



Scientific Center of Innovative Research OÜ

**ECONOMICS, FINANCE AND  
MANAGEMENT  
REVIEW  
(EFMR)**

**Issue 2 (14)**

**2023**

***International databases and directories indexing publications:***

- [CrossRef \(DOI: 10.36690\)](#);
- [ISSN International Centre](#);
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*Economics, Finance and Management Review*. DOI: 10.36690/2674-5208-2023-2

The third issue contains articles by scientists from different countries, prepared on the basis of their scientific work. It is designed for university teachers, graduate students, undergraduates, practitioners in economics, finance, accounting and auditing, as well as other branches of economics.

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## CHAPTER 1

### CURRENT TRENDS IN ECONOMIC DEVELOPMENT

#### AN ASSESSMENT OF CHALLENGES AND FACTOR INFLUENCING THE FREIGHT FORWARDING BUSINESS IN THE LOGISTICS INDUSTRY

**Deepa Rajesh, Sandeep Kumar Gupta, Svitlana Ilinich, Nikhil Singh**

<sup>1</sup>PhD., Vice President (Academic), AMET University, Chennai, India, e-mail: [executivedirector@ametuniv.ac.in](mailto:executivedirector@ametuniv.ac.in)

<sup>2</sup>PhD, Professor, Centre for Statistics, Modelling and Simulation, AMET Business School, Faculty of Management Studies, AMET University, Chennai, India, e-mail: [skguptabhu@gmail.com](mailto:skguptabhu@gmail.com), ORCID: <https://orcid.org/0000-0002-2670-2858>

<sup>3</sup>PhD., Director/ Associate Professor, Open International University of Human Development "Ukraine", Kyiv, Ukraine, e-mail: [ilnichsvitlana@gmail.com](mailto:ilnichsvitlana@gmail.com), ORCID: <https://orcid.org/0000-0003-4130-7933>

<sup>4</sup>MBA Student, AMET Business School, Faculty of Management Studies, AMET University, Chennai, India

**Citation:**

Rajesh, D., Gupta, S. K., Ilinich, S., & Singh, N. (2023). An assessment of challenges and factor influencing the freight forwarding business in the logistics industry. *Economics, Finance and Management Review*, (2), 4–23. <https://doi.org/10.36690/2674-5208-2023-2-4-23>

**Received: May 14, 2023**

**Approved: June 29, 2023**

**Published: June 30, 2023**



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**Abstract.** This research was undertaken with the sole aim of understanding some of the challenges and Factor Influencing the Freight Forwarding Business in the organizations involved the Forwarding and distribution of shipper Cargo encounter in their logistics operations. A freight forwarder is a person or company that organizes shipments for individuals or corporations to get large orders from the manufacturer or producer to market or final point of distribution. Forwarders will contract with a carrier to facilitate the movement of goods. A forwarder is not typically a carrier but is an expert in supply chain management. In other words, a freight forwarder is a "travel agent," for the cargo industry, or a third-party (non-asset-based) logistics provider. A forwarder will contract with asset-based carriers to move cargo ranging from raw agricultural products to manufactured goods. The term Logistics Management or supply chain management is that part of Supply Chain Management that plans, implements, and controls the efficient, effective, forward, and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer's requirements. The research targeted a selected sample of Employees and representatives of transporters of goods and key management personnel of Companies Central Distribution Center based in the industrial area Chennai. The primary objective of this project is to conduct 'A study on Challenges and factor influencing the freight forwarding business in the Freightkare Multimodal Logistics Pvt. Ltd. It is important to analyze the problems faced by freight forwarders from the carriers as well as companies and individual customers. By studying and comparing the various problems faced by the freight forwarders. It is easy identifying the solutions to avoid the problems and make sure the smooth flow of business. This will help Freightkare Multimodal Logistics Pvt. Ltd to establish a reasonable share in the marketplace.

**Keywords:** multimodal logistics, freight forwarding, logistics provider.

**JEL Classification:** D 41, L62, L81

**Formulas:** 0; **fig.:** 0; **tabl.:** 24; **bibl.:** 34

**Introduction.** A freight forwarder, forwarder, or forwarding agent is a person or company that organizes shipments for individuals or other companies and may also act as a carrier. A forwarder is often not active as a carrier and acts only as an agent, in other words as a third-party logistics provider, they have the expertise that allows them to prepare and process the documentation and perform related activities pertaining to international shipments.

Freight forwarding is a crucial component of the global trade industry, facilitating the movement of goods across borders and between countries. However, this business sector faces several challenges, including operational, economic, and regulatory hurdles. In this response, I will provide an overview of some of the major challenges and factors that influence the freight forwarding business.

*Regulatory challenges:* Freight forwarding companies must comply with various regulations, including customs regulations, safety regulations, and environmental regulations. Compliance with these regulations can be costly and time-consuming, which can impact the profitability and efficiency of the business.

*Technological challenges:* The freight forwarding industry is becoming increasingly digitalized, and companies must adopt new technologies to remain competitive. However, implementing new technology can be challenging, and companies must invest in training and infrastructure to ensure that they can take full advantage of the benefits of new technology.

*Economic challenges:* The freight forwarding industry is highly sensitive to economic changes, including fluctuations in currency exchange rates, changes in import and export regulations, and shifts in consumer demand. These economic factors can impact the profitability and viability of freight forwarding companies.

*Competition:* The freight forwarding industry is highly competitive, with many companies competing for business. This competition can lead to price pressure and reduced profit margins. *Infrastructure challenges:* Freight forwarding companies rely on transportation infrastructure, such as ports, airports, and highways, to move goods. However, inadequate infrastructure can cause delays and increase costs, which can impact the efficiency and profitability of the business.

*Environmental factors:* The freight forwarding industry is also affected by environmental factors, such as weather events and natural disasters. These events can disrupt supply chains and lead to delays and additional costs. *Political factors:* Political instability and changes in government policies can also impact the freight forwarding industry. For example, changes in trade agreements or tariffs can lead to changes in the flow of goods, which can impact the business of freight forwarding companies.

*Quality control:* Freight forwarding companies must ensure that goods are transported in a safe and timely manner, and that they arrive at their destination in the same condition as when they were shipped. Failure to maintain quality control can lead to customer dissatisfaction, lost business, and damaged reputation. *Cultural differences:* The freight forwarding industry operates in a global environment, and cultural differences can impact the way business is conducted. Companies must be aware of these differences and adapt their communication and business practices

accordingly.

*Insurance and liability:* Freight forwarding companies must carry insurance to cover any damages or losses that may occur during transport. However, insurance can be costly, and companies must carefully manage their liability to ensure that they are adequately covered without incurring excessive costs. *Payment and financing:* Freight forwarding companies often face payment and financing challenges, particularly when dealing with international customers. Payment delays or default can impact cash flow, and companies must carefully manage their finances to ensure they can meet their obligations and remain profitable.

*Data privacy and security:* Freight forwarding companies must ensure that customer data is kept secure and confidential, particularly when dealing with sensitive information such as customs declarations and shipping documents. Failure to maintain data privacy and security can result in legal liability, damaged reputation, and lost business.

The freight forwarding industry faces a range of challenges and factors that can impact its success. Companies must be aware of these challenges and develop strategies to address them, including investment in technology, infrastructure, and workforce training. By doing so, they can remain competitive and successful in a rapidly evolving global marketplace.

The freight forwarding industry faces several challenges and factors that can impact its efficiency, profitability, and viability. Companies in this sector must be proactive in addressing these challenges and adapting to changes in the industry to remain competitive and successful.

A forwarder does not directly undertake the moving of goods but acts as an expert in the logistics network. The carriers can use a variety of shipping modes, including ships, airplanes, trucks, and railroads, and often use multiple modes for a single shipment. For example, the freight forwarder may arrange to have cargo moved from a plant to an airport by truck, flown to the destination city and then moved from the airport to the customer's building by another truck. Some of the typical information reviewed by a freight forwarder is the commercial invoice, shipper's export declaration, bill of lading and other documents required by the carrier or country of export, import, or transshipment. Much of this information is now processed in a paperless environment.

International freight forwarders typically handle international shipments and have additional expertise in preparing and processing customs documentation and performing activities pertaining to international shipments. Information reviewed by a freight forwarder includes the commercial invoice, shipper's export declaration, bill of lading and other documents required by the carrier or country of export, import, and/or transshipment. The International Federation of Freight Forwarders Association described the freight forwarder as the Architect of Transport, a term which illustrates the commercial position of the forwarder in relation to its client. In Europe, some forwarders specialize in certain niche areas such as rail-freight, and collection and deliveries around a large port.

Freight forwarder faces numerous challenges and factor influencing the process

and this has consequently led in the failure of their operations and satisfying customers need. The occurrence of problems of freight forwarders in India is as a result of government regulations, liner companies, non-availability of trailers, and trucks, bad roads, lack of straight or access routes, warehousing of goods etc. The Indian government has taken several initiatives to help the forwarders. Some slackening is found in the infrastructure facilities which must be developed in India to meet up with the international standards. Service tax collected from freight forwarders is huge and none are happy with it. So, they have to be very careful while handling the shipments.

A freight forwarder is responsible for the transportation of goods between one destination and another. Freight forwarding companies specialize in arranging the whole process for their shippers, from the storage to the shipping of their merchandise. They act as an intermediary between the shipper and transportation services, liaising with various carriers to negotiate on price and decide on the most economical, reliable, and fastest route. Using a freight forwarder to import and export goods can make the whole process much less stressful. Extremely knowledgeable in the elements of supply chain, freight forwarders can assist on all levels, from the packing and warehouse stages to the customs procedure, taking some of the pressure off their customers.

Using a freight forwarding company for the transportation of goods to the consumer can be advantageous to business in many ways. Using their knowledge and expertise, 4 freight forwarders will ensure that the goods arrived at the correct destination on time and also save a lot of money in the process, compared to doing it alone. Before leaving the goods in the hands of a freight forwarder, the shipper needs to ensure that all the paperwork for transporting his goods is completed. The freight company will be able to help them with this, but it's an incredibly important step to reduce the risk of certain items not being released from customs or the bank refusing to release their funds – neither of which would be beneficial to business.

Logistics is involved in all the facts of our daily lives. It is the main backbone to a national and international supply chain. While being compared to developed nations, such as China, US etc. the Indian logistics industry is still considered to be underdeveloped. A freight forwarder, being an individual or company that dispatches shipments via asset-based carriers either books or arranges space for those shipments some way or the other. Common carrier types could include waterborne vessels, airplanes, trucks, or railroads. Freight forwarders have analogically been called travel agents for freight. In the U.S., a freight forwarder involved with international ocean shipping is licensed by the Federal Maritime Commission as an Ocean Transportation Intermediary.

**Literature review.** Freight forwarders are intermediary companies involved in Logistics. Their task is to manage all functions involved in transport after the buying process of merchandise is complete. As with any industry which involves such a large scale of operations, the freight forwarding companies have a lot of problems to reckon with and overcome. Murphy et al., (1989) found that 35% of airports and air cargo companies they interviewed perceived the administrative documentation as the major

problem at airports. Moreover, the inefficiency of customs can form a source of delay at the airport and airports that provide reliable, timely customs clearance or even preclearance can build up a competitive advantage.

Özsomer, Aysegül et.al., (1993) in their research article, “Selecting International Freight Forwarders: An Expert Systems Application” have mentioned that the recent changes in the international freight forwarding arena have witnessed the emergence of a new group of freight forwarders who make it possible for a broad spectrum of services to be available under one roof. Logistics companies which offer a wide range of such services have become almost imperative strategic partners to obtain a competitive advantage in foreign markets. According to Murphy, Paul R., and James M. Daley (1996), the increasing strategic importance of global trade has profoundly affected the forwarding industry. In their research article “A Preliminary Analysis of the Strategies of International Freight Forwarders”, they have focused on the contemporary forwarding industry which is characterized by a tremendous degree of volatility. Responses to this volatility include 28 consolidations, exiting the industry, and offering of additional services, such as warehousing and information management.

Gillis, Chris (1996) has identified yet another problem for freight forwarders. While they are expected to pay the shipping freight, container operators and trucking companies and for other services of the suppliers upfront, they have to wait much longer time to get reimbursement from the shipper. Hence, a group of small freight forwarders working together are endowed with an ability to compete better against larger companies on a worldwide basis and give them better profits. Such networks also give them the opportunity to utilize each other's facilities like warehouses and provide common bills of lading, which in turn gives better bargaining power with the carriers. Several of the networks are developing electronic information systems for planning transport options, spotting supply chain problems etc.

Xin Wang, et. al. (2004) in “Operational Transportation Planning of Freight Forwarding Companies in Horizontal Coalitions” have remarked that in order to improve profitability, freight forwarding companies try to organize their operational transportation planning systematically, considering not only their own fleet but also external resources. Such external resources include vehicles from closely related subcontractors in vertical co operations, autonomous common carriers on the transportation market, and cooperating partners in horizontal coalitions. They confirmed that by introducing subcontracting, the conventional routing of own vehicles is extended to an integrated operational transportation planning, which simultaneously constructs fulfillment plans with overall lowest costs using the own fleet and subcontractors' vehicles. This is then combined with planning strategies, which intend to increase the profitability by exchanging requests among members in 29 horizontal coalitions. Computational results showed considerable cost reductions using the proposed planning approach.

Krajewska, M.A., and Kopfer, H. (2006). In their research paper “Collaborating freight forwarding enterprises” have recommended a model for collaboration among independent freight forwarding entities which would reduce their fulfillment costs by



exploiting different execution modes (self- fulfillment and sub contraction) in the highly competitive modern transportation branch freight forwarders. For self-fulfillment they would use their own vehicles to execute the requests and for subcontracting they can forward the orders to external freight carriers. They further suggested that enhancement of competitiveness can be achieved if the freight forwarders cooperate in coalitions in order to balance their request portfolios.

Kokkinis, George et.al., (2006) conducted a survey on “Freight forwarding in Greece: Services Provided and Choice Criteria” to evaluate the criteria on which production companies choose particular freight forwarders, to point out the elements that affect quality and to differentiate services provided in various customer categories. The results of the survey brought to light that Greek freight forwarding companies considered quality to be more important for their customers than cost and that small companies seemed to evaluate the price of services offered, the offering of special privileges, personal treatment and experience as relatively more important than big companies did.

Cheng, Yung-Hsiang, and Chian-Yu Yeh (2007) in their article “Core Competencies and Sustainable Competitive Advantage in Air-Cargo Forwarding: Evidence from Taiwan” have advised that since air-cargo forwarders are important 30 intermediaries in the field of global transportation, expanding into additional national markets can help an air-cargo forwarder accumulate professional knowledge in providing global services. Coming up with innovative ideas to satisfy customers and excellent service will go a long way to protect firms from their competitors as well as ensuring customer loyalty.

Puettmann, Carolin and Hartmut Stadtler (2010) have pointed out in “A collaborative planning approach for intermodal freight transportation” that the impact of the lack of collaboration and coordination is witnessed in overseas transports. They have added further that due to information asymmetry and double marginalization, costs considerably exceed the cost minimum of the whole transportation chain. In order to reduce these inefficiencies, a coordination scheme is elaborated which is able to identify significant improvements and which allows the service providers involved to keep their private planning domain with no disclosure of critical data. Sekeris, Theodore (2011) in his paper on “Greek airports: Efficiency measurement and analysis of determinants” stated that the privatization initiative taken during the 1990s was to ensure an unceasing rise in the efficiency levels of the airport infrastructure which would in turn boost regional development. One of the most common concerns in the developing nations is the long dwell time for air cargo and the researcher concludes that to improve efficiency, cargo handlers at air cargo terminals should ensure efficient timely and secure handling of the cargo.

Oluwasanmi Ezra, Aderibigbe (2013) in his dissertation ‘A Study on the Challenges faced by the Freight Forwarders in India’ has identified that the main issue in freight forwarding is the volume of their export or import shipment which is very less and has resulted in the giant players in freight forwarding seeming to have less focus on such clients because they are generally interested in the clients who can afford more volume of export or import shipments. His dissertation has also pointed

out that the factors which hinders the success of the Freight Forwarding Industry in India are reliability, frequency, transit time, capital tied up in stock, quality of service, packaging, warehouse charges, permits and licenses, import duty and insurance. Customer loyalty is lost due to inefficiency in distribution of goods. Customers expect to benefit through consumption of goods imported, thus creating a value chain. Goods have to reach the point of consumption within the shortest possible time in order to retain the goodwill of the customers. Nayak, Arvind (2016) the Managing Director of Nayak Aviation Services Pvt Ltd has stated in the air cargo handbook, that E-Commerce has changed the dynamics of domestic air cargo and we can see not only growth but also induction of skilled manpower and technology into the industry.

