through its subsidiaries International Transportation Storage Distribution, Mars Air and Maritime Cargo, Mars Insurance, Mars Logistics S.A.R.L, and Mars Logistics Europa SA. Structured as a well-organized corporation with a full-service policy and a fully equipped infrastructure and communication network among its subsidiaries.

The principal forms of transportation are air, ocean, road, and rail explained. By integrating technical specialists' ideas with cutting-edge technology, Mars Logistics can meet a wide range of requirements and needs while also benefiting its clients.

Intermodal transportation service allows Mars Logistics to provide door-to-door delivery by combining several modes of transportation to enhance value and save expenses. Intermodal transportation is a kind of transportation that combines the use of two or more modes of transportation in the same vehicle or container.

The Mars Logistics personnel is quite courteous while communicating with consumers. Through specialized project transportation personnel and Mars Logistics large network of agents, provides customer-specific solutions. With a knowledgeable staff, plan large and bulky cargoes in accordance with customer requirements, and provide dependable and cost-effective services.

Mars Logistics performs a job of evaluating the demands of the industry and delivering logistics solutions that suit those needs. The 'Milk Run' transport model, which Mars designed as a special project for sectors where planning is crucial, can provide cost-effective logistics support. The most important part Mars Logistics thinking alternatives.

Mars Logistics provides effective Milk Run shipping service, especially in locations where the automobile sector is strong, thanks to its broad service network, powerful suppliers, and self-owned trucks. The biggest market share based on the number of cars available in Turkey, they are the industry leader in Automotive Milk Run transportation.

These empirical findings and investigating Mars Logistics competitors continue following chapter. Analysis to understand in detail, describe how based on Turkey, Mars Logistics Company able to have advantages in the value chain.

5 ANALYSIS

Last chapter is analysis of Mars Logistics and see the big picture in the global value chain. Empirical findings in section four and the theory mentioned in part two are merged and linked together to determine the relationship between them. Analysis part held on competitor analysis, quality of service analysis, case study analysis in the end, the SWOT matrix would be used to present the outcomes of the analysis.

This chapter also shows the benefits of intermodal transportation on the value chain opens all sorts of possibilities. Explanation with case study how Mars Logistics had an advantage compared to other international logistics companies. Instead of using local knowledge gained value to Mars Logistics. With this new knowledge of the supply chains of companies in Europe, they could create more customized shipping solutions and offer the best value to customers.

For example, the newest company in comparison to others, was founded in 1989 as Mars International Company. Mars Logistics compete with worldwide logistics companies they can offer a better price for shipping a container from one country to another.

This is an advantage for the customer. The customer can save money and time. This also means that the customer can get a better quality of service. Plus meaning that they can get better service.

5.1 Mars Logistics competitor analysis

Understanding your competitors is a crucial step in gaining market share. UPS has a significant lead in terms of total personnel numbers. UPS takes advantage of its large human resource pool to complete more work than the other companies which are DHL, FedEx and Mars Logistics. On the contrary, a huge workforce may immediately increase costs. And because UPS was created first, it should have greater operational experience than the other corporations. In terms of insurance verification, even if UPS and FedEx have full liability insurance, DHL remains the industry leader.

Mars Logistics earns client pleasure, if not customer loyalty, because of improved security equipment and cutting-edge technology. However, Mars should learn anything from its competition to become more ideal; perhaps it is an opportunity to attract more or fewer potential clients. One typical example is liability insurance; Mars Logistics must have a significant shortcoming.

UPS critical freight is a service that focuses on time-sensitive freight demands. The advantages of critical freight include expedited transportation can be organized based on client time-critical freight shipment needs; real-time shipment tracking from pickup to delivery, and the development to satisfy transportation needs.

Many companies rely on UPS because it provides exclusive services for businesses, such as Express Shipper and Express Manager. FedEx can create a unique box for a customer's high-tech equipment, ensuring the safety of the goods throughout delivery. Customers will be pleased, and delivery will be simplified. Mars Logistics should pay more attention to express marketing. Because UPS and FedEx do better than Mars Logistics.