Quindimil, Manuel (2017) has mentioned in his working paper on “Promoting Logistics Providers in Developing Countries: Proposals for Peru” that services provided by cargo agencies or freight forwarders are defined by the International Federation of Freight Forwarders Associations (FIATA) as services of any kind relating to the carriage, consolidation, storage, handling, packing or distribution of the goods as well as ancillary and advisory services in connection therewith, including but not limited to customs and fiscal matters, declaring the Goods for official purposes, procuring insurance of the goods and collecting or procuring payment or documents relating to the goods.

Dias, A, et.al., (2018) in the article entitled ‘Determinants of Customer Satisfaction in Freight Forwarding Companies in Sri Lanka’ have stated that since freight forwarders usually work with agents, forwarders, small or medium size manufacturers, having a close customer relationship is a vital role which could sustain the competitiveness in freight forwarding industry. They had identified eight factors as essential to determine the overall customer satisfaction namely reliability, responsiveness, communication and documentation accuracy, assurance, empathy, branding, technology, efficiency and trust.

Subhashini, S. and Preetha, S. (2018), in "An empirical analysis of service quality factors pertaining to ocean freight forwarding services", set out to prove that the service sector is the key driver of a country's economic growth and that the quality of service is more important for the survival of any organization. It is the interactive process by which the organization understands the customer and satisfies their needs. Their study revealed that tangibility, responsiveness, reliability, trust, empathy and value are the service quality and it was also proved that there exists a significant association between the service quality factors and is positively related to the customer satisfaction.

Vasanth. S and S. Meena (2019) have conducted “A study on Challenges faced by Freight forwarders in their operations in Chennai”. They concluded that the problems faced by forwarders is chiefly due to government regulations, the result of port authorities, insurance companies, customs clearance, infrastructural issues, payment issues etc. Their suggestion was that in order to overcome these problems, the forwarders association has to be strong and raise the voice against the government whenever necessary. They also identified that the main problems India suffers from

in the shipping industry is because of infrastructure facilities. With the improvement in contemporary technologies Freight forwarders have to exercise caution while accepting shipments from exporters and importers.

Huang, S.T., Bulut, E. and Duru, O (2019) in their study “Service quality evaluation of international freight forwarders: an empirical research in East Asia” have declared that since the forwarder plays the role as the bridge between carrier and shipper to source various transport solution and earns profits by arranging package of delivery service, they tend to have more flexibility to market change since the physical infrastructure investments are far less than the shipping or airline companies. It is extremely competitive because services provided by freight forwarders seem to be same or similar to one another, along with the increasing number of new entrants. Thus, competitive advantage of freight forwarders only based on cheaper price is not enough. Enhancing satisfactory customer service becomes strategic and survival issue for forwarders to stay competitive and build sustainability.

**Aims.** The major scope of this study as follows: to find out the challenges and Factor influencing freight forwarding companies business and find out solution for the same; to find out the solutions for the Delay in delivery problems; to find out the solutions for the problems faced by freight forwarders from the carriers as well as companies and individual customers through their opinions. It helps to understand the satisfaction level of the custom clearance.

**Research Gap.** The companies are facing with several challenges and factors influencing to delays in delivery of goods due to some issues. There is therefore the need to investigate factors & Challenges whichever is affecting the whole freight forwarding procedure like delays in delivery of goods and find a solution to it; hence this study. The prime objective of this study was to identify the challenges and factor influencing a reliable freight forwarding system that poses a potential hindrance towards the smooth operations of the logistics function of an organization involved in the manufacturing and distribution of goods.

In order to attain the above prime objective, the under mentioned specific objectives were considered:

- to identify the major challenges and Factor influencing reliability of freight forwarding in the downstream logistics operations of Multimodal Logistics:
- to assess the impact of these challenges and factors on Multimodal Logistics operations?

In order to achieve the objectives of this study, the following relevant research questions were posed:

- What are the key challenges and Factor influencing reliability of freight forwarding Business within the downstream logistics operations of Multimodal Logistics?
- How do these challenges and factors affect Multimodal Logistics Business?

The objective of the research includes to examine the challenges and factors influencing a reliable freight forwarding business that poses a potential hindrance towards the smooth operations of the logistics function of an organization involved in the freight forwarding of Goods.

Primary Objective is to study the Challenges and factor influencing the freight

forwarding business with special reference to multimodal logistics.

*Secondary Objectives are:* to analyze the problems faced by freight forwarders from the carriers; to analyze the problems faced by freight forwarders from the companies and individual customers; to know the satisfaction level with the customs clearance and terms and conditions imposed on the freight forwarders by the carriers; to suggest solutions to reduce the problems faced by the freight forwarders; to provide suitable suggestions to resolve the problems in transportation.

**Methodology.** Research methodology refer to various sequential steps adopted by researches and in studying the problem with certain objective in mind. The method used in collecting data was the questionnaires. The method used for data analysis is the simple percentage, the Freight Forwarding problems in Chennai include Fluctuating exchange rates, Bunker Fluctuations, and Ocean Volatility should be better designed, coordinated and maintained. To curb the challenges and factor influencing freight forwarding Industry. It is also to examine the concept of Freight Forwarding, identify or examine the roles of Freight Forwarders, examine the problems of freight Forwarding Operation, examine the causes and effects Influencing the freight forwarding process and proper solutions to the Challenges and Factor Influencing the freight forwarding Business.

Research design is the framework of research methods and techniques chosen by a researcher. The design allows researchers to hone in on research methods that are suitable for the subject matter and set up their studies up for success. The design of a research topic explains the type of research (experimental, survey, correlational, semi experimental, and review) and also its sub-type (experimental design, research problem, descriptive case-study).

The type of research that has been adopted by the researcher is descriptive research. It described the study on Challenges and Factor Influencing the Freight Forwarding Business in the Logistics Industry.

Descriptive research is typically based on observation and measurement of variables, such as demographics, behaviour's, attitudes, or perceptions. The data collected can be qualitative or quantitative, and can be obtained through surveys, interviews, questionnaires, focus groups, or direct observation.

The main sources through which data is collected are: Both primary and secondary data were used.

- *Primary data* - is collected from the first-hand experience and which has not been used in the past. The data gathered by primary data collection methods are specific to the research's motive and highly accurate. Primary data are collected for the first time and this happens to the original in character. In this study, data are collected directly from the transport owners or managers by using the questionnaire method

- *Secondary data* - Secondary data refers to data that is collected by someone other than the primary user. Common sources of secondary data for social science include censuses, information collected by government departments, organizational records and data that was originally collected for other research purposes. The secondary data, which have been already, collected data. It included internal sources like company profile and external sources like books, journals, magazines, newsletters and

internet.

The sample size refers to the number of sampling units selected from the population for exploration. The sample size of this research is 20.

A framework is a structured approach to solving a particular type of problem or performing a specific type of task. It can be thought of as a set of guidelines, principles, and best practices that help ensure consistency and efficiency in the development process.

The sampling technique adopted for this study is convenience sampling.

The Research Tool used for the study is Questionnaire created by Google Form.

The researcher had used mean and percentage analysis to analyze the responses. Mean implies average and it is the sum of a set of data divided by the number of data. Percentage analysis is the method to represent raw streams of data as a percentage (a part in 100 – percent) for better understanding of collected data.

*Limitations of the Study:* opinion of employees may be biased at time; respondents would have hidden some facts due to the fear of management; the study is based on the data collected from respondents and a journal hence the reliability of the data is not probed into; utmost care has to be taken while extending the results to the other areas; even though an elaborate study was made on the problems in freight forwarding due to the time constraint, it limited to logistics industry; the study was limited to Chennai only; the study was limited to freight forwarding business only; Time was a major constraint; the sample was limited to only owners or managers of logistics industry in Chennai.

**Results.** The findings of the study are based on the assumption that respondents have disclosed in the questionnaire.

*Computation and Interpretation.* Data analysis and interpretation is the process of assigning meaning to the collected information and determining the conclusions, significance, and implications of the findings. It is an important step in the process of research.

**Table 1. Table showing issues faced in Transportation department**

Issues Faced in Transportation Department	Mean Value
Delay in Delivery Order (DO) & Unloading	2.5
Non-availability of transportation	3.05
CHA not doing his work properly	2.65

Source: Primary Data

From the above table of mean analysis, it can be inferred that Delay in Delivery Order (DO) & Unloading, Non-availability of transportation CHA not doing his work properly are the major problems faced in transportation department. Among these problems, Non-availability of transportation with mean value of 3.05 is considered as the major problem in transportation department.

**Table 2. Table showing issues faced in Business Operation**

Issues Faced in Business Operations	Mean Value
Air Way Bill Sticker Missing/Wrong Sticker placed (Sticker of different airlines)	2.6
SL or EL Pieces	2.65
Flight Delay & Wrong Scheduling	3.4
Gross Weight Mismatch	3
Part Shipment problem	2.45
False Information of product dimensions	3.45
Missing Piece	2.35
Problems in customs clearance	3.9

Source: Primary Data

From the above table of mean analysis, it can be inferred that Air Way Bill Sticker Missing/ Wrong Sticker placed (Sticker of different airlines), SL or EL Pieces, Flight Delay & Wrong Scheduling, Gross Weight Mismatch, Part Shipment problem, False Information of product dimensions, Missing Piece and Problems in customs clearance are the major problems faced in Business Operation. Among these problems, Problems in customs clearance with mean value of 3.9 is considered as major problem in business operation.

**Table 3. Showing issues faced in Core Competencies**

Issues Faced in Core Competencies	Mean Value
Cargo tracking problem	2.9
Fluctuation in Flight rates	3.05
Improper packing	2.5
miscommunication for flight booking	4.1
Indian Customs Server Error	3
Shipper Communication problem	2.1

Source: Primary Data

From the above table of mean analysis, it can be inferred that Cargo tracking problem, Fluctuation in Flight Rates, Improper packing, IATA agent miscommunication for flight booking, Indian Customs Server Error and Shipper Communication problem are the major problems faced in Core Competencies. Among these problems in IATA agent, miscommunication for flight booking with mean value of 4.1 is considered as the major problem in Core Competencies.

**Table 4. Showing issues faced in Documentation Department**

Issues Faced in Documentation Department	Mean Value
Lack of Proper Documents	2.8
Wrong Flight Details	3.25
Port of Loading/Origin Port Mismatch	4.05

Source: Primary Data

From the above table of mean analysis, it can be inferred that Lack of proper documents, Wrong Flight Details, Port of Loading / Origin Port mismatch are the major problems faced in Documentation Department. Among these problems, Port of Loading/Origin Port mismatch with mean value of 4.05 is considered as major problem in documentation department.

**Table 5. Showing employees' opinion on Delay in Delivery Order (DO) & Unloading**

Occurrence	Number of Respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	5	25%
Very Rarely	10	50%
Never	5	25%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 25% feels that Delay in Delivery Order (DO) & unloading problems occurs rarely, 50% feels that their problems occur very rarely, 25% feels never. Hence it can be concluded that majority of employees feel that very rarely it occurs.

**Table 6. Showing employees' opinion on non-availability of transportation**

Occurrence	Number of Respondents	Percentage
Often	0	0%
Sometimes	6	30%
Rarely	4	20%
Very Rarely	3	15%
Never	7	35%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 30% feels that non-availability of transportation problems occurs sometimes, 20% feels that their problems occur rarely, 15% feels very rarely, 35% feels never. Hence it can be concluded that majority of employee's feels that never it occurs.

**Table 7. Showing employees' opinion on CHA not doing his work properly**

Occurrence	Number Of Respondents	Percentage
Often	5	25%
Sometimes	2	10%
Rarely	4	20%
Very Rarely	3	15%
Never	6	30%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 25% feels that CHA not doing his work properly problems occurs often, 10% feels that their problems occur sometimes, 20% feels that their problems occur rarely, 15% feels that their problems occur very rarely, 30% feels that their problem never occurs. Hence it can be concluded that majority of employee's feels that never it occurs.

Out of 20 employees of company, 35% feels that Air Way Bill Sticker Missing/ Wrong Sticker placed (Sticker of different airlines problems occurs sometimes, 20% feels that their problems occur rarely, 45% feels very rarely.

**Table 8. Showing employees' opinion on problems of Air Way Bill Sticker Missing/Wrong Sticker placed (Sticker of different airlines)**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	7	35%
Rarely	4	20%
Very Rarely	9	45%
Never	0	0%
Total	20	100%

Source: Primary Data

Hence it can be concluded that majority of employee's feels that very rarely it occurs.

**Table 9. Showing employees' opinion on problems of SL or EL Pieces**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	5	25%
Rarely	8	40%
Very Rarely	6	30%
Never	1	5%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 25% feels that SL or EL Pieces problems occurs sometimes, 40% feels that their problems occur rarely, 30% feels very rarely and 5% feels never. Hence it can be concluded that majority of employee's feels that very rarely it occurs.

**Table 10. Showing employees' opinion on problems of Flight Delay & Wrong Scheduling**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	11	55%
Very Rarely	0	0%
Never	9	45%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 55% feels that their problems occur rarely, 45% feels never. Hence it can be concluded that majority of employee's feels that very rarely it occurs.

**Table 11. Showing employees' opinion on problems of Gross Weight Mismatch**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	2	10%
Rarely	8	40%
Very Rarely	5	25%
Never	5	25%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 10% feels that Gross Weight Mismatch problems occurs sometimes, 40% feels that their problems occur rarely, 25% feels



that their problem occur very rarely, and 25% feels never.

**Table 12. Showing employees' opinion on problems of Part Shipment problem**

Occurrence	Number of respondents	Percentage
Often	1	5%
Sometimes	8	40%
Rarely	4	20%
Very Rarely	5	25%
Never	2	10%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 5% feels that Part Shipment problem occurs often, 40% feels that their problems occur sometimes, 20% feels that their problems occur rarely, 25% feels that their problems occur very rarely, 10% feels never Hence it can be concluded that majority of employees feels that sometimes it occurs.

**Table 13. Showing employees' opinion on problems of False Information of Product dimensions**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	9	45%
Very Rarely	3	15%
Never	8	40%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 45% feels that problem occurs rarely, 15% feels that problem occurs very rarely, and 40% feels never it happens. Hence it can be concluded that majority of employee's feels that rarely it occurs.

**Table 14. Showing employees' opinion on problems of Missing Piece**

Occurrence	Number of respondents	Percentage
Often	3	15%
Sometimes	5	25%
Rarely	7	35%
Very Rarely	2	10%
Never	3	15%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 15% feels that Missing Piece problems occurs often, 25% feelsthat their problems occur sometimes, 35% feels rarely, 10% feels very rarely, and 15% feels never. Hence it can be concluded that majority of employee's feels that rarely it occurs.

**Table 15. Showing employees' opinion on Problems in customs clearance**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	0	0%
Very Rarely	12	60%
Never	8	40%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 60% feels that their problems occur very rarely, and 40% feels never. Hence it can be concluded that majority of employee's feels that very rarely it occurs.

**Table 16. Showing employees' opinion on problems of Cargo tracking problem**

Occurrence	Number of respondents	Percentage
Often	0	
Sometimes	5	25%
Rarely	2	10%
Very Rarely	13	65%
Never	0	
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 25% feels that Cargo tracking problems occurs sometimes, 10% feels that their problems occur rarely, 65% feels that their problems occur very rarely, hence it can be concluded that majority of employees feels that very rarely it occurs.

**Table 17. Showing employees' opinion on problems of Fluctuation in Flight rates**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	2	10%
Rarely	8	40%
Very Rarely	7	35%
Never	3	15%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 10% feels that Fluctuation in Flight rates problems occurs sometimes, 40% feels that their problems occur rarely. 35% feels that their problems occur very rarely, and 15% feels never. Hence it can be concluded that majority of employee's feels that rarely it occurs.

**Table 18. Showing employees' opinion on problems of Improper packing**

Occurrence	Number of respondents	Percentage
Often	2	10%
Sometimes	6	30%
Rarely	4	20%
Very Rarely	6	30%
Never	2	10%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 10% feels that improper packing problems occurs often, 30% feels that their problems occur sometimes, 20% feels that their problems occur rarely, 30% feels that their problems occur very rarely, 10% feels never. Hence it can be concluded that majority of employees feels that sometimes and very rarely it occurs.

Out of 20 employees of company, 40% feels that their problems occur very rarely, and 60% feels never.

**Table 19. Showing employees' opinion on problems of IATA agent mis-communication for flight booking**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	0	0%
Very Rarely	8	40%
Never	12	60%
Total	20	100%

Source: Primary Data

Hence it can be concluded that majority of employee's feels that never it occurs.

**Table 20. Showing employees' opinion on problems of Indian Customs Server Error**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	10	50%
Very Rarely	10	50%
Never	0	0%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 50% feels that their problems occur rarely, 50% feels that their problems very rarely. Hence it can be concluded that majority of employees feels that rarely and very rarely it occurs.