A significant trend or event, such as concern over the introduction of a new competitor, might have a considerable impact on the assessment of strategic choices. Technology, which may be both a threat and an opportunity for a prospective competitor, might suggest new commercial fields.

As a result, it is critical for Mars Logistics to innovate in terms of its service. Through their individual sustainability programs, all four corporations prioritize environmental impact. They do all possible to reduce environmental negative impact while also making major contributions to the industry's environmental sustainability. The subsidiaries of DHL, UPS, and FedEx provide more efficient services.

Today's 3PL connections are more collaborative. Cooperation between competitors is sometimes required to attain a common goal. For example, multiple 3PL organizations may collaborate due to a major procurement or anything similar. During their collaboration, these organizations can share their expertise, experience, and talents.

5.2 Mars Logistics quality of service

Mars Logistics' core product as an international three-party logistics company is delivery service. Mars and its clients rely heavily on several modes of transportation. In general, delivery service is always associated with certain difficulties such as safety, environmental impact, durability, and dependability. Customers are concerned and frequently inquire about these factors.

'It is no doubt that service quality in logistics is very important topic addressed in huge number of scientific papers.'[60] According to the official website of Mars Logistics, the company possesses a variety of software and hardware to assist that identification. High-tech may be one of Mars Logistics' capabilities. Furthermore, unlike many other freight insurers, Value is measured rather than weight or package count. As a result, whether by air, sea, or land, can ensure the security of goods and mails.

Mars Logistics does its utmost to meet each customer's need. The company's major focus should be on safety and durability, which are two elements that customers worry about. Every year, the corporation invests billions of Euros in new security systems to secure the protection of goods and mails, allowing the entire delivery process to run smoothly and without any accidents.

Furthermore, there is a simple way to contact Mars via the official website, and all employees are eager to assist consumers. Mr. Umit believes that communication, response, and access may then be established. Even though Mars Logistics can provide the greatest service to customers. However, the most serious issue is one of cost.

Customers must be turned off by the high price. There is little information available about Mars Logistics independent customers forums at which they share with feedback and comments complaints it is an unknown sector that will influence the outcome of strategic decisions. As a result, client complaints can be viewed as one strategic uncertainty.

Information collecting is critical for controlling consumer complaints. Scenarios for strategy development can be created. For example, Mars Logistics may set up a section to handle complaints. In this manner, the organization can devise a contingency plan to guard against disaster and avoid client displeasure. When it comes to service quality Mars Logistics should continue to strengthen its assessment methodology, conduct customer satisfaction research on a regular basis, and be aware of market changes.

5.3 Case study analysis

According to the Umıt Tokoz, one of the largest competition strengths is logistics time. Mars Logistics operates six weekly train services between Trieste and Bettembourg. Cargoes are picked up from various parts of Turkey and transported by road to the seaports of Istanbul, Izmir,

[60] Anderson, E. W., Fornell, C., Lehrmann, D. R. 1994. Customer satisfaction, market share, and profitability: findings from Sweden, Journal of Marketing 58(3): 53–66. https://doi.org/10.2307/1252310

and Mersin on these journeys. RO-RO transports trailers that are far from towing trucks to Trieste. Reach steaker in Trieste loads trailers onto wagons, which are then railroaded to Luxemburg. At the Bettembourg Multimodal port, trailers that are reconnected to towing trucks begin traveling by road to numerous destinations in Luxembourg, Belgium, European countries, the UK, France, and Germany. During this case, the study specifically mentioned details on how they reduce time by Halkalı-Duisburg 96 hours. Containers delivered with goods from various sites in Turkey are transported via railways between Halkalı and Duisburg within the Intermodal transportation between Turkey and Duisburg, whose complete organization is controlled by Mars Logistics.