**Table 21. Showing employees' opinion on problems of Shipper Communication problem**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	8	40%
Rarely	12	60%
Very Rarely	0	0%
Never	0	0%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 40% feels that their problems occur sometimes, and 60% feels that their problems rarely. Hence it can be concluded that majority of employees' feels that rarely it occurs.

**Table 22. Showing employees' opinion on problems of Lack of proper documents**

Occurrence	Number of respondents	Percentage
Often	1	5%
Sometimes	6	30%
Rarely	3	15%
Very Rarely	6	30%
Never	4	20%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 5% feels that Lack of proper documents problems occurs often, 30% feels that their problems occur sometimes, 15% feels that their problems occur rarely, 30% feels that their problems occur very rarely, 20% feels

never Hence it can be concluded that majority of employees feels that both sometimes and very rarely it occurs.

**Table 23. Showing employees' opinion on problems of Wrong Flight Details**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	11	55%
Very Rarely	3	15%
Never	6	30%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 55% feels that problem occurs rarely, 15% feelsthat problem occurs very rarely, and 30% feels never it happens. Hence it can be concluded that majority of employee's feels that rarely it occurs.

**Table 24. Showing employees' opinion on problems of Port of Loading/Origin Portmismatch**

Occurrence	Number of respondents	Percentage
Often	0	0%
Sometimes	0	0%
Rarely	2	10%
Very Rarely	5	25%
Never	13	65%
Total	20	100%

Source: Primary Data

Out of 20 employees of company, 10% feels that problem occurs rarely, 25% feels that problem occurs very rarely, and 65% feels never it happens. Hence it can be concluded that majority of employee's feels that never it occurs.

*Findings of study:*

- From the mean analysis, it can be inferred that Delay in Delivery Order (DO) & Unloading, Non-availability of transportation CHA not doing his work properly arethe major problemsfaced in transportation department.
- From the mean analysis, it can be inferred that Air Way Bill Sticker Missing/ WrongStickerplaced (Sticker of different airlines), SL or EL Pieces, Flight Delay & WrongScheduling, Gross Weight Mismatch, Part Shipment problem, False Information of product dimensions, Missing Piece and Problems in customs clearance are the majorproblems facedin Business Operation.
- From the table of mean analysis, it can be inferred that Cargo tracking problem Fluctuation in Flight rates Improper packing, IATA agent miscommunication for flight booking Indian Customs Server Error and Shipper Communication problem arethe major problems faced in Core Competencies.
- From the table of mean analysis, it can be inferred that Lack of proper documents, WrongFlight Details, Port of Loading/Origin Port mismatch are the major problems faced in Documentation Department.
- Most of the employees feel that problem of Delay in Delivery Order (DO) &Unloading occurs very rarely.

- Most of the employees feel that problem of non-availability of transportation occurs never.
- Most of the employees feel that problem of CHA not doing his work properly occurs never.
- Most of the employees feel that problem of Air Way Bill Sticker Missing/ Wrong Sticker placed (Sticker of different airlines) occurs very rarely.
- Most of the employees feel that problem of SL or EL Pieces occurs rarely.
- Most of the employees feel that problem of Flight Delay & Wrong Scheduling occurs rarely.
- Most of the employees feel that problem of Gross Weight Mismatch occurs rarely.
- Most of the employees feel that problem of Part Shipment problem occurs sometimes.
- Most of the employees feel that problem of False Information of product dimensions occurs rarely.
- Most of the employees feel that problem of Missing Piece occurs rarely.
- Most of the employees feel that problem of customs clearance occurs very rarely.
- Most of the employees feel that problem of Cargo tracking occurs very rarely.
- Most of the employees feel that problem of Fluctuation in Flight rates occurs rarely.
- Most of the employees feel that problem of improper packing occurs very rarely.
- Most of the employees feel that problem of IATA agent miscommunication for flight booking never occurs.
- Most of the employees feel that problem of Indian Customs Server Error occurs very rarely.
- Most of the employees feel that problem of Shipper Communication problem occurs rarely.
- Most of the employees feel that problem of Lack of proper documents occurs very rarely.
- Most of the employees feel that problem of Wrong Flight Details occurs rarely.
- Most of the employees feel that problem of Port of Loading/Origin Port mismatch never occurs.

**Discussion:**

- FreightKare Multimodal Logistics Pvt. Ltd need to expand the company and appoint more Employees for better company expansion.
- FreightKare Multimodal Logistics Pvt. Ltd should concentrate in the business operations as it contains certain core problems.
- Organization can give full assure for the theft and damage of the products. It will increase the image of the company.
- Shipway is one of the effective ways of transport, but from the study it is clear that there is a problem in shipping. The company should take right steps to make the transport very effective.
- FreightKare Multimodal Logistics Pvt. Ltd can update their documentation process

with fully computerized.

**Conclusion.** During the project period, I was exposed to a lot of technical aspects about shipping, logistics and freight forwarding industry. My Internship period at Multimodal Logistics also opened a new window for me to learn how to adapt to an organization and to be a team worker as well as prove myself as an individual. The report covers an overview of challenges and Factors Influencing freight forwarding business in Multimodal Logistics. It explains the logistics, international freight forwarding, custom clearance, transportation, role of freight forwarders in general along with the challenges faced by the freight forwarders. Further, it covers the problems faced by freight forwarders in the import process. Moreover, the researcher has gained some field experience during his internship which has evinced a keen interest in developing knowledge in business line.

Since the Freight forwarding sector is a cyclic business, there are lots of ups and downs in the industry due to rise and fall of demand of cargo and customers, fluctuations in the exchange rates and several other factors. The problems faced by the freight forwarder from the side of importer and exporter are due to terms of contract and product related issues.

The best way to maintain the stability of these industries is to be more focused on the business operations side, while trying to maintain an amiable relationship with customs clearance. This will be beneficial for the profits in business concern. If these problems were rectified, then the industry will definitely have a brighter and better future. We can find a better solution for these problems with further studies in these areas. The major crux of this study was made possible, by the internship experience in Multimodal Logistics, which provided a very good learning environment. The hands-on experience that I gained there will definitely keep me in good stead as it provided a very good working environment and also provided opportunity for me to learn and improve my skills and knowledge.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## DEVELOPMENT OF CORPORATE VENTURE CAPITAL UNDER THE CONDITIONS OF INTENSIFICATION OF INNOVATIVE ACTIVITY

Mykola Denysenko<sup>1</sup>, Zoryna Yurynets<sup>2</sup>, Rostyslav Yurynets<sup>3</sup>, Ivanna Myshchyshyn<sup>4</sup>

<sup>1</sup>Doctor of Science (Economics), Professor of Department of Mathematics and Methods of its Teaching, Volodymyr Vynnychenko Central Ukrainian State University, Kropyvnytskyi, Ukraine, e-mail: profden3@gmail.com, ORCID: <https://orcid.org/0000-0001-8767-9762>

<sup>2</sup>Doctor of Science (Economics), Professor of Management Department, Ivan Franko National University of Lviv, Lviv, Ukraine, e-mail: zoryna\_yur@ukr.net, ORCID: <https://orcid.org/0000-0001-9027-2349>

<sup>3</sup>Ph.D. (Physical and Mathematical Sciences), Associate Professor of the Department of Information Systems and Networks, Lviv Polytechnic National University, Lviv, Ukraine, e-mail: rostyslav.v.yurynets@lpnu.ua, ORCID: <https://orcid.org/0000-0003-3231-8059>

<sup>4</sup>Junior Researcher of the Department of Regional Ecological Policy and Environmental Management, Institute of Regional Research named after M.I. Dolishniy of the NAS of Ukraine, e-mail: ivanna.myshchyshyn@ukr.net, ORCID: <https://orcid.org/0000-0002-0227-5345>

### Citation:

Denysenko, M., Yurynets, Z., Yurynets, R., & Myshchyshyn, I. (2023). Development of corporate venture capital under the conditions of intensification of innovative activity. *Economics, Finance and Management Review*, (2), 24–30. <https://doi.org/10.36690/2674-5208-2023-2-24-30>

Received: May 22, 2023

Approved: June 29, 2023

Published: June 30, 2023



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**Abstract.** In recent years, corporate venture capital has gained popularity in all areas of the economy in different countries of the world. Along with traditional venture capital funds, business angels and accelerators, traditional corporations also invest in startups around the world. Most often, these processes take place according to the corporate venture capital model. This makes it possible to remove restrictions on the participation in corporate venture funds mainly of legal entities, will open up opportunities for the participation of various subjects in corporate venture funds, and promotes the investment of funds in innovative structures. The purpose of the article is to analyze corporate venture capital, to identify structural characteristics of corporate venture capital and peculiarities of corporate venture investing in Ukraine. During the research, the method of synthesis and analysis, induction (in the study of corporate venture capital, structural characteristics of corporate venture capital and peculiarities of corporate venture investing in Ukraine); the method of schematic, graphic images (for the visual display the received results of the study) has been used. The main structural characteristics of corporate venture capital have been singled out. The signs of structural characteristics of corporate venture capital include the parameters of the corporate venture capital investment model, the types of corporate venture investment goals, criteria for deciding on financing a startup for investors and analysts of corporate investment funds, the types of corporate venture capital investments, the main motives for investment by corporate venture capital funds, ways to promote business growth through corporate investment in venture capital funds, the main financial parameters of the sustainability of corporate venture capital. Ukrainian investors appeared in this field literally 5-7 years ago, but their interest in global international startups is already marked. It was established that for Ukrainian businessmen venture investments at the stages of the B+ series are a new stage of expansion of the investment portfolio. The amount of investment depends on the investor's faith in the project and the arrogance and talent of the startup. If «seed» and «angel» investments are calculated on average in hundreds of thousands of dollars, then capital investments in the innovative business are measured in millions and tens of millions. The main goal of corporate venture capital is strategic innovative business development. Activation of activity through corporate venture capital investments in Ukraine is only developing, and much depends on the business reputation and personal characteristics of managers. Ukraine's economy needs integration into global economic processes through the development of corporate venture capital.

**Keywords:** investors, corporate venture capital, corporate venture capital investments, business, innovative.

**JEL Classification:** E 22, G 24, O 31

**Formulas:** 0; **fig.:** 0; **tabl.:** 1; **bibl.:** 10



**Introduction.** In recent years, corporate venture capital has gained popularity in all areas of the economy in different countries of the world. Along with traditional venture capital funds, business angels and accelerators, traditional corporations also invest in startups and innovative businesses around the world. Most often, these processes take place according to the corporate venture capital model (corporate venture capital, CVC). The development of corporate venture capital in the country contributes to the development of the financial market and raises the level of corporate culture. This makes it possible to remove restrictions on the participation in corporate venture funds mainly of legal entities, will open up opportunities for the participation of various subjects in corporate venture funds, and promotes the investment of funds in innovative structures.

Since 1974, more than 41% of public companies in the US have been financed by corporate venture capital. Together, they generated 86% of all R&D spending, creating 65% of the total capitalization of public companies.

The development of corporate venture funds is just beginning in Ukraine. In the post-war economy, this phenomenon will become widespread.

**Literature review.** The scientific works of Belderbos R., Jacob J. and Lokshin B. (2018) [1], Döll L., Ulloa M., Zammar A., Prado G., Piekarski C. (2022) [5], Gaddy B., Sivaram V., Jones T., Wayman L. (2017) [6] are devoted to the problem of the development of corporate venture capital investments and the analysis of technological performance. Considerable attention was paid to the issues of venture capital managerial incentives processes by scientists such as Buzzacchi L., Scellato G., Ughetto E. (2015) [2], Cumming D., Henriques I., Sadorsky P. (2016) [3]. The question of the practical foundations of the activities of venture capitalists is revealed in the scientific works of such authors as Gompers P., Gornall W., Kaplan S., Strebulaev I. (2020) [7], Gornall W., Strebulaev I. (2020) [8], Weber C., Bauke B., Raibulet V. (2016) [9].

Therefore, the structural characteristics of corporate venture capital and the peculiarities of corporate venture investing in Ukraine should be a key focus for venture capitalists.

**Aims.** The purpose of the article is to analyze corporate venture capital, to identify structural characteristics of corporate venture capital and peculiarities of corporate venture investing in Ukraine.

**Methods.** During the research, the method of synthesis and analysis, induction (in the study of corporate venture capital, structural characteristics of corporate venture capital and peculiarities of corporate venture investing in Ukraine); the method of schematic, graphic images (for the visual display the received results of the study) has been used.

**Results.** Venture financing stimulates the development of scientific and technical progress and contributes to the acceleration of the introduction of the latest achievements of science into production. Sources of venture capital are:

- wealthy individual investors, branches and subsidiaries of banks and other corporations, which are organized into small investment companies;

- groups of investment banks and corporations that create a pool of investments or so-called venture capital investment partnerships;
- some large banks and some foreign investors.

One of the important methods of venture investing is the process of developing corporate venture capital to finance start-up external enterprises (ventures) [1].

Corporate venture capital (CVC) is a form of collective investment by a large company aimed at the innovative development of a corporation through financial investments in external firms, most often start-ups, through a corporate fund.

Corporate venture investments are made by operating corporations that finance or invest in start-ups with high technological potential for their strategic goals. CVCs can only be afforded by large companies with stable cash flow, as they use their cash reserves to supplement in-house R&D.

Airbnb, Uber, Stripe, TransferWise, Alibaba – all these startups are united not only by the status of the most outstanding startups of our time, which have changed the world. They also have corporations among their investors. CVC investments average \$35 billion per quarter, and the share of financing with corporate participation is 20%. In the field of financial services (fintech), the participation of corporate venture capital in startups grew by 500% between 2014 and the beginning of 2020 [5].

Innovative companies (Intel, Google, SoftBank), global giants (Airbus, BMW, Siemens, Merck, AXA, JP Morgan), and medium-sized companies (manufacturer of boilers Viessmann and car optics Hella) have their corporate venture funds.

To get started, you need to understand how an ordinary fund works. He collects money from external investors (limited partners, LP) in management for 10 years and invests in start-ups to then sell his share (exit) at a higher price.

Venture capital funds are inherently high risk (since most startups fail). These forces venture capitalists to look for startups that have the potential (to grow 10-100 times with a valuation higher than \$1 billion) and can compensate for losses from 80% of failed investments.

Table 1 shows the main structural characteristics of corporate venture capital.

Corporate venture funds exchange strategic ideas with the parent company. A special process is created for this. While investments are sprouting, the company is engaged in obtaining strategic information about the startup ecosystem. Sometimes Corporate venture funds are involved in inventing new products or developing a business strategy.

The corporate venture capital investment model is characterized by two parameters:

- purpose,
- the connection between the operations of the investor company and the start-up enterprise.

With a strong connection, the new enterprise can rely on the investor company's production capacity, its sales channels, technologies or trademarks, and use its business methods for the development, sale or service of products. At the same time, an external venture can provide the investor company with the opportunity to create

new potential with less risk. If the activity of the venture will be successful, the corporation can assess the possibilities and ways of mastering its methods or even its absorption.

**Table 1. The structural characteristics of corporate venture capital**

Signs	Characteristic
The parameters of the corporate venture capital investment model	- purpose, - the connection between the operations of the investor company and the start-up enterprise
The types of corporate venture investment goals	- strategic investments aimed primarily at increasing sales and profits of the investor's own innovative business due to interaction with a new venture, - financial investments aimed at obtaining an attractive income
Criteria for deciding on financing a startup for investors and analysts of corporate investment funds	- the level of talent and balance in the team, - the level of talent of the manager who leads the startup, - the degree of conformity of the product to the needs of the market, - the degree of consistency of the project with the concept of the whole company, - the level of potential benefit for the company from capital investment and project implementation
The types of corporate venture capital investments	- stimulating, - managers, - complementary
The main motives for investment by corporate venture capital funds	- companies invest mainly for strategic reasons due to existing financial problems; - companies invest mainly for financial reasons, due to existing strategic problems; - companies invest for purely financial purposes
Ways to promote business growth through corporate investment in venture capital funds	- promotion of the standard, - demand stimulation, - use of unfinished technologies, - experimenting with new features, - development of backup technology, - exploring strategic gaps
The main financial parameters of the sustainability of corporate venture capital	- strategic goals, - succession, - financial stability

Source: developed by the authors based on [1-4; 6-10]

According to corporate venture investment goals, the following are distinguished:

- strategic investments aimed primarily at increasing sales and profits of the investor's own *innovative* business due to interaction with a new venture (for example, a company that produces telecommunications equipment invests in a new infrastructure or service enterprise),

- financial investments aimed at obtaining an attractive income. In this case, the investor company expects to receive results no worse than those of private venture capital investors, counting on its knowledge of the market and technology, financial strength, trademark, etc.