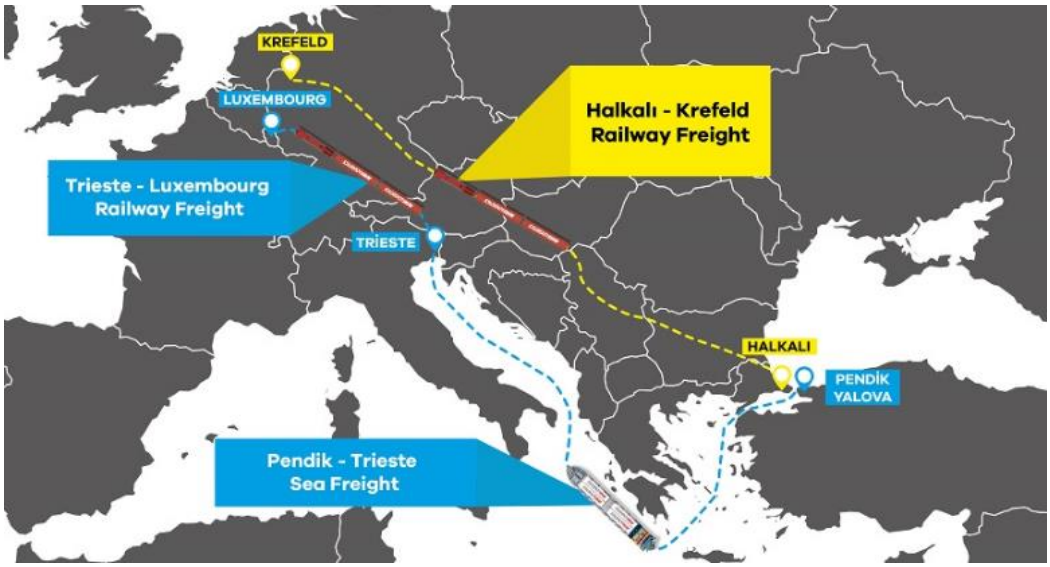
Halkalı Terminal is situated on the Marmara Sea coast at the eastern entrance to the Bosporus. Built on a peninsula extending to the Black Sea, the terminal is connected to the Bosporus-Europe Maritime Canal and therefore the international transport corridor, facilitating freight transport to all or any European ports. From the terminal, cargo is transported to Europe, including to the Balkans, Russia, the center East, and China. Halkalı Terminal is one in every of the most important freight terminals in Turkey, with a complete area of two,000,000 m² and a railway branch extending to town of Dursunbey. The terminal consists of ten container parks with a combined storage capacity of 500,000 m², which operate in tandem with the Halkalı Container Terminal at the location.

The Duisburg Container Terminal is that the largest cargo terminal in Europe, and one in all the most important container terminals within the world. The terminal is found within the southern area of Duisburg-Marxloh. it's linked to the A61 autobahn and the A43 high-speed train line, enabling the transportation of containers to and from Germany and across Europe. The terminal is connected to eight motorway and 6 railway routes, including to the North Rhine-Westphalia main motorway, the A45 motorway and motorway ring, the A40 motorway, and therefore the main rail routes within the German states of Rhineland-Palatinate and Hesse.Benefits of Consolidating Transport to Halkalı and Duisburg Terminals:

• The logistics chain is standardized for transport to both terminals.

• The capacity of the terminals is increased and the storage capacity improved.

• The terminals are located at the east entrance to the Bosporus, allowing freight to be transported to European ports in an exceedingly single trip.



Source: Mars Logistics official website.

Fig. 10. Map of Special Intermodal Lines.

Following their arrival at Halkalı Terminal and completion of customs clearances, the containers proceed on the train to Duisburg, Germany, after passing through Kapıkule customs via Bulgaria, Serbia, Hungary, and Austria. The containers are then transported by road freight to their respective destinations. This special multimodal service value adding to the company;

• Sustainable.

• Environmentally friendly, as fast as road freight.

• Reliable.

• Reduces the detrimental consequences of walking restrictions and poor crossing conditions.

• When compared to road transportation, it emits less CO2 and features a fixed journey time.

• Can be monitored 24 hours every day, 7 days per week.

• Compared to road freight, it's an improved load capacity and reduces the results of inclemency.

• With set transit times, it's possible to plan realistically.

• Provides a price edge over competitors.

5.4 SWOT analysis for Mars Logistics

The SWOT matrix of Mars Logistics, given in figure, is created by combining all the external and internal components outlined above to illustrate what strengths, opportunities, weaknesses, and threats Mars Logistics possesses. This technique is intended for use in the early stages of decision-making processes and can be used to assess the strategic position of a variety of businesses. Its purpose is to specify the business endeavor or project's objectives as well as the internal and external elements that are favorable and unfavorable to accomplishing those goals.

Source: Composed by author.

Fig. 11. SWOT Matrix of Mars Logistics.

SWOT analysis users frequently ask and answer questions to generate meaningful information for each area and determine their competitive advantage. SWOT has been lauded as a tried-and-true method for strategic analysis, but it has also been chastised for its shortcomings.

STRENGTH : Organization must concentrate on clients and develop long-term relationships with them. Customers of Mars can be found all over the world. Mars Logistics, as a worldwide player, is committed to cultural tolerance and respect. Mars Logistics is always listening to what its customers have to say. Provides quick delivery, as well as a safety insurance service using high-tech equipment. It provides excellent efficiency and client satisfaction. All carbon dioxide emissions from transportation, on the other hand, would be offset by external climate protection programs. As a result, Mars Logistics can establish a balance between sustainability initiatives and customer expectations. Most employees will be satisfied with a good income, which will encourage them to work hard.

WEAKNESS : Mars Logistics does not have the same number of personnel as UPS. As a result, UPS is able to use its vast human resource to complete more tasks than Mars Logistics.DHL lacks liability insurance when compared to Mars Logistics' competition. It is possible that it will result in client loss at some point. The most severe issue is the cost. Mars Logistics is, in fact, more expensive than its competitors. Furthermore, in some places, service quality is difficult to guarantee. The negative attitude of some employees, in particular, would have a substantial impact on the company's reputation.

OPPORTUNITIES : Different businesses have their own unique strategy. Even if the core capability cannot be duplicated, Mars Logistics may learn a lot from other businesses. A logistics business, for example, can create its own liability insurance by studying the policies of its competitors. According to Sibel Aslan, "We believe Mars Logistics still has more capacity and potential to increase employee cooperation." Furthermore, Mars Logistics must reinvent its service in order to surprise clients.

THREATS : The most difficult logistical hurdle for Mars is based on Turkey's location. And Mars Logistics is constantly attempting to catch up with many international companies, such as FedEx, UPS, DHL, and others.3PL relationships are considerably more sophisticated than traditional logistics supplier agreements. As a result, the competitor may one day befriend Mars Logistics. On the other hand, a friend may turn to your competition. It means that it is feasible to feed competitors by cooperating and sharing knowledge, talents, resources, etc.

The company's competitive advantages would be its strengths and opportunities. For example, Mars Logistics' competitive advantages include customer satisfaction, high-tech

transportation services, competitive compensation, and a long-term program. Mars Logistics will be more successful if it can learn from other organizations or increase teamwork.

Weaknesses and threats, on the other hand, would be regarded as competitive disadvantages. Mars Logistics lacks comprehensive liability insurance, which could result in customer loss and weaken safety concerns. Furthermore, the overall number of Mars Logistics staff is insufficient to deal with global commerce. More employees are able to provide more opportunities to serve clients.Meanwhile, each employee's task can be minimized. As a result, undue toil can be avoided, and recruiting is a viable solution to such an issue.

Stressed on case study road follows the advantages and value-added services for this international logistics. As well, Mars Logistics is more expensive. It drives away potential clients from Mars Logistics. In additionthat, it is difficult to control each employee's qualification; some of them may lack tolerance or experience in dealing with problems.

5.5 Summary of analysis

In this analysis chapter competitive analysis proof that having a competitive advantage in terms of total employees is very important to gaining market share. In addition, having a good human resource pool is also beneficial for a company. Market share requires a thorough understanding competition. In terms of total employees, UPS has a big advantage. UPS, like DHL, FedEx, and Mars Logistics, makes advantage of its enormous human resource pool to do more work than the competition.