Corporations focus on projects that are most relevant to their corporate business. For example, the Viessmann, Siemens, Airbus, Allianz, and Hella funds have the task of opening areas adjacent to the main innovative business.

Investors and analysts of corporate investment funds pay attention, first of all, when deciding on financing a startup, to the following parameters:

- the level of talent and balance in the team,
- the level of talent of the manager who leads the startup,

- the degree of conformity of the product to the needs of the market,
- the degree of consistency of the project with the concept of the whole company,
- the level of potential benefit for the company from capital investment and project implementation.

The main goal of CVC is to develop technological entrepreneurship. CVCs, having quick access to new technologies, can dramatically change the structure of the industry and are both a potential threat and a source of income for market leaders [3].

There are three types of corporate venture capital investments:

- stimulating,
- managers,
- complementary.

The main motives for investment by corporate venture capital funds:

- companies invest mainly for strategic reasons due to existing financial problems;
- companies invest mainly for financial reasons, due to existing strategic problems;
- companies invest for purely financial purposes.

There are six ways in which different types of corporate investments in venture capital funds can contribute to business growth [4]:

- promotion of the standard (when a company invests in start-ups that produce products and services that promote the implementation of the corporation's standard technologies);
- demand stimulation (investing in start-ups that develop additional products and services that increase demand for the investor's products);
- use of unfinished technologies;
- experimenting with new features;
- development of backup technology;
- exploring strategic gaps.

For many large corporations, CVC is becoming an increasingly popular diversification and hedging tool.

The success of Google Ventures, which has funded startups like Uber, 23 and Me, Nest, Slack and Jet, has inspired firms to follow in their footsteps. Additional CVCs will only intensify the growing competition to fund the best startup ideas, but it remains to be seen whether other CVCs will have the same success [5].

Researchers identify the following main financial parameters of the sustainability of corporate venture capital [9]:

- strategic goals,
- succession,
- financial stability.

The most important parameter is financial stability, which is a complex combination of financial balance and growth in the value of capital, which is ensured by the rational use of technical, material and human resources [7]. However, according to most experts, CVCs are mainly aimed at achieving the strategic goals of

the corporation, in contrast to institutional venture capitals, which make only focus on financial returns [8].

For Ukrainian businessmen, venture investments at the Series B+ stages are a new stage in expanding their investment portfolio.

A startup comes with its idea or a prototype of an invention and asks an investor for «lifts» to, for example, collect a staff of employees, rent an office, conduct market research, try to launch the product and test it in real conditions. Most often, at this stage, the investor is ready to invest from 10 thousand to 1 million dollars. The amount of investment depends on the investor's faith in the project and the arrogance/talent of the startup. But recently, at an early stage, the maximum checks have grown to 5-10 million dollars. This is due to the general growth of capital investments in innovation. B+ investment rounds are investments in startups that have proven their relevance and ability for the market. The money goes to scaling the company (expanding the staff, the geography of presence, opening new offices), and even further – to prepare a resale to a strategic investor or before an IPO. If «seed» and «angel» investments are calculated on average in hundreds of thousands of dollars, then capital investments in the innovative business are measured in millions and tens of millions.

Ukrainian investors appeared in this field literally 5-7 years ago, but their interest in global international startups is already marked. They invest in «unicorns» (companies whose market value is 1 billion dollars), thereby joining the global competition for the right to be an investor at the international level. At the same time, it is most profitable to invest in unicorns several rounds before they are worth a billion dollars. In this case, a specialist in venture investments from the fund plays a decisive role.

Many startups are not vetted by the experts of corporate venture funds and do not reach the stage of investment in them. Ukrainian investors are investing in the food delivery service Deliveroo (preparing for an IPO at a valuation of 8 billion pounds), the IT logistics company Sennder (the market valuation of the company is over 1 billion euros), the insurance platform Wefox, the delivery service Glovo and dozens of others. Investments in such companies provide for the long term but also promise profit. A seven-year wait (funds are formed for such a period) can bring the investor a return of funds in the amount of more than 3X of the investments.

**Conclusions and discussion.** Corporate venture capital is a powerful tool for the country's development and is distinguished among other investment institutions by the widest investment opportunities. The strategic component in the corporate world is very valuable. The main goal of corporate venture capital is strategic innovative business development. Corporate venture capital can specialize in financing both in the early stages of research and development and in partnership with the parent company CVC, which can offer industry knowledge and a strong financial position in new markets of already successfully developed products.

Activation of activity through CVC investments in Ukraine is only developing, and much depends on the business reputation and personal characteristics of managers. Ukraine's economy needs integration into global economic processes

through the development of corporate venture capital. In addition to the financial benefit when exiting the company (selling its share to the next investor for an amount that exceeds the purchase price), a Ukrainian corporate investor can become part of a global innovative business.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## AN ASSESSMENT OF CHENNAI PORT CUSTOMS CLEARANCE OPERATIONS

**Sandeep Kumar Gupta, Svitlana Ilinich, V. Noah**

<sup>1</sup>PhD, Professor, Centre for Statistics, Modelling and Simulation, AMET Business School, Faculty of Management Studies, AMET University, Chennai, India, e-mail: skguptabhu@gmail.com, ORCID: <https://orcid.org/0000-0002-2670-2858>

<sup>2</sup>PhD., Director/ Associate Professor, Open International University of Human Development "Ukraine", Kyiv, Ukraine, e-mail: ilinichsvitlana@gmail.com, ORCID: <https://orcid.org/0000-0003-4130-7933>

<sup>3</sup>MBA Student, AMET Business School, Faculty of Management Studies, AMET University, Chennai, India

### Citation:

Gupta, S. K., Ilinich, S., & Noah, V. (2023). An assessment of chennai port customs clearance operations. *Economics, Finance and Management Review*, (2), 31–50. <https://doi.org/10.36690/2674-5208-2023-2-31-50>

Received: May 17, 2023

Approved: June 29, 2023

Published: June 30, 2023



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**Abstract.** Customs clearance is a necessary procedure before goods can be imported or exported internationally. If a shipment is cleared, then the shipper will provide documentation confirming customs duties that are paid and the shipment can be processed. The purpose of the article is to study the custom clearance operations in Chennai: to study the challenges faced in the custom clearance; to study the process flow of custom clearance; to study the documents required in the custom clearance. The research design undertaken in this article of descriptive in nature, since it provides a description of the state of affairs as it exists in the organization at performance management. The sample size taken for the study is 100. The instrument used in the present study is Questionnaire. Pilot study were done to test the questions and to make some modifications in the questionnaire. The study concentrated through the analysis of tabulation, comparative percentage, bar diagrams, Chi-square test is used in the appropriate places. Most common customs-related problems are: Misclassification; Duties higher than anticipated; Customs office won't clear the shipment to your buyer/importer; Customs office invoking health, sanitary, or safety issues; Labeling issues involving a certificate of origin, weight, ingredients, marks, etc.; Inadequate documentation provided by the exporter; Issues involving the import or packing regulations of the receiving country. The Present Value of Import duty.

**Keywords:** customs duty, foreign trade, customs clearance.

**JEL Classification:** L81, L91

**Formulas:** 0; **fig.:** 0; **tabl.:** 8; **bibl.:** 14

**Introduction.** Customs clearance is the act of taking goods through the customs authority to facilitate the movement of cargo into a country (import) and outside the country (export). Also, the customs clearance means a document issued by the customs authority to a shipper indicating that all duties have been paid and the shipper's goods is cleared for export.

Customs is an authority or agency in a country responsible for collecting tariffs and for controlling the flow of goods, including animals, transports, personal effects, and hazardous items, into and out of a country. Traditionally, customs has been considered as the fiscal subject that charges customs duties (i.e. tariffs) and other taxes on import and export. In recent decades, the view on the functions of customs has considerably expanded and now covers three basic issues: taxation, security, and trade facilitation.

Each country has its own laws and regulations for the import and export of goods into and out of a country, enforced by their respective customs authorities; the

import/export of some goods may be restricted or forbidden entirely. A wide range of penalties are faced by those who break these laws

Freight Forwarders who coordinate the international transportation also provide customs clearance services to the clients. The activity is called customs brokerage. Customs clearance work involves preparation and submission of documentations required to facilitate export or imports into the country, representing client during customs examination, assessment, payment of duty and co taking delivery of cargo from customs after clearance along with documents. Customs clearance agents are also called Carrying and Forwarding agents. They are registered and licensed by Customs to operate. Their role is limited to acting on behalf of and representing clients as third-party agencies engaged in customs clearance. Customs Agents are linked through EDI with customs in most of the countries and use documentation software to facilitate entire process. Cargo imported into the country from any point of entry is warehoused at Customs bonded area under customs jurisdiction until it is released after clearance.

All goods imported into India have to pass through the procedure of customs for proper examination, appraisal, assessment and evaluation. This helps the custom authorities to charge the proper tax and also check the goods against the illegal import.

The role of customs clearance in the Import-Export Process involves the preparation as well as the submission of import and export documentation. It helps in the following:

- To represent a company before the customs examination;
- Assessing the document;
- Payment of duties and releasing the cargo from customs after the clearance of documentations.

Understanding the Import-Export Process and its customs procedure is important. Customs involved a set of documentations, both while importing or exporting of goods.

Clearing and forwarding agents are facing lots of problems which have direct impact in their business performance. Though, the problems are more in every field, but in C&F agents, they totally depend on customers, customs and shipping companies. The problems faced by them are grouped into four categories namely, finance problems, logistics problems, problems related to government policies, and customs problems. This industry runs mainly of logistics related activities and hence, they face several problems related to logistics. Of course, finance problems are major issues in any company, and this industry is not an exemption. Therefore, it is important to study about the problems faced by clearing and forwarding agents in both export and import of goods. This study is conducted to analyze different problems faced by clearing and forwarding agents in Chennai.

Goods are exported and imported from one country to another in order to maintain a seamless supply chain. Transportation and shipping of the commodities happen through various routes like road, air, and water to reach their destinations. But in order to ensure a complete legal and ethical freight shipment, custom clearance is indispensable. Custom clearance can help a countries economy from illegal tax



invasion.

Importers and exporters are the main parties involved in the EXIM process. Here are some examples of importers and exporters. Alibaba, Walmart, etc. are some of the companies involved in this process.

Custom broker is a person who is licensed to carry out the customs formalities. He or she acts as a professional agent. An importer or exporter prepares and submits all documents or clearing goods through customs. The remuneration so received for his service is called customs-brokerage. All of the items imported into the country have to be Custom cleared. This applies to the items brought in as personal effects and also imported by trade and business establishments including governmental and defense agencies. Necessary stipulated duties would have to be paid before the goods are released by Customs.

Getting payment from the customers is the foremost problems faced by clearing and forwarding agents with respect to finance. The next major problems related to finance are, high transportation cost, and more taxes. Conversion of foreign currencies is not a major problem for the C&F agents.

Regarding, logistics problems, it is noted that bringing goods from the customer point to port is the major problem faced by C&F agents, which is followed by high logistics insurance cost. As far as problems related to government policies are concerned, it is found that restrictions in government policies during expansion of business is the major problem faced by the C&F agents, which is followed by frequent changes of government rules and regulations, and difficulty in doing business when the government changes policies regularly.

While considering customer problems, it is observed that the C&F agents face more problems related to delay of goods during export and import due to customs persons, which is followed by more customs clearance formalities, and making unnecessary delay by customs people.

**Literature review.** According to M. Janet (2018) A country's ability to trade globally depends on its traders' access to global freight and logistics networks and efficiency of a country's supply chain ( in cost, time and reliability) depends on specific features of its domestic economy (logistics performance). Today's international trade is not only highly competitive but also dynamic, a necessary responsive framework to make exports compete globally is essential. Countries cannot live in isolation.

They have to mutually share their prosperity, technical know-how and undertake trade in order to sell their surplus products. The world economy is the interdependent economic progress of a nation would depend upon its ties with other countries maintain trade relations with each other. Hence in this paper an attempt has been made to analyze what are the problems faced by the customs house agents in Thoothukudi District Rnupin.

As per S Parikh (2012) has stated that custom house agents are very important person whenever you are importing or exporting any goods. By definition he is a person who has acquired a license to act as an agent for transaction of any business related to departure or entry of transportations or the exporting or importing goods at

any custom station. Generally, the business that imports or exports goods don't have knowledge about the rules and regulations of the government neither do they have any time to look into these matters. Hence, they appoint an agent to act on their behalf. However, all the duties performed by the CHA are administered by a government body known as Custom House Agent Licensing Regulations Kirubakaran.

According to J Paul Sundar (2012) stated that the flow of goods from the manufacturer to the end users goes through various stages with the help of effective logistic operations. The study is aimed to analyze the following objectives empirically. To limelight the overview of the Custom House Agents (CHA's), to analyze the contributions of Custom House Agents in the marine trade, to analyze the opinion any time to look into these matters. Hence, they appoint an agent to act on their behalf. However, all the duties performed by the CHA are administered by a government body known as Custom House Agent Licensing Regulations.

According to Deneesh (2009) that computerization of Customs procedures resulted in time and cost savings due to the reduced need to prepare, handle, store and deliver customs documentation. EDI is based on the principle of trust and contractual obligations. It provides the faster settlement of customs clearance. It should be possible to do away with requirements of paper documentations, i.e., there would be no necessity to submit invoice, packing list, B/L etc in paper. Records need only be kept at the office of importers/exporters/CHA for a minimum period, for verification by concerned authorities, if required. It is sure that EDI system has made a phenomenal progress in the arena of Indian Customs Clearance, but for further progress attitudinal change in the officers and the business people is required to adapt to EDI. EDI is a reality.

According to Ashok Sagar (2008) Customs duties form a significant source of revenue for India. The principle statute under which they are imposed is the Customs Act, 1962 (hereinafter Act). Duties of custom are levied under section 12 of the Act on goods imported into or exported from India. The rates of duty are specified under the Customs Tariff Act, 1975 (hereinafter Tariff Act) or under any other law for the time being in force. For instance, special duties of customs may be levied under Finance Acts. The basis of valuation is the "transaction value" of goods. The transaction value is the price actually paid or payable for the goods when sold for export to India for delivery at the time and place of importation or as the case may be or export from India for delivery at the time and place of exportation. The transaction value as declared is normally accepted, except in cases where the buyer and seller of the goods are related persons and the price is not the sole consideration for the sale of goods. Section 14 of the Customs Act provides that the transaction value shall include, in addition to the price, any amount that is paid or payable for costs and services, including commissions and brokerage, engineering, design work, royalties and licence fees, costs of transportation to the place of importation, insurance, loading, unloading and handling charges. The extent and the manner in which such charges are to be added are specified in the Rules framed under the Customs Act. As stated above, section 12 of the Customs Act is the charging section. It provides that the

duties of customs shall be levied at such rates as may be specified, inter alia, in the Tariff Act Under section 3 (3) of the Tariff Act an additional duty of customs may be imposed by the Union Government to counterbalance excise duty livable on raw materials, components and ingredients of the same nature as, or similar to those used in the production or manufacture of such articles as the Union Government may specify by notification.

STA Law Firm (2018) say that Panorama of Customs Duty in India We all have read in our childhood or seen in movies that how centuries ago, to enter a kingdom, a merchant with his merchandise had to give some gift to the king. In due course, this tradition has formalized and now given the name of customs duty on goods exported from the country and imported into it. The flow of goods across borders demands a monitoring and controlling system, to protect the domestic industry and to prevent any illegal activities or products from entering the country.

Every country has its own set of customs laws. Customs Act, 1962 describes the significance of customs duties that form a source of revenue for India. Custom obligations in India go back to the eighteenth century when the British East India Company came to political power in India. The organization of this obligation commenced through various laws during the British period.

The three presidencies to be specific Bengal, Mumbai and Chennai had their own particular traditions controls. Until 1859, there was a regular tax; be that as it may, the tariff underwent necessary amendments in 1867, 1870, 1894, 1932, 1934 and 1939. After autonomy of India, a noteworthy change was affected in 1975 when Customs Tariff was lined up with the Customs Cooperation Council Nomenclature (CCCN), which is the globally acknowledged order.