Today's three-party logistics links are more collaborative. It is sometimes necessary for competitors to work together to achieve a common goal. Due to a large procurement or anything similar, companies may collaborate. These companies can contribute their expertise, experience, and talents through collaboration.

The supply chain nature of the relationships between the companies can be very beneficial and can make the relationship stronger over time. When companies have the desire to cooperate with each other on joint projects, they use a variety of different methods. Some companies in that chain have a formal joint venture agreement. Joint venture agreements are the formal agreements between a company and a different company to jointly invest in a project.

However, companies may use informal collaboration to exchange information and resources. Informal collaboration is a business partnership where each company works on a project jointly,

with the assistance of the other parties. Collaboration between companies is a way to achieve business goals. Collaboration can be used to improve productivity and efficiency, increase the level of work, or reduce costs.

Collaboration in the supply chain is a process of collaboration between companies in supply chain management. There are a lot of benefits when collaboration takes place. Business partners can work together on a complex supply chain project such a production line. The goal is to meet certain product quality and production process specifications.

Collaborators can also share resources, such as machinery, people, and materials. Collaborative supply chain projects can be beneficial for both parties. The benefits of collaboration are many. Collaborating with other companies can lead to the discovery of new business opportunities, reduce time to market, and reduce overall costs. Collaborated projects can also be used for the exchange of information, thus, providing better customer service.

Besides that, discussed by SWOT analysis combining all the external and internal components outlined above to illustrate what strengths, opportunities, weaknesses, and threats Mars Logistics possesses. The company has a strong presence in the Turkish market. The Turk market is the fastest-growing market for Mars Logistics. Mars Logistics has a competitive advantage over other competitors in the global market because of providing complete supply chain solutions to customers.

The main advantage of Mars is its ability to provide complete supply chains solutions to the customers. Mars can provide all the supply chain services to the customer. Mars Logistics can provide complete solutions to its customers. Therefore, Mars Logistics can keep its customers satisfied.

As a result of the strong presence of the company in the market, the company has an overall advantage over its competitors. The strength of Mars's supply chain is that the company can deliver solutions to all the customers who require these solutions. The company is also able to deliver solutions that are cost-effective to the clients. The cost-effectiveness of the solutions is the main advantage of the Mars supply chains.

Mars Logistics is a global provider of logistics and supply chain management solutions. The company offers a wide range of services to its customers, including contract support, managed services, software development, and data management. Mars Logistic provides services to a

variety of industries. The Mars service portfolio includes services, such as supply chain optimization, planning, warehousing, transportation, distribution, and compliance.

Finalizing the thesis, some important trends of evolution of logistics sector might be emphasized, companies must have acknowledged the importance of logistics as a management factor;

The operations of the value chain clarified, to optimize the supply chain system and the flow of information, including financial information. The value chain is created to evaluate environmental, social, and economic implications; organizations are often organized by sector, but other factors should be considered as well.

The global value chain has skyrocketed, and it has a direct bearing on strategic business decisions. Companies are also defining the specific tasks of the logistics department and aligning their service networks to meet client requests. While the number of participants has increased dramatically in recent years, logistical technology has lagged. In recent decades, logistics, in particular, has undergone significant changes to meet changing demands and pressures.

It will become increasingly vital as more jobs are committed to logistics in the future. The use of competitor analysis to create a clear logistics firm analysis guided by an explanation of value chain mapping. Stressed on Mars Logistics and SWOT matrix is a technique for evaluating a company's internal elements such as strengths and weaknesses, as well as external factors such as opportunities and challenges.

This thesis includes a literature assessment as well as an empirical investigation of Mars Logistics. The qualitative approach is employed as the analysis method in this thesis to examine Mars Logistics' role in the Global Value Chain. For this object, the case of an international logistics company was presented.