**Table 1. May or may not also do customs clearance**

Exports	Imports
<ul style="list-style-type: none"> <li>- Select suitable mode of transport</li> <li>- Slot booking in the Vessel</li> <li>- Container Booking at Competitive rates</li> <li>- Insurance arrangement.</li> <li>- Cargo Consolidation</li> <li>- Weight and measurement services</li> <li>- Payment of freight and other relevant charges</li> <li>- Arranging transport of containers/goods to the port.</li> <li>- Custom clearance</li> <li>- Documentation formalities</li> <li>- Monitoring shipment and follow up with other agencies</li> <li>- Arranging “Shipped on Board” bill of lading.</li> <li>- Assisting exporters for Export promotion schemes and claims</li> </ul>	<ul style="list-style-type: none"> <li>- Monitoring import movement &amp; ETA (Expected Time of Arrival) etc on behalf of importers</li> <li>- Checking of Non – negotiable documents in advance to avoid delays in clearance.</li> <li>- Co-ordination with shipping lines and port authorities.</li> <li>- Payment of Inland Haulage Charges to Shipping Lines, if required.</li> <li>- Arranging custom clearance under different schemes.</li> <li>- Follow ups with different agencies.</li> <li>- Payment of duties</li> <li>- Delivery of custom cleared goods.</li> </ul>

The researcher has stated that custom house agents are very important person whenever you are importing or exporting any goods. By definition he is a person who has acquired a license to act as an agent for transaction of any business related to departure or entry of transportations or the exporting or importing goods at any custom station. Generally, the business that imports or exports goods don’t have knowledge about the rules and regulations of the government neither do they have any time to

look.

According to prevailing customs regulation, no cargo meant for export can be loaded on a ship unless the customs authorities at the port accord their formal approval. After obtaining the export licenses, where necessary, a complete set of shipping documents, including five copies of the shipping bill. “Under claim of drawback”. Submitted by the export to the customs house concerned.

An officer of the customs department of the rank of as appraiser scrutinizes the complete set of documents with a view of determining. Whether the description, quantity and value indicated in the shipping bill for which permission is sought for export, correspond with those mentioned in the contract entered into with the buyer.

The customs also check the details on the GR-1 form including its number and date and the entry there of in the other document. The original copy of the GR-1 form is retained by the customs and later, after recording the same in their register, forward it to the RBI with the endorsement on the duplicate copy of the shipping bill by the export department of the customs house, customs clearance for the exports of products mentioned in the shipping bill is deemed to have been obtained.

*The following are the main document to which are received from the exporters to make arrangement for shipment.*

*Receiving Documents to Arrange Shipment.*

- Invoice
- Packing list
- Letter of credit
- GR Form
- Exporters declaration

*Documents Required for Import-Export Customs Clearance:*

- Pro Forma Invoice
- Customs Packing List
- Country of Origin or COO Certificate
- Commercial Invoice
- Shipping Bill
- Bill of Lading
- Bill of Sight
- Letter of Credit
- Bill of Exchange
- Export License
- Warehouse Receipt
- Health Certificate
- Bill of Entry
- Import License
- Insurance Certificate
- RCMC (Registration cum Membership Certificate)
- GATT/DGFT Declaration

*Pro Forma Invoice.* The Pro Forma Invoice documents the intention of the exporter to sell a predetermined quantity of goods or products. This invoice is

generated as per the outlined terms and conditions agreed upon between the exporter and the importer, through a recognized medium of communication such as email, fax, and telephone or in person. It is similar to a 'Purchase Order', which is issued prior to completing the sales transaction.

*Customs Packing List.* The customs packing list states the list of items included in the shipment that can be matched against the pro forma invoice by any concerned party involved in the transaction. This list is sent along with the international shipment and is especially convenient for transportation companies as they know exactly what is being shipped. Individual customs packing lists are secured outside each individual container to minimize the risk of exporting incorrect cargo internationally.

*Country of Origin or COO Certificate.* The Country of Origin Certificate is a declaration issued by the exporter that certifies that the goods being shipped have been completely acquired, produced, manufactured or processed in a particular country.

*Commercial Invoice.* A commercial invoice is a mandatory document for any export trade. The customs clearance department will ask for this document first as it contains information about the order, including details such as description, selling price, quantity, packaging costs, weight or volume of the goods to determine customs import value at the destination port, freight insurance, terms of delivery and payment, etc. A customs representative will match this information with the order and decide whether to clear this for forwarding or not.

*Shipping Bill.* A shipping bill is a traditional report where the downside is asserted and primarily serves as a measurable record. This can be submitted through a custom online software system (ICEGATE). To obtain the shipping bill, the exporter will need the following documents:

- GR Forms for shipment to all the countries
- Packing list (with various details such as information about the content, quantity, the gross and net weight of each package)
- Export License
- Indent
- Acceptance of Contract
- Invoices (with all relevant information such as the number of packages, quantity, price, correct specification of goods, etc.)
- Purchase Order
- Letter of Credit
- AR4 and Invoice
- Examination or QC Certificate
- Port Trust document

*Bill of Lading.* Bill of Lading is a legal document issued by the carrier to the shipper. It acts as evidence of the contract for transport for goods and products, mentioned in the bill provided by the carrier. It also includes product information such as type, quantity, and destination that the goods are being carried to.

This bill can also be treated as a shipment receipt at the port of destination

where it must be produced to the customs official for clearance by the exporter. Regardless of the form of transportation, this is a must-have document that should accompany the goods and must be duly signed by the authorized representative from the carrier, shipper, and receiver. The Bill of Lading comes in handy if there is any asset theft.

*Bill of Sight.* Bill of Sight is a declaration from the exporter made to the customs department in case the receiver is unsure of the nature of goods being shipped. The Bill of Sight permits the receiver of goods to inspect them before making payments towards applicable duties.

Applying for a bill of sight becomes necessary as it acts as a substitute document if the exporter does not have all the must-have information and documents needed for the bill of entry. Along with the bill of sight, the exporter also needs to submit a letter that allows for the clearance of goods by customs.

*Letter of Credit.* Letter of credit is shared by the importer's bank, stating that the importer will honor payment to the exporter of the sum specified to complete the transaction. Depending on the terms of payment between the exporter and importer, the order is dispatched only after the exporter has this letter of credit.

*Bill of exchange.* Bill of exchange is an alternative payment option where the importer is to clear payments for goods received from the exporter either on-demand or at a fixed or determinable future. It is similar to promissory notes that can be drawn by banks or individuals. You can even transfer a bill of exchange by endorsement.

*Export License.* Businesses must have an export license that they can provide to customs in order to export or forward any products. This only needs to be produced when the shipper is exporting goods to an international destination for the very first time. This type of license may vary depending on the type of export you intend to make. This can be done by applying with the licensing authority, and the permit is eventually issued by the Chief Controller of Exports and Imports.

*Warehouse Receipt.* Warehouse Receipt is generated once the exporter has cleared all relevant export duties and freight charges post customs clearance. This is needed only when an ICD is involved.

*Health Certificates.* Health Certificate is applicable only when there are food products that are of animal or non-animal origin involved in international trade. The document certifies that the food contained in the shipment is fit for consumption by humans and has been vetted to meet all standards of safety, rules and regulations prior to exporting. This certificate is issued by authorized governmental organizations from where the shipment originates.

*Bill of Entry.* A bill of entry is a legal document to be filled & duly signed by an importer/CHA/carrier. After filing a bill of entry along with the other necessary documents, assessment and examination of goods are carried out by concerned authorities. Once the process is completed, an importer can avail for ITC claim on goods.

*Import License.* There are certain items that cannot be freely imported in India, an import license is a permission granted by the government to undertake import activities for restricted goods. In order to avail the benefits, one must file an

application to the licensing authority.

*Insurance certificate.* An Insurance Certificate is a document required for import customs clearance. This certificate helps the authorities to verify the shipment, in terms of whether the selling price contains the insurance or not. Also, it helps determine the precise value which eventually decides the import duty aggregate.

*RCMC Registration cum Membership Certificate.* RCMC is a certificate issued by Export Promotion Councils of India. If an exporter or importer wants to avail any benefits under any schemes governed by FTP or any of the EPCs then he has to submit his RCMC as well at the time of customs clearance.

*GATT/DGFT declaration.* Every importer has to file a GATT and DGFT declaration while completing customs clearance formalities for imports. It has to be filed as per the terms stated in General Agreement on Tariff and Trade. Following are some of the requirements for filing this document.

*Show Cause Notice.* The show cause notice must clearly specify the amount of duty or interest demanded. The notice must specifically require the person to show cause why the duty or interest should not be demanded from him. It is essential that the show cause notice must clearly state the department's case against the affected person.

*Misdeclarations.* Misdeclaration of imported goods - Bitumen - Country of Origin - Redemption fine - Levy of penalty - The department was well within its right to seize the goods for such misdeclaration and impose penalties under Section 112 of Customs Act, 1962, notwithstanding the fact that the appellants had nothing to gain.

*DEEC (Duty Exemption Entitlement Certificate).* DEEC (Duty Exemption Entitlement Certificate) is an Export Promotion Scheme, which enables duty free import of inputs required for manufacture of export goods. Value and quantity of each item permitted under DEEC imports are specified in the Advance License.

*Advance License.* An Advance License is issued to allow duty free import of inputs, which are physically incorporated in the export product (making normal allowance for wastage). In addition, fuel, oil, energy, catalysts etc.

*EPCG.* EPCG is a term used in India under exports and imports. EPCG means, Export Capital Goods. EPCG is one of the schemes provided by government of India Promotion to importers and exporters to promote exports. In simple and easy language, EPCG is a scheme related to machinery, machinery parts and similar goods. Apart from other financial assistance for exporters, you can get exemption of 100% import duty amount while importing such machineries.

When obtaining EPCG license from government, you guarantee that you will export required amount or quantity of goods for next 5 years. EPCG is a good facility provided to exporters and importers by government on exemption of import duty amount.

*EPCG Scheme* allows import of capital goods for pre-production, production and post-production at zero customs duty.

*Examination of Import Goods.* The imported goods, which are interdicted for examination by the RMS, are required to be examined for verification of correctness of description/declaration given in the Bill of Entry and related documents.

The imported goods may also be examined prior to assessment in cases where the importer does not have complete information with him at the time of import and requests for examination of the goods before assessing the duty liability or, where the proper officer, on reasonable belief feels that the goods should be examined before assessment, giving reasons for the same.

Wherever required, samples are drawn in the examination area for chemical analysis, verification or any other purposes. After assessment by the appraising group or for cases where examination is carried out before assessment, bill of entry needs to be presented for registration for examination of imported goods in the import shed.

The proper officer of customs examines the goods along with requisite documents. The shipments, found in order are given clearance order by the proper officer of customs in the Import Shed.

*Examination of Export Goods.* After the receipt of the goods in the customs area, the exporter/ customs broker may contact the Customs Officer designated for the purpose, and present the check list with the endorsement of custodian and other declarations along with all original documents such as, Invoice and Packing list, ARE-1, etc.

The Customs Officer may verify the packages of the goods actually received and enter the same into the system and thereafter mark the Electronic Shipping Bill, handing over all original documents to the Dock Appraiser who assigns a Customs Officer to carry out examination of goods, if required under the Risk Management System and indicate the officers' name and the packages to be examined, if any, on the check list and return it to the exporter/ Customs Broker.

*Duty Free Import Authorisation (DFIA).* DFIA issued under the FTP 2009-14 are similar to AA in many aspects including requirement of monitoring. However, DFIA has a minimum value addition requirement of 20% and once export obligation is completed, transferability of the authorization and / or material imported against it is permitted.

The DFIA is issued only where SION are notified. After the annual supplement 2013 to the FTP 2009-14, the exemption from antidumping duty and safeguard duty is not available when materials are imported against a DFIA made transferable. In case imported materials are transferred, the importer is to pay an amount equal to the anti-dumping and safeguard duty leviable on the material, with interest.

These aspects apply subject to specified conditions. Under the FTP 2015-20, only post-export transferable DFIA with exemption from only Basic Customs duty is issued by RA. Such DFIA is not available for Gems and Jewellery sector or where SION prescribes actual user condition (for example, fuel).

The admissibility of brand rate of duty drawback is as per para 4.26 of the FTP. For transferrable DFIA, prior to registration it is to be verified that the details of the exports given along with the DFIA match the record of exports and is genuine. If any discrepancy is found it need to be first referred to the RA.

*Re-Import & Re-Export.* Sometimes, indigenously manufactured goods, when exported, are returned back for various reasons including cancellation of export order or after exhibition/display etc., or after use in particular project/contract and



completion of the contract etc. (such as machinery).

Similarly imported goods which may have discharged duties at the time of original importation have also to be often sent out for repair, reconditioning etc. Private, personal imported property may also have to be sent abroad for repair within the warranty period and returned.

There are also goods that may have to be sent for special processes like electroplating, polishing or coating and re-imported. Thus, specific legal provisions permit the facility of re-import and re-export of goods.

*Entry Inwards and unloading and loading of goods.* On arrival of the vessel, the shipping line needs to approach the Preventive Officer for granting Entry Inwards. Before making the application, the shipping line has to make payment of the Light House dues, as may be applicable.

Section 31 of the Customs Act, 1962 requires that the Master of the vessel shall not permit unloading of any imported goods until an order is given by the proper officer granting Entry Inwards to such vessel. Normally, Entry Inwards is granted only after the IGM is delivered. The date of Entry Inwards is crucial for determining the rate of duty in case of filing of prior Bill of Entry, as provided in Section 15 of the Customs Act, 1962. However, unloading of items like accompanied baggage, mail bags, animals, perishables and hazardous goods are exempt from this stipulation.

No imported goods are to be unloaded unless specified in the IGM/Import Report for being unloaded at that Customs station and such unloading shall only be at places provided therefore. Further, imported goods shall not be unloaded except under the supervision of the proper officer. Similarly, for unloading imported goods on a Sunday or on any holiday, prior notice shall be given and prescribed fees paid.

Board has clarified that unloading of liquid bulk cargo from the ship to the bonded storage tanks through pipe lines is allowed under the provisions of Section 33 of Customs Act, 1962 subject to the conditions that the premises where the goods are received through pipe lines is a bonded warehouse under Section 58 or 59 of Customs Act, 1962; permission of the proper officer is obtained for unloading prior to discharge of such cargo; and other requirements under the Customs Act, 1962 are fulfilled.

If the bonded tanks are located outside the jurisdiction of the Commissioner in charge of port permission may be granted subject to concurrence of Commissioner in whose jurisdiction the bonded tanks are located, and other safeguards as necessary.

*Risk Management System in Import.* “Risk Management System” (RMS) is one of the most significant steps in the on-going Business Process Re-engineering of the Customs Department. RMS is based on the realization that ever-increasing volumes and complexity of international trade and the deteriorating global security scenario present formidable challenges to Customs and the traditional approach of scrutinizing every document and examining every consignment will simply not work. Also, there is a need to reduce the dwell time of cargo at ports/airports and also the transaction costs in order to enhance the competitiveness of Indian businesses, by expediting release of cargo where compliance level is high. Thus, an effective RMS strikes an optimal balance between facilitation and enforcement and promotes a culture of

compliance. RMS is also expected to improve the management of the Department's resources by enhancing efficiency and effectiveness in meeting stakeholder expectations and bringing the Customs processes at par with best international practices.

Bills of Entry and IGMs filed electronically in ICES through the Service Centre or the ICEGATE are transmitted by ICES to the RMS. The RMS processes the data through a series of steps and produces an electronic output for the ICES. This output determines whether a particular Bill of Entry will be taken-up for appraisal or examination or both or be cleared after payment of duty without assessment and examination. Also, where necessary, RMS provides instructions for Appraising Officer, Examining Officer or the Out-of-Charge Officer.

*Risk Management System in Export.* On similar lines of the RMS in imports, a Risk Management System (RMS) in Export has been introduced with effect from 15-7-2013. The RMS in exports allows low risk consignments to be cleared based on self-assessment of the declarations by exporters. This enables the department to enhance the level of facilitation and speed up the process of export clearance. By expediting the clearance of compliant export cargo, the RMS in exports will contribute to reduction in dwell time, thereby achieving the desired objective of reducing the transaction cost in order to make the business internationally competitive. At the same time, the RMS in exports will ensure proper and expeditious implementation of existing control over export goods under the applicable Allied Acts and Rules. It will also provide appropriate control measures for proper and speedy disbursement of drawback and other export incentives.

Shipping Bills filed electronically in ICES through the Service Centre or the ICEGATE will be processed by RMS through a series of steps/corridors and an electronic output will be produced for the ICES. This output from RMS will determine the flow of the Shipping Bill in ICES i.e. whether the Shipping Bill will be taken up for verification of self-assessment or examination or both or to be given "Let Export Order" directly after payment of Export duty (if any) without any verification of self-assessment or examination.

With the introduction of the RMS in exports, the practice of routine verification of self-assessment and examination of Shipping Bills has been discontinued and the focus is on quality assessment, examination and Post Clearance Audit (PCA) of Shipping Bills selected by the RMS.

*National Risk Management Committee.* A National Risk Management (NRM) Committee headed by DG(Systems) reviews the functioning of the RMS, supervises implementation and provide feedback for improving its effectiveness. The NRM Committee includes representatives of Directorate General of Revenue Intelligence (DGRI), Directorate General of Valuation (DGOV), Directorate General of Audit (DG Audit), Directorate General of Safeguards(DGS) and Tax Research Unit (TRU) and Joint Secretary (Customs), CBIC. The NRM Committee meeting is to be convened by RMD at least once every quarter. The following are some of the functions of the NRM Committee:

- Review performance of the RMS including implementation of ACP/AEO and

PCA.