Mars Logistics is able to cover a wide range of requirements and needs while also helping its clients by combining technical specialists' ideas with cutting-edge technology. Mars Logistics' intermodal transportation service enables them to provide door-to-door delivery by combining many means of transportation to increase value and reduce costs.

Logistics is predicted to evolve at a rapid rate and take on an entirely new shape in the next years. What is happening and what will happen in logistics, as well as the implications for logistics technology, are examined.

This research clearly illustrates, having a strong human resource pool is advantageous to a business. UPS, like DHL, FedEx, and Mars Logistics, uses its massive human resource pool to complete more work than the competition. The three-party logistics connections of today are more collaborative.

Informal collaboration can be used by businesses to share information and resources. Informal cooperation is a type of corporate relationship in which each company collaborates on a project with the help of the others. Collaboration between businesses is a means of achieving commercial objectives also utilized to boost productivity and efficiency, as well as increase work volume and cut expenses.

In the Turkish market, the corporation has a substantial presence. Mars Logistics' biggest company in the Turk market. Mars Logistics has a competitive advantage in the worldwide market since it provides customers with entire supply chain solutions. Customers may expect complete solutions from Mars Logistics.

The corporation has an overall edge over its competitors because of its significant presence in the market. The strength of Mars' supply chain is that it can deliver solutions to any clients that require them. Clients will also benefit from the company's ability to provide cost-effective solutions. Mars Logistics is a multinational logistics and supply chain management services provider. Contract support, managed services, software development, and data management are just some of the services available to customers.

CONCLUSIONS

This study aimed to investigate the role of logistics in global value chain based on a study case of Mars Logistics company. The results indicate that international logistics companies must emphasize the importance of governance.

1. Knowledge of the global value chain and keeps the supply chain's costs as low as possible. This research is crucial for success in the value chain management, response the value of an international company's product, increased revenue, decrease inventory costs, maximized revenue, improved customer happiness, and had lower logistics expenses.

2. Understanding governance and cutting the time and quantity of shipments in the supply chain. Supply chain management is a method in which a company's logistics department works along with its sales and marketing departments to form a supply chain. This strategy enables a corporation to generate new business prospects by supplying clients with value-added products or services at a low cost.

3. Methodology of research for a logistics company achieved case study to observe an international logistic company. The master's thesis analyzes the results of competitive analysis, interview case study analysis, internally and externally for quality of service analysis, and SWOT matrix.

4. Empirical findings' purpose is to specify the objectives of the business venture or project, as well as the internal and external factors that are favorable and unfavorable to achieve. Mars Logistics loses potential business due to high costs. Furthermore, it is difficult to monitor each employee's qualifications; some may lack patience or problem-solving skills. It affects that these findings are essential for the supply chain to ensure long-term competition.

5. The analysis addressed the role of Mars logistics in value chain management to improve and achieve overall company value Mars Logistics can learn from other companies or improve teamwork, it will be more successful. From the perspective of management, it is a corporate activity maximizing the company's potential. Customer satisfaction, high-tech transportation services, competitive compensation, and a long-term program are among Mars Logistics' advantages.

RECOMMENDATIONS

Based on these conclusions, practitioners should consider in this immense global value chain field the author is unable to uncover all success variables in this study due to the fact that the value chain approach comprises several challenges. Recommendations to the Mars Logistics company and the comprehension of supply chain management;

1. Mars Logistics well defined a competitive advantage at the chain on the supply chain's external and internal research to determine which factors can assist.

2. To better acknowledge the implications of these results future studies could address Mars Logistics' ideas and viewpoints in the Turkish market and position of the country.

3. The focus of Mars Logistics is on the relationship between businesses and their customers assessing the quality and level of satisfaction with the chain's products and services. Recommendation to further studies must observe e-commerce and attention how the world became so small with technology.

Further research is needed to determine the causes of effects on the value chain of relationships between international companies and their local customers.