- Review risk parameters and behaviour of important risk indicators.
- Review economic trends, policies, duty rates, exemptions, market data etc. that adversely impact Customs functions and processes and suggest remedial action.

*Local Risk Management (LRM) Committee.* A Local Risk Management (LRM) Committee headed by Commissioner of Customs has been constituted in each Custom House / Air Cargo Complex /ICD, where RMS is operationalized. The LRM Committee comprises the Additional / Joint Commissioner in charge of Special Investigation and Intelligence Branch (SIIB), who is designated as the Local Risk Manager and includes the Additional / Joint Commissioner in charge of Audit and a nominee, not below the rank of a Deputy Director from the regional / zone unit of the DRI, and a nominee, not below the rank of Deputy Director from the Directorate of Valuation, if any.

*Import of jewelers/gold/silver.* An Indian passenger who has been residing abroad for over 1 year is allowed to bring jewellery, free of duty, in bonafide baggage up to a weight of twenty grams with a value cap of Rs.50, 000/- in the case of a male passenger or forty grams with a value cap of Rs.1 lakh in the case of a lady passenger.

*Export of gold jewellery.* There is no value limit on the export of gold jewellery by a passenger through the medium of baggage so long as it constitutes the bonafide baggage of the passenger.

*WTO Agreement on Rules of Origin (Uruguay Agreement).* The Agreement on Rules of Origin aims at harmonization of non- preferential rules of origin, and to ensure that such rules do not themselves create unnecessary obstacles to trade.

The Agreement sets out a work program for the harmonization of rules of origin to be undertaken after the entry into force of the World Trade Organization (WTO), in conjunction with the World Customs Organization (WCO).

Through this Agreement, members commit to negotiate common rules of origin for all non preferential trade purposes. The Agreement does not contain rules (but broad principles), but rather, launch the negotiations for the harmonization of non-preferential rules of origin.

However, these negotiations are still on-going, so, for the moment, there are no common rules of origin at the WTO.

*Refund (Only for Importer).* Customs refund on import of goods, at times, it is found that duty has been paid in excess of what was actually liveable on the goods. Such excess payment may be due to lack of information on the part of importer/exporter or non-submission of documents required for claim of lower value or rate of duty.

*Drawback (Only for Exporter).* Drawback is the refund, reduction or waiver in whole or in part of customs duties assessed or collected upon importation of an article or materials which are subsequently exported.

*Remittance.* A remittance is a payment of money that is transferred to another party. The term is derived from the word remit, which means to send back.

*Bank Remittance Certificate.* FIRC (Foreign Inward Remittance Certificate) is issued against any receipt of amount from foreign countries by a bank to their

customers. BRC (Bank Realization Certificate) is issued by banks to its customers who run export businesses. BRC is issued on each shipment of export proceeds.

*Import & Export Documentary Remittance.* The Import and Export Documentary Remittances are a means of payment/receipt that you can use instead of the Documentary Credit, Payment Order or Foreign Cheque in transactions where the parties involved already achieved a certain degree of mutual trust. It is also less expensive.

*It enables the Importer to:*

- Minimise the risk of non-compliance with the contractual obligations established with the Exporter
- Defer payment.

*It enables the Exporter to:*

- Receive the funds in a safer and more controlled manner before the importer takes possession of the goods (remittances against payment)
- Get an executive deed (remittances against acceptance)
- Anticipate the funds via discount or advance.

*The most common problems with customs clearance.* Customs clearance of goods transported by sea often becomes a challenge: incorrect classification or packaging of goods puts the consignment at risk of not reaching the recipient, and the complexity of the documentation to be completed requires accuracy and a fair amount of time. Below are some of the most common customs-related problems and the tips for dealing with them effectively.

*Inaccurate Duties:* Taxes on imported and exported goods shipped by sea are among the most misleading issues. These taxes depend on the country, as well as on the weight, category and value of goods. Pay attention to paperwork to avoid tax issues. Adequately prepare commercial documents: contracts and invoices. In the absence of commercial documents, the certificate of transportation costs provided by the declarant will be assessed. The customs often perform checks to ensure that a declaration is not fictitious, so better act honestly.

*Incorrect Cargo Classification:* Pay attention to the classification of the cargo. Many problems arise from an inaccurate description. This is especially relevant for shippers of goods, foods, and technical devices. Formalities can cause you considerable losses. Goods are classified according to size, dimensions, state of aggregation, specific features, degree of hazard and cargo handling technique. The more accurate you provide this information; the shorter time your customs procedures will take.

*Consignee-related Problems.* Not only the consignor is responsible for the customs clearance of the consignment, as there are cases where the consignor pays all the necessary duties and duly completes all forms but the consignee refuses to accept the customs formalities, duties or licensing procedures. In this case, the receipt of the cargo is not shipper's responsibility. To avoid any disagreement, inform the customer of any potential charges that may apply to the consignment and send him / her documents that will be required to collect the consignment.

*Shipping of Dangerous Goods.* Such goods receive an increased attention. It

happens that the customs authorities determine that a cargo is hazardous to health or poses a danger to safety in general, which results in returning or re-routing the cargo.

We recommend that you familiarise yourself with the Law on the Transport of Dangerous Goods before shipping this type of cargo. The carriage of all dangerous goods is governed by the International Maritime Dangerous Goods Code, the European Agreement concerning the International Carriage of Dangerous Goods by Road, the IMO International Code for the Construction and Equipment of Ships Carrying Dangerous Bulk Chemicals.

The International Convention for the Prevention of Pollution from Ships dated 1973 and the protocol of 1978 relating to this Convention. Compliance with these requirements is obligatory for all ports and ships.

*Subtleties of Packaging.* Customs of some ports have strict rules regarding packaging of cargoes or consignments. If the packaging material is unsuitable, the cargo may not reach the final consignee. Avoid problems by ensuring proper packaging of your cargoes. The packaging must meet applicable freight shipping standards for the particular cargo and must be robust and withstand the entire transportation process.

*The Present Value of Import duty.* The rate is 10% of the value of goods. GST is applicable on all imports into India in the form of levy of IGST. IGST is levied on the value of imported goods + any customs duty chargeable on the goods.

**Aims.** The *purpose of the article* is to study the custom clearance operations in Chennai: to study the challenges faced in the custom clearance; to study the process flow of custom clearance; to study the documents required in the custom clearance.

*Scope of Research:*

- Identifying the needs of stevedoring in shipping and importance of cargo handling while loading and unloading.
- Identify importance of equipment's and labour to handle the cargo.
- The foreign trade policy that changes after every five years also has the impact of the working of import and export.

Here we can understand that how the CHA customs House Agents and the co-leaders are interrelated to each other.

*Limitation of Research:*

- The studies were restricted to collect the information as they were busy by shipment.
- Short span of time was another limiting factor for conducting the survey from the respondents.
- This result will be valid to particular time period only because the act and regulation might change in future.
- Sometime respondents have fear with top level management to give their own options.
- Limitation of time.

**Methodology.** Methodology is an essential aspect of any research. It enables the investigator to look at the research problem in a systematic, meaning and orderly way. Methodology comprises of the sources of data collection, sampling design, hypothesis

and techniques used for analyzing the data.

The research design undertaken in this study of descriptive in nature, since it provides a description of the state of affairs as it exists in the organization at performance management. The sample size taken for the study is 100. The instrument used in the present study is Questionnaire.

Pilot study were done to test the questions and to make some modifications in the questionnaire. The study concentrated through the analysis of tabulation, comparative percentage, bar diagrams, Chi-square test is used in the appropriate places.

The Chi square test is an important test amongst several tests of significance developed by statisticians. Chi square, symbolically written as X<sup>2</sup>(pronounced as chi-square) is a statistical measure used in the context of sampling analysis for comparing a variance to a theoretical variance.

As a non-parametric test. It can be used to determine if categorical data shows dependency or the two classifications are independent. It can also be used to make comparisons between theoretical population and actual data when categories were used. Thus the Chi-square test is applicable in large number of problems.

The test is, in fact, a technique though the use of which it is possible for all researchers to (i) test the goodness of fit (ii) test the significance of association between two attributes, and (iii) test the homogeneity or the significance of population variance  $X^2 = \frac{(O - E)^2}{E} \cdot = \text{Observed Frequency} \cdot E = \text{Expected Frequency}$

*Research Design.* The research design chosen is descriptive research design Descriptive research aims to accurately and systematically describes a population, situation or phenomenon.

It can answer what, when, where, when and how questions, but not why questions. A descriptive research design can use a wide variety of research methods to investigate one or more variables Descriptive research is an appropriate choice when the research aim is to identify characteristics, frequencies, trends, and categories. It is useful when not much is known yet about the topic or problem.

Before you can research why something happens, you need to understand how, when and where it happens be introduced in a significant way unless we have complete overhaul

*Tools for Analytics Stastical Tools Percentage Analysics.* Percentage analysis is one of the basic statistical tools which is widely used in analysis and interpretation of primary data. It deals with the number of respondent's response to a particular question is percentage arrived from the total population selected for the study  $\text{Percentage} = \frac{\text{Number of respondents}}{\text{Total no of respondents}} \times 100$

*Data Analysis and Interpretation.*

**Table 2. The Gender**

Gender	Percentage
Male	70 %
Female	30%
Total	100%

Source: Primary Data

It is interpreted from above chart that; maximum number of respondents are female of about 30% and 70% are male.

**Table 3. The Age**

S.no	Age category	Percentage
1	18-30	50%
2	30-58	50%
Total		100%

Source: Primary Data

It is interpreted from above chart that maximum numbers of respondents are 18-30 age category of about 50% and 50% are 30-58 age category.

**Table 4. Educational Qualification**

S. No	Particulars	Percentage
1	SSLC	10
2	HSC	15
3	Diploma	15
4	Undergraduate	30
5	Postgraduate	30
Total		100%

Source: Primary Data

It is interpreted from above chart that maximum number of respondents are Postgraduates that is 30%, 30% are Undergraduate, 15% are Diploma, 10% are SSLC 15% are HSE.

**Table 5. No of Years' Experience in a Company**

S. No	Particulars	Percentage %
1	1-5	15
2	5-15	20
3	15-25	50
4	More than 25 years	15
Total		100

Source: Primary Data

It is interpreted from above chart that maximum numbers of respondents are 15-25 Years' experience that is 50%, 5-15 Years' experience that is 20%, 1-5 Years' experience that is 15%.

**Table 6. Initial Capital Investment of company**

S.no	Particulars	Percentage
1	Less than 5 lakhs	30
2	More than 10 lakhs	20
3	5-10 lakhs	50
Total		100

Source: Primary Data

It is interpreted from above chart that maximum number of respondents saying that the initial capital investment of their company is less than 5 lakhs that is 30% more than 10 Lakhs 20% 5-10 Lakhs 50%.

**Table 7. The Licensed Clearing Agent**

S.no	Particulars	Percentage
1	Undergraduate	12
2	Pass H card	48
3	Experience in Customs Clearance	40
Total		100

Source: Primary Data

It is interpreted from above chart that maximum no of respondents say that those who pass H card can become a Licensed clearing agent that is 48% about 40% say that those who are experience in customs clearance about 12% say that those who are undergraduate.

**Table 8. The Mode of Transport is mostly used for Export and Import**

S.no	Particulars	Percentage
1	Sea	70
2	Air	15
3	Multimodal	15
Total		100

Source: Primary Data

It is interpreted from above chart that maximum no of respondents say that Air transport is mostly used for shipment that is 15%, Multimodal transport is used by 15%, Seatransport is used by 70%.

The 15.56 percent of the respondents opine that unwanted questions from the customs officers are the main weakness in the process of clearing consignment at the port of India, which is followed by over pollution (13.33%), poor system knowledge (13.33%), and poor infrastructure (11.11%).

*Most common customs-related problems:*

- Misclassification;
- Duties higher than anticipated;
- Customs office won't clear the shipment to your buyer/importer;
- Customs office invoking health, sanitary, or safety issues;
- Labeling issues involving a certificate of origin, weight, ingredients, marks, etc.;
- Inadequate documentation provided by the exporter;
- Issues involving the import or packing regulations of the receiving country.

*To resolve customs problems, try the following:*

- Involve the buyer/importer. Chances are they can help or at least find out what needs to be done to resolve the problem;
- Involve your shipping company. Most shippers are responsive to the customs problems faced by their customers;
- Involve your insurance company;
- Contact the foreign customs' office.
- Contact the Commercial Service office in the appropriate country.

*Discussion:*

- VJ Logistics has to improve their planning for emergencies.
- Customs procedure need for modification so that the cargo can be cleared



properly.

- The exporter and importer need to proper assistants to the customs house agents forshipmenting
- Reduction in Service charges will help to increase the volume of trade.
- CHA's should provide market development assistant for the shippers who have the potential in manufacturing commodities but do not have the marketing competence.
- For Indian business to be able to compete effectively in the global market of the 21stCentury there needs to be a revolution in logistics.
- The Government policies specifically to this industry must be easy and technologiesmust be implemented to do the work properly.
- The common mistakes that happen during filing a packing list should be reduced because it creates more problems in customs clearance.
- Many people have responded that those who don't have valid license can go for customs for clearance it is wrong those who have license only knows the process ofclearance and necessary documents required
- Clearance agent does not give one time lock it is the responsibility of Customs person.

**Conclusions.** The logistics business is very important the growth and development of the country mainly depend upon the logistics industry the export in logistics play a important role apart from my project the role of clearing agents in logistics is a key all cannot be a clearing agent he must pass a qualifying exam conducted by central bureau of indirect taxes he must have a good knowledge to perform a task and to manage a shipment clear the shipment handle problem if problem arises so he must have a well experience in the field to manage the activities the knowledge must be also needed to identify any smuggling of goods cross checking the customer details verifying the packing list because any problem occurs it is the responsibility for a clearing agent to clear the shipment the industry involves a lot of documents the documents varies for kind of shipment either FCL or LCL the goods which are brought inside have different HS codes HS codes the code must be verified and proceededaccordingly to necessary places.

CHA's are in company form of organization have more than 9 years of experience doing shipment range is Rs.200-300 lakhs. They handled all type of goods in export and import. They work for all type of customers and Use Sea and Air Transport. They handle 20 feet and 40 feet container and less container load and full container load. They handle general cargo container and stuffing is done is all places like Airport, House Stuffing and Inland Containers Depots and pay Freight Rates at destination and advance payment. They provide Facilities like information about Vessel movement, packing and insurance.

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## THE MAIN LOSSES OF THE UKRAINIAN ENERGY SYSTEM AS A RESULT OF MASSIVE ATTACKS BY RUSSIA

**Dmytro Tkach<sup>1</sup>, Dmytro Tkach<sup>2</sup>**

<sup>1</sup>Doctor of Political Sciences, Professor, Vice-Rector for International Affairs, KROK University, Kyiv, Ukraine, e-mail: ditkach2017@gmail.com, ORCID: <https://orcid.org/0000-0002-0824-8559>

<sup>2</sup>Postgraduate student, specialty 051 "Economics", KROK University, Kyiv, Ukraine, e-mail: dmitriyt@krok.edu.ua, ORCID: <https://orcid.org/0009-0009-1401-3324>

### Citation:

Tkach, D., & Tkach, D. (2023). The main losses of the ukrainian energy system as a result of massive attacks by russia. *Economics, Finance and Management Review*, (2), 51–59. <https://doi.org/10.36690/2674-5208-2023-2-51-59>

**Received: March 02, 2023**

**Approved: June 29, 2023**

**Published: June 30, 2023**



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**Abstract.** For Ukraine, which is in a state of hybrid war with the Russian Federation, the issue of effective counteraction to the consequences of massive Russian attacks on the energy system of Ukraine is vital. Therefore, the study of the state of the electric power industry after the terrorist attacks of Russian aggressors and the actions of the authorities to neutralize the damage caused by the enemy is an extremely urgent task. The purpose of the article is to analyze the state of the electric power industry after the terrorist attacks of Russian aggressors and the actions of the authorities to neutralize the damage caused by the enemy. The structural-functional method helps to identify the main elements of conflict interaction, to determine the role of each of them. In this case, we are talking about the actions of the state-terrorist regarding the massive attacks of Russians on the energy system of Ukraine, but also in the ability of the Ukrainian authorities to guarantee the stable functioning of the electricity industry in war conditions. The method of expert assessments, the essence of which is that it is experts: scientists, politicians, journalists who give professional, unbiased assessments of objective and subjective factors affecting the situation in the electricity sector. Historical - critical method, which means the study of the emergence, formation and development of objects in chronological sequence. In this case, we are talking about the study of the emergence and further development of the Ukrainian-Russian war. The main results of the research presented in the article consist in the systematization of total losses of the energy system of Ukraine during the war. The article proposes the main measures to restore the energy system of Ukraine.

**Keywords:** Ukrainian-Russian war, Ukrainian electricity industry, fuel and energy complex of Ukraine, renewable energy sources, nuclear generation and hydrogen energy.

**JEL Classification:** F47, L94, P18

**Formulas:** 0; **fig.:** 0; **tabl.:** 1; **bibl.:** 9

**Introduction.** The Ukrainian-Russian war, which has lasted for eight years, has caused great damage to the Ukrainian electricity industry. Firstly, there was a sharp drop in the use of electricity by at least 40%. Secondly, the enemy captured part of the power generating capacities, several dozens of power plants of various types were destroyed due to shelling with missiles, shells, bombs. Thirdly, the majority of CHPs and TPPs that work on coal were left without this energy raw material, because the mines are in the occupied territory.

All this negatively affects the Ukrainian economy, leads to a drop in GDP, impoverishes the Ukrainian people.

Thus, our state faces a challenge not only in ensuring national security in confronting military aggression from Russia, but also in the ability to guarantee the stable functioning of the electric power industry in the conditions of war.

The situation in the fuel and energy complex and the level of energy security that the government is able to provide is a litmus test of the maturity of public policy and the quality of public administration. The events that have been developing in Ukraine after February 24 emphasize its systemic importance.

The interests of the state, business and every citizen intersect in the fuel and energy sector. The highly sensitive social component makes it the focus of attention not only of government officials managing the economy, but also of the President of Ukraine, who in his oath pledged to "take care of the good of the Motherland and the welfare of the Ukrainian people".

And in the annual address to the Verkhovna Rada, delivered by Volodymyr Zelenskyy on December 28, the energy sector was given a special role.

"Now that the enemy has set out to destroy our energy sector, we aim to become a leader in its transformation to counter any threats - military, political, economic or even climate. We must become - and will become - a leader in building modern green energy. This will allow creating a decentralized energy system that cannot be destroyed by missile strikes," the President said. He also noted that the development of renewable energy sources, nuclear generation and hydrogen energy would strengthen the role of Ukraine in Europe.

"Restoring justice for millions of Ukrainians who suffered from the unjustified and extremely brutal Russian invasion is a matter of principle for the Ukrainian government and public.

Every day lost is additional destruction and suffering of Ukrainians at the hands of the invaders. Russia, its criminal government and citizens must be held accountable for their crimes against Ukrainians.

This can be achieved through close cooperation with our Western partners, as well as a consistent policy of collecting compensation from the aggressor. Countries that were in similar situations spent sometimes decades on collecting evidence and trials. For Ukraine, this process can last only a few years.

Recognized by the European Parliament, the Council of Europe and the NATO Parliamentary Assembly as a state sponsor of terrorism, Russia shelled Zaporizhzhya Nuclear Power Plant again, once again bringing the world to the brink of nuclear disaster. The occupiers continue to attack the civilian infrastructure of Ukraine, creating a humanitarian catastrophe and polluting the environment. Attacks by Russian drones and missiles on the objects of the Ukrainian electric power industry have become regular. The aggressor country is not deterred by holidays or the huge damage they cause to ordinary citizens who suffer from lack of electricity, heat in their homes, water supply. These actions of Russia fall under the definition of a terrorist state and will certainly be assessed by the international community.

**Literature review.** The above-mentioned problems testify to the concentration of attention of domestic researchers on the analysis of the state of the electric power industry of Ukraine after the massive Russian attacks on the energy system of

Ukraine. A significant contribution in this area was made by scientists-economists, namely: V. Grushko, Y. Korolchuk, H. Konovalova, C. Mikhailovskaya, L. Trotsenko, M. Topalov, O. Kharchenko and others.

At the same time, in today's complex domestic economic realities, a significant transformation of theoretical and methodological approaches to determining the state of the electric power industry of Ukraine during the Ukrainian-Russian war is necessary, which requires a detailed scientific study of this problem.

**Aims.** The purpose of the article is to analyze the state of the electric power industry after the terrorist attacks of Russian aggressors and the actions of the authorities to neutralize the damage caused by the enemy.

**Methods.** The structural-functional method helps to identify the main elements of conflict interaction, to determine the role of each of them. In this case, we are talking about the actions of the state-terrorist regarding the massive attacks of Russians on the energy system of Ukraine, but also in the ability of the Ukrainian authorities to guarantee the stable functioning of the electricity industry in war conditions.

The method of expert assessments, the essence of which is that it is experts: scientists, politicians, journalists who give professional, unbiased assessments of objective and subjective factors affecting the situation in the electricity sector.

Historical - critical method, which means the study of the emergence, formation and development of objects in chronological sequence. In this case, we are talking about the study of the emergence and further development of the Ukrainian-Russian war.

**Results.** Russia, having suffered painful defeats on the battlefield, cowardly and insidiously, violating all possible and impossible rules of warfare, carries out terrorist attacks on Ukrainian cities and villages, civilian critical infrastructure, energy facilities, destroys centralized drinking water supply. The purpose of the attacks is to exterminate Ukrainians by creating uninhabitable conditions.

Energy facilities have been under shelling by Russian terrorists since the first months of the war. On February 24, 2022, the aggressors seized the Chernobyl NPP. After a long resistance, the Russians seized the Zaporizhzhia NPP on March 4. ZNPP has 6 power units with a total capacity of 6000 MW and is the largest nuclear power plant in Europe.

As for CHPPs and TPPs, the situation is as follows. Due to the shelling by Russian occupants in Ukraine at least 4 thermal power plants were damaged, namely Luhansk CHP, Okhtyrka CHP, Trypillia CHP and Chernihiv CHP. Luhansk CHP is lost, Okhtyrka CHP is actually completely destroyed [1].

Zaporizhzhya thermal power plant has run out of coal, which cannot be supplied due to the temporary occupation of Enerhodar by Russians and hostilities in the South of Ukraine - the operation of the TPP is stopped.

In the hydropower sector, Ukraine has annexed the Kakhovka HPP, and the Trypillia TPP in Kyiv region was hit by Russian shells, but it is still operating.

The owner of SCM company, billionaire Rinat Akhmetov estimates the loss of wind generation of DTEK energy holding due to the Russian invasion in Ukraine at 500 MW.

Huge losses due to terrorist actions of Russians are in renewable energy sources. Let's start with solar energy. 60% of industrial solar power plants are located in the places of fierce fighting, in the southern and southeastern regions of Ukraine. This has caused huge losses from the Russian occupiers. According to preliminary data, 30-40% of solar power plants in these regions were destroyed, which is 1120-1500 MW of their capacity.

The greatest damage was caused to these facilities in Mykolaiv region. Thus, the solar park of the Solar Generation company (22 MW) was half destroyed by artillery and helicopters of the enemy. And the remaining generation cannot be used because 5.5 km of 150 kV power lines supplied to Mykolaiv were destroyed. Almost 100% of the capacities of solar power plants were destroyed in Kharkiv region.

As of January 2022, 1.2 GW of solar power plants were installed in private homes in the country, about 280 MW (24%) have been destroyed to date.

Wind energy has also been developed in Ukraine. As of January 1, 2022, the gross generation of operating wind power plants is 1673 MW. They are mainly located in Zaporizhzhia, Mykolaiv, Lviv, Odesa regions. Due to the war with Russia, 2/3 of wind generators are not working, which is 1162.5 MW of capacity, only 372.5 MW are working, mainly in Odesa and Lviv regions.

In Zaporizhzhya region, all wind farms of DTEK (Botievska - 199.88 MW, Prymorska-2 - 99.58 MW, Orlovska - 98.8 MW) are not working, except for Prymorska-1 - 99.58 MW. The 330 kV overhead power line in Melitopol cannot supply current due to the destruction of the power line. Zaporizhzhya wind power plant of LLC "Yurokap Ukraine" - 98.1 MW - is not operating in the region.

In Mykolaiv region, the turbines of the Prychornomorsky Wind Park and fourteen turbines of Wind Parks of Ukraine LLC do not work.

In Odesa region, the Pivdenne Energy WPP (76.5 MW) has stopped working, but the Dniester WPP (not fully) of Elementum Energy LLC (40 MW) and the wind park of Turkish Guris "Ovid Wind" (32.67 MW) are producing electricity.

As of early July 2022, two wind turbines belonging to different owners were destroyed.

As for bioenergy, the situation is as follows. Companies that produce electricity from biomass in Ukraine can generate 224.5 MW (119.1 MW from biomass, 105.4 MW biogas). All these enterprises are located on the territory of powerful agricultural enterprises. As of early July 2022, the Russian aggression destroyed

10-15% of installed capacities. This primarily concerns the north and east of Kharkiv region, Sumy and Chernihiv regions, Mykolaiv district, Zhytomyr city[2].

As we can see, at first, the occupants seized generating capacities and disconnected them from the United Energy System of Ukraine, hit CHPPs that produce heat and hot water, and thermal power plants in the area of active hostilities.

The enemy launched a missile attack against the power system in September, hitting high-voltage network facilities in the Kharkiv region.

In October 2022, Russia significantly increased its attacks on Ukraine's energy facilities, damaging about 40% of the country's energy infrastructure.

On October 10-11, 2022, the Russian aggressor began to use new tactics: they identified critical energy infrastructure facilities as the main target. As you know, the energy system consists of two parts: power plants that generate electricity and infrastructure for its supply. In October, the aggressor set a goal to destroy both components. First, they launched rocket and bomb attacks on switchgears, transformers and switches to disconnect the power plants from the UES of Ukraine.

Thus, on October 10-11, the racists carried out a powerful attack on high-voltage substations of "Ukrenergo", they hit these objects in the western regions, central region, south and east of Ukraine. Russian terrorists did not stop there and bombed energy facilities every day.

A big problem is that Russian power engineers advise military terrorists on which infrastructure facilities are the most vulnerable.

On October 17 and 22, the next two large-scale attacks took place. Rashists sought to destroy power plants and again high-voltage substations of "Ukrenergo". Russian barbarians used not only cruise missiles, but also Iranian drones for this purpose. On October 10, there were up to five arrivals at some facilities, and there are substations with up to 10 missiles and 2-3 drones. As a result of enemy attacks, about 30% of the power system suffered varying degrees of damage.

On October 31, 2022, due to massive shelling of critical infrastructure, Ukrenergo was forced to initiate emergency power outages. In total, 13 energy facilities were hit. After the loss of light, water supply is stopped. Water was cut off in Kharkiv and Zaporizhzhya, 80% of subscribers in Kyiv have no water supply.

In the second wave on the same day, Russian terrorists hit 10 regions with missiles and drones, where 18 objects were damaged, most of them energy facilities, as a result hundreds of settlements in seven regions of Ukraine were cut off from electricity. The consequences could have been much worse, but thanks to the professional work of air defense 44 out of more than 50 Russian missiles were shot down[3].

Kyiv Mayor Volodymyr Klitschko reported two strikes on critical infrastructure facilities in Kyiv. There was also an attack on one of the communities of the Kyiv region, according to the OVA.

Critical energy infrastructure facilities were also hit in Kharkiv, Zaporizhzhia, near the city of Svitlovodsk in Kirovohrad region and in Cherkasy region. There are problems with electricity supply in these regions.

In Cherkasy region, according to the regional authorities, two-thirds of the region has no electricity. Kharkiv city authorities reported that the subway, trams and trolleybuses are not working, but buses are running. There are also possible problems with water supply.

Due to the Russian attack, parts of Zaporizhzhia were left without electricity and in some places without water, the OVA reported. Windows in high-rise buildings, a hospital, a school, a house of culture and an infrastructure facility were blown out.

For the first time, Chernivtsi region suffered an attack on critical infrastructure. The damage to critical infrastructure as a result of the shelling was reported by the head of the Chernivtsi Regional Military Administration Ruslan Zaporanyuk.

In Bukovina, Russians hit the Dniester hydroelectric power station, the Moldovan authorities reported. There, in the morning of October 31, a Russian missile fell in the village of Naslavcha, Ocnita district in the north of the country, the local Interior Ministry reported.

The ministry noted that the missile was shot down by the Ukrainian air defense system and fell on the northern edge of the village of Naslavcha, located on the border with Ukraine.

The head of the Dnipropetrovs'k Regional Military Administration Valentyn Reznichenko reported that energy infrastructure facilities in Dnipro and Pavlohrad were hit. According to him, there are serious destructions, all services are working[4].

Local emergency power outages continue in Kyiv, Zaporizhzhya, Dnipropetrovsk and Kharkiv regions. Today, as in previous weeks, it is important that all Ukrainians consciously consume energy and reduce the load on the grid.

Since February 24, Russians have struck at energy facilities 85 times. Two out of three strikes occurred in the last two weeks of the war. The enemy uses air-, sea- and land-based cruise missiles, ballistic missiles, anti-aircraft guided missiles and Iranian Shahed-136 drones.

Donetsk, Sumy, Dnipropetrovsk and Lviv regions suffered the most. Only Zakarpattia, Chernivtsi and Ternopil regions avoided the attacks. The purpose of the attacks is to destroy Ukrainians by creating uninhabitable conditions.

In the conditions of Russian terror in the electric power system of Ukraine, it is extremely important that in March the power system of Ukraine was synchronized with the network of continental Europe ENTSO-E. This made it possible to start commercial export of electricity to the EU countries on June 30. In September this year, it was recorded that the export of current ranks second in ensuring export revenues of the state in the conditions of war.

However, since October 11, Ukraine was forced to suspend electricity exports to the EU to stabilize its own energy system as a result of rocket attacks on the energy infrastructure of Ukraine. It should be noted that the technical capabilities of grid synchronization also work in the opposite direction, if it happens that Ukraine needs to import electricity from the EU [5].

Ukraine's membership in ENTSO-E has created conditions for assistance from the transmission system operators of Germany, Belgium, Denmark, Poland, Slovakia, and Lithuania. Ukrainian power engineers receive equipment and materials from these countries. For example, this is the wire that is most needed to restore the power grid. These are also uninterruptible power supplies, floodlights for the work of crews at night. "Ukrenergo is negotiating with European partners to replenish the transformer park, relay protection equipment, switches and disconnectors. Table No.1 is provided below: "How allies help Ukraine in connection with the destruction of power facilities (as of 1.12.2022)".



**Table 1. How allies help Ukraine in connection with the destruction of energy facilities (as of 1.12.2022)**

Country	Financing of repair (mln usd)	Generators	Transformers
Great Britain	6		
Israel		20	
Spain		30	
Canada	48,2		
Latvia		84	
Lithuania	7,2	160	114
South Korea		20	
Germany	59	135	
Netherlands	73		
USA	108	1000	
Switzerland	100		
Czech Republic	1		
Japan	3		
European Union		40	202
Taiwan		20	

Source: <https://www.slovoidilo.ua/2022/12/01/infografika/suspilstvo/vidnovlennya-enerhetychnoyi-infrastruktury-ukrayiny-chym-dopomahayut-soyuznyky>

European Union Commissioner for Energy Kadri Simson arrived in Kyiv on November 1. She arrived in the Ukrainian capital the day after a massive Russian missile attack, during which critical infrastructure of Ukraine was shelled. The attacks left much of Kyiv without electricity and water. Simson said she arrived in Kyiv to "help scale up support for Ukraine's energy sector." [6]

On November 1, 2022, President Volodymyr Zelenskyy met with European Union Commissioner for Energy Kadri Simson and discussed the restoration of Ukrainian energy infrastructure after Russian strikes and the stabilization of Ukraine's energy grid. In her turn, the Commissioner stated that we have 25.5 million euros ready to ensure the urgent needs and appropriate supplies literally during this meeting. During the escalation, the Russian attacks on the energy system, we need to support Ukraine. I have already seen this destruction with my own eyes, so I will do everything possible to increase the financial, technical, as well as practical assistance that should come from the EU, our institutions, but also from our international partners and private donors.

At the same time, Zelenskyy drew attention to the expediency of creating a platform to support the Ukrainian economy, in particular the energy sector, such as the Contact Group in the Ramstein format [7].

On November 4, 2022, US Secretary of State Anthony Blinken announced that the G7 countries had agreed on a new format to help Ukraine, whose energy infrastructure is suffering from Russian attacks. The new coordination mechanism will be similar to the "Ramstein format", which provides military support to Ukraine.

It is not only about restoring damaged infrastructure, but also about strengthening its resilience. To do this, it is necessary to understand what Ukraine's needs are and what each state can offer on its part, taking into account the available resources. Ukraine appealed to partners to supply equipment for repairs. The call was answered by 12 states, as well as G7 countries [8].

Already in early November, 17 European Union states decided to send Ukraine 500 electric generators. Among the countries that provided such assistance are Slovenia, Slovakia, Ireland, Austria, Sweden, Spain, Germany, Italy, Denmark, Finland, Estonia, Belgium, Bulgaria, Luxembourg, Cyprus, Poland and France[9].

At the same time, Ukraine has opportunities to increase electricity production. It is primarily about renewable energy sources. To do this, the Verkhovna Rada should adopt a law to support investors who want to build wind power plants, as well as small hydropower facilities in the western regions: Transcarpathian, Ivano-Frankivsk and Lviv regions. This law will create conditions for the commissioning of "green" energy facilities, thanks to which Ukraine would receive at least 500 MW of additional capacity in a fairly short period of time. Every 100 MW of built "green" capacities means UAH 1 billion of revenues for the state.

Already on the night of December 31, 2022 to January 1, 2023, Russian aggressors struck again at civilian infrastructure in different regions of Ukraine. Residential buildings, a hotel, a shop, a place of celebration were damaged. There are dead and wounded. However, as stated by Prime Minister Shmyhal, the Russians want to intimidate and leave Ukrainians in the dark on New Year's Eve, causing as much damage to civilian infrastructure as possible. Despite this, the power system remains stable. All services are working to eliminate the consequences of the attacks.

**Discussion.** The actions of the aggressor country to destroy the infrastructure of the electric power industry of Ukraine receive a sharp negative assessment of the leading countries of the world, international organizations. However, there are countries whose leadership pretends that nothing extraordinary happened in the Ukrainian-Russian war and Russian terrorists do not deserve tougher sanctions and appropriate punishment. This puts before the Ukrainian diplomacy, scientific community the task of finding the reasons for such a position of these countries and ways to influence them in order to change their anti-Ukrainian position.

**Conclusion.** Russia will continue its energy terror against Ukraine and energy pressure on the European Union. Ukrainian people will continue to suffer from interruptions in the supply of electricity, water and heat. In the conditions of winter, which will soon come to the country, these difficulties will only increase. Therefore, it depends on the balanced actions of the Verkhovna Rada, the Cabinet of Ministers, resilience and preparedness of the Ukrainian people how we will survive the winter this year.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## CHAPTER 2

# DEVELOPMENT OF FINANCE, ACCOUNTING AND AUDITING

## FOREIGN OWNERSHIP AND BANK RISK-TAKING IN VIETNAM

**Cung Huu Duc<sup>1</sup>**

<sup>1</sup>*Ho Chi Minh City Industry and Trade College (HITC), Ho Chi Minh City, Vietnam, e-mail: cunghuuducvn@yahoo.com.vn*

**Citation:**

Cung Huu Duc. (2023). Foreign ownership and bank risk-taking in vietnam. *Economics, Finance and Management Review*, (2), 60–69. <https://doi.org/10.36690/2674-5208-2023-2-60-69>

**Received: June 18, 2023**

**Approved: June 29, 2023**

**Published: June 30, 2023**



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**Abstract.** *Foreign ownership of banks in Vietnam refers to the participation and ownership of banks by foreign entities in the country's financial sector. Over the years, Vietnam has gradually opened up its banking industry to foreign investors as part of its broader economic reforms and efforts to integrate with the global economy. Foreign ownership of banks in Vietnam was initially restricted, but the government has implemented various measures to encourage foreign investment in the sector. This balanced approach aims to harness the benefits of foreign ownership while safeguarding financial stability and the interests of the domestic economy. Therefore, it may make the banks more risky and perform the study on the relationship between foreign ownership and bank risk taking become more important. The objective of this study is to examine the influence of foreign ownership on the risks faced by commercial banks in Vietnam. By analyzing data collected from a survey conducted between 2010 and 2020, involving 28 commercial banks in Vietnam, the empirical findings demonstrate that foreign ownership in Vietnamese commercial banks is associated with a reduction in risks. Additionally, the research reveals that lower risks experienced by Vietnamese commercial banks in the past are correlated with lower risks in the present. These findings contribute to the ongoing discourse surrounding foreign ownership in Vietnamese commercial banks, emphasizing the need for policymakers to prioritize the effectiveness of joint-stock foreign ownership.*

**Keywords:** bank risk-taking, random effect, system GMM, foreign ownership

**JEL Classification:** G12, G18, G21

**Formulas:** 1; **fig.:** 0; **tabl.:** 4; **bibl.:** 45

**Introduction.** Foreign ownership of banks in Vietnam refers to the participation and ownership of banks by foreign entities in the country's financial sector. Over the years, Vietnam has gradually opened up its banking industry to foreign investors as part of its broader economic reforms and efforts to integrate with the global economy. Foreign ownership of banks in Vietnam was initially restricted, but the government has implemented various measures to encourage foreign investment in the sector. These measures include easing regulatory requirements, allowing higher ownership limits, and simplifying procedures for foreign banks to establish a presence in the country. In recent years, the Vietnamese government has continued to welcome foreign investment in the banking sector while maintaining prudential regulations and supervision. This balanced approach aims to harness the benefits of foreign

ownership while safeguarding financial stability and the interests of the domestic economy. Therefore, it may make the banks more risky and perform the study on the relationship between foreign ownership and bank risk taking become more important.

Previous research studies, including those conducted by Al-Tamimi and Al-Mazrooei (2007), Lee and Hsieh (2014); Nguyen (2021), Nguyen (2020), have established a connection between foreign ownership of banks and an increase in the level of risks. For instance, Nguyen (2022b) found through their empirical analysis that foreign-owned banks face higher operating risks compared to privately-owned banks. These risks are particularly influenced by electoral cycles and political considerations that prioritize the protection of the government. This protection stems from moral hazard, where the government's guarantees to foreign-owned banks weaken their ability to repay obligations. Abid et al. (2021) also support the notion of a lower ratio of foreign ownership in banks. Furthermore, research by Nguyen (2022c) demonstrates that credit risk is higher in foreign-owned banks compared to private banks. Similarly, AlAbbad et al. (2019) arrive at a conclusion consistent with Boubakri et al. (2020), highlighting that commercial banks controlled by the government are associated with elevated credit risk.

Conversely, several prior research studies, including those conducted by Cubillas and González (2014), Bruna et al. (2019), Bhuiyan et al. (2020), have provided empirical evidence indicating that bank foreign ownership is associated with a decrease in risks. Specifically, the empirical results suggest that default risk is lower for banks with foreign owners compared to privately-owned banks. This finding implies that banks with foreign ownership exhibit less sensitivity to macroeconomic shocks. Additionally, bank foreign ownership plays a crucial role in stabilizing credit during banking cycles and periods of financial instability. The research conducted by Younas et al. (2019) supports the notion that countries with strong government interventions in inefficient financial systems aim to protect foreign ownership in the banking sector.

In Vietnam, the government has been gradually divesting its capital from banks such as BIDV, Vietinbank, and Vietcombank. This research paper aims to investigate the impact of bank foreign ownership on bank risk in this context. The empirical findings indicate that bank foreign ownership is associated with a decrease in banks' risks. The study contributes to the ongoing academic discourse in the banking industry, providing empirical evidence from commercial banks in Vietnam, a developing country. These findings also have implications for policy-making decisions regarding the divestment of capital from foreign-owned banks.

The structure of the paper is as follows: The second section presents the theoretical and conceptual framework, followed by the methodology and data description in the third section. The fourth section presents the research results, followed by a consistency test in the fifth section. Finally, the paper concludes with key findings and implications.

**Literature review.** Bruna et al. (2019) conducted a study reviewing the impact of privatization on bank performance. They found that when the government relinquishes control and allows for the privatization of foreign-owned banks by

strategic investors, it leads to increased efficiency in banks. They also emphasized that banks' competition should not be restricted by government intervention. However, high government intervention, particularly with a significant proportion of foreign ownership, has been shown to decrease profits for foreign-owned banks (Dang et al., 2020; Dang & Nguyen, 2021b; Dang et al., 2022; Nguyen & Dang, 2020; Nguyen, 2022a). This situation hampers the financial development process, especially in developing countries (Nguyen, 2022a, 2022b). These findings align with the conclusions of Berger, Hasan, and Zhou (2009), who suggest that foreign-owned banks exhibit weaker efficiency. Additionally, Bhuiyan et al. (2020) propose the development of privately-owned banks in developed countries. Similarly, Liu and Sun (2021) argue that government protection creates higher risks for foreign bank owners.

Previous studies also argue that foreign ownership can have an impact on bank risk-taking due to several reasons.

First: diversification of risk: Foreign ownership often brings in additional capital, expertise, and resources that can enhance a bank's ability to diversify its risk. This can be achieved through international networks, access to global markets, and knowledge of diverse financial products. By spreading risk across different regions and industries, foreign-owned banks may reduce their exposure to specific risks, thus lowering overall bank risk (De Nicoló et al., 2006; Nguyen and Dang., 2023).

Second: improved corporate governance: Foreign-owned banks often adhere to higher corporate governance standards compared to local banks. They may implement robust risk management practices, internal control systems, and stricter regulatory compliance measures. This enhanced governance framework can help mitigate excessive risk-taking behaviors within the bank and foster a more prudent approach to managing risk.

Third, transfer of best practices: Foreign-owned banks often bring in best practices and risk management techniques from their home countries. They may have experience operating in different regulatory environments and face stricter regulations in their home countries. This knowledge transfer can lead to the adoption of better risk management strategies and a more risk-aware culture within the bank (Della Seta et al., 2020; Meles & Starita, 2013; Nguyen & Dang, 2022a).

Finally, market discipline and reputation: Foreign-owned banks are subject to scrutiny from both local and international stakeholders. They often have a reputation to uphold, and their actions are closely monitored by regulators, investors, and the public. This market discipline and the need to maintain a positive reputation can act as a deterrent against excessive risk-taking, as any significant risk failures could have severe consequences on their operations and market standing (Mateev et al., 2021; Yung & Chen, 2018).

Therefore, the H1 theory is posited, suggesting that bank foreign ownership increases banks' risks.

**Aims.** The objective of this study is to examine the influence of foreign ownership on the risks faced by commercial banks in Vietnam.

**Methodology.** Following Bertay et al. (2015), the research model is proposed as:

$$LnZscore_{i,t} = \beta_0 + \beta_1 FOW_{i,t} + \sum_{k=2}^6 \beta_k X_{ki,t} - 12u = 1 + \omega lYear + \varepsilon_{i,t} \quad (1)$$

which  $LnZscore_{i,t} = LnE_{i,t} + ROA_{i,t} \delta ROA_{i,t}$  is the  $i$ th bank's risk at time  $t$ .

The higher increase in  $LnZscore$  leads to the more stability of the commercial bank, and the lower bank risk (Nguyen, 2022d; Nguyen & Dang, 2022b), is affected by the research variable:

-  $FOW_{i,t}$ , is the foreign-owners' ratio of the commercial bank  $i$  at time  $t$  (Almustafa et al., 2023; Dang et al., 2022; Tran, 2019).

And a set of control variables  $Xk$  to test the consistency of commercial banks' performance includes:

-  $LnZscore_{i,t-1}$  is the logarithm  $Zscore$  of the bank  $i$  at time  $t-1$ , to consider the change in  $Zscore$  overtime;

-  $LnTA_{i,t-1}$  is the logarithm of total assets of bank  $i$  at time  $t-1$  (Dang & Nguyen, 2021a, 2022; Younas et al., 2019; Zardkoohi et al., 2018), to consider that commercial banks scale is used to make the control of the theory of economic scale and the problem is too large to collapse;

-  $NPL_{i,t-1}$  is the ratio of non-performing loans and total loans of the bank  $i$  at time  $t-1$  (Zhang et al., 2021), to affect the credit risk of commercial banks positively on general bank risk;

-  $ROE_{i,t-1}$  is a return on equity of bank  $i$  at time  $t-1$  (Tran, 2019), to point out the relationship between equity-profit and risk, so  $ROE_{i,t-1}$  is used as a variable explanation for the impact of equity-profit negatively on bank risk;

-  $LQU_{i,t-1}$  is the ratio of liquid assets and total assets of the bank  $i$  at time  $t-1$  (Battaglia & Gallo, 2017), to find out the effect of bank liquidity negatively on bank risk;

And a set of macroeconomic variables  $Mu$  to test the environment of the economy in Vietnam to respond to commercial banks' performance includes inflation rate  $INT_{t-1}$ , and economic growth  $GDPGR_{t-1}$  at time  $t-1$  (Dang et al., 2020; Dang & Nguyen, 2021b; Ho et al., 2023).

To estimate this model, we applied OLS, random effect and GMM estimation method. Ordinary Least Squares (OLS) is a widely used estimation method in econometrics to estimate the relationship between dependent and independent variables. OLS assumes that the error term has constant variance, is uncorrelated with the independent variables, and follows a normal distribution. By minimizing the sum of squared residuals, OLS provides the best linear unbiased estimates of the regression coefficients. OLS is particularly useful when the data is balanced, and there are no concerns about endogeneity or unobserved heterogeneity. However, OLS may produce biased estimates if these assumptions are violated, such as when there is heteroscedasticity, serial correlation, or omitted variable bias. Random effects estimation, also known as the random effects model or the Mundlak model, is a method used in panel data analysis. It accounts for unobserved heterogeneity by assuming that individual-specific effects are uncorrelated with the independent variables. The random effects model estimates both the fixed effects (common

across all individuals) and the individual-specific random effects. This method allows for capturing time-invariant heterogeneity and addressing endogeneity concerns.

However, the random effects model assumes that the individual-specific effects are uncorrelated with the independent variables, which may be unrealistic in some cases. Additionally, the random effects estimator can be less efficient than other estimators, such as fixed effects or generalized method of moments (GMM), when the individual-specific effects are correlated with the independent variables. Generalized Method of Moments (GMM) is an estimation technique that is particularly useful in dealing with endogeneity and other violations of classical assumptions. GMM allows for weakly specified models and can handle various forms of heteroscedasticity, serial correlation, and measurement errors. GMM relies on moment conditions, which are based on the orthogonality between the error term and certain instruments. These instruments are chosen to ensure that the moment conditions are satisfied. GMM estimation provides consistent and asymptotically efficient estimates under mild assumptions. It is commonly used in dynamic panel data models, instrumental variable regressions, and other situations where traditional OLS or fixed effects estimators may not be appropriate due to endogeneity or omitted variable bias. However, GMM estimation can be computationally intensive and requires careful consideration of instrument validity and overidentification restrictions to obtain reliable results.

*Research data description.* The research data consists of imbalanced tabular information derived from financial reports and annual reports of 28 commercial Vietnamese banks spanning the period between 2010 and 2020. Table 1 contains the primary details and contents of this dataset.

**Table 1. Statistics describing variables**

Variables	Definition	Obs	Mean	Standard deviation	Min	Max
<i>LnZscore</i>	$LnZscore = Ln(ROA+EA)\sigma ROA$	298	2.13921	0.92109	-0.98109	8.18219
<i>LnTA</i>	Logarithm of Total Assets	298	11.21881	1.19887	8.89118	11.08788
<i>NPL</i>	Ratio of Non-Performing Loans and Total Loans	298	0.02222	0.01888	0.000	0.11809
<i>ROE</i>	Return on Equity	298	0.09202	0.08129	-0.82002	0.12189
<i>LQU</i>	Ratio of Liquid Assets and Total Assets	298	0.20711	0.11229	0.00018	0.87981
<i>INF</i>	Inflation Rate	298	0.08211	0.09228	0.0092	0.2297
<i>GDPGR</i>	Economic Growth	298	0.09111	0.00920	0.08217	0.07129
FOW	Foreign-Owners' Proportion in commercial bank	298	0.12881	0.22929	0.000	0.48213

Source: the researcher's data analysis

The statistical description in Table 1 is shown that the mean of *LnZscore* is 2.14 with the maximum 8.18 and the minimum -0.98, and the mean of FOW is 0.13 in the banking system with the maximum 0.48 foreign-owner and the minimum 0 of local owners.

The result of the correlation matrix is presented in Table 2, using a tool of Spearson correlation to test pair variables and the result is used to test "sign" expectation of research variables' betas analyzed in the proposed research model:



the pair variables of *LnZscore* and lag of *LnZscore* has the correlative coefficient 0.4334 at 0.01 significant meaning, but the pair variables of *LnZscore* and FOW do not correlate at 0.1 significant meaning.

**Results.** This section presents the impact of foreign-ownership on bank risk. The hypothesis H1 test for the relationship of foreign-ownership and risk in equation 1 is shown in Table 2.

**Table 2. Correlation Matrix**

Variables	<i>LnZscore</i>	<i>LnZscore</i> -1	<i>LnTAt</i> -1	<i>NPLt