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ABSTRACT

Companies must change their tactics to keep up with shifting global value chain conditions. Over the last few decades, supply chain strategies have been a source of competitive advantage, notably in the logistics industry. The master's thesis examines and evaluates a company's supply chain solution. The model of Mars Logistics' value added is presented using the SWOT matrix method and is empirically supported based on interviews. By SWOT analysis, the strength, opportunities, threats, and weaknesses of Mars Logistics company are figured out. Strength and opportunities are regarded as the company's competitive advantages in global value chain. Mars Logistics special intermodal transportation in the chain open all styles of possibilities. The purpose of this research is to provide insight into the decision-making process which is necessity for each business owner to understand clearly the needs, expectations, and demands of the customer rather than to work tirelessly to increase and satisfy them.

Keywords: Mars Logistics Company, global value chains, supply chain activities, international logistics.

Degirmenci C. Logistikos vaidmuo globaliose vertės grandinėse: Mars Logistics company įmonės atvejis/ Logistikos vadybos studijų programos magistro darbas. Vadovas dr. J. Seiranov - Vilnius: Mykolo Romerio universitetas, Verslo ir ekonomikos institutas, 2021 m.

ANOTACIJA

Įmonės turi pakeisti savo taktiką, kad neatsiliktų nuo kintančių pasaulinės vertės grandinės sąlygų. Per pastaruosius kelis dešimtmečius tiekimo grandinės strategijos buvo konkurencinio pranašumo šaltinis, ypač logistikos pramonėje. Magistro darbe nagrinėjamas ir įvertinamas įmonės tiekimo grandinės sprendimas. „Mars Logistics" pridėtinės vertės modelis pateikiamas naudojant SSGG matricos metodą ir yra empiriškai pagrįstas interviu. Atlikus SSGG analizę, nustatomos Mars Logistics įmonės stiprybės, galimybės, grėsmės ir silpnybės. Stiprybė ir galimybės vertinamos kaip įmonės konkurenciniai pranašumai pasaulinėje vertės grandinėje. Mars Logistics specialus intermodalinis pervežimas grandinėje atveria visų stilių galimybes. Šio tyrimo tikslas – suteikti įžvalgų apie sprendimų priėmimo procesą, kuris yra būtinas kiekvienam verslo savininkui, kad jis aiškiai suprastų kliento poreikius, lūkesčius ir poreikius, o ne nenuilstamai stengtųsi juos didinti ir patenkinti.

Raktiniai žodžiai: Mars Logistics Company, gloabalios vertės grandinės, tiekimo grandinės veikla, tarptautinė logistika.

SUMMARY

For many logistics organizations, entrepreneurs, managers, employees, owners, or shareholders, the position of Mars Logistics in the global value chain master thesis is critical. Supply chain researchers emphasize that this is a critical aspect in increasing a company value-added. One of the most difficult challenges is that the global value chain is difficult to define, intangible, and complex. As a result, the basic research question was raised: how did Mars Logistics succeed? The goal is to emphasize the importance of the value chain's integrity. The primary goal of this research is to assess a worldwide logistics organization and propose key supply chain solutions for its expansion.

The study's key objectives are to give a supply chain framework, provide Mars Logistics' value-added coherence, develop, and present an intellectual capital and company value-added model, and empirically test it. The master thesis technique included competition analysis, case study analysis with interviews, internal and external for service quality analysis, and the SWOT matrix.

The key hypothesis of the empirical study was the function of the international logistic company Mars Logistics in the chain. This hypothesis was confirmed by an expert valuation from Mars Logistics, which means that both the SWOT analysis and the Mars managers made the same point. Employee motivation, customer happiness, cooperation and communication, positive employee culture, and resiliency are among the primary elements driving competition, according to the study.

Employee motivation and dependable consumers are the two most important variables that influence a company's value-added growth. Maintaining a high level of client satisfaction while reducing the time and quantity of shipments increases the supply chain's profit.

Conclusions and recommendations on Mars Logistics' regarding the investigation of case study analysis importance were presented according to research, remarkable flows reflect existing trade relationships via logistics solutions.

Strategies for evaluating, strategies for simplifying operations, and optimizing businesses gain operational visibility businesses become stronger and more efficient. The approaches were developed to benefit the international logistics in the global value chain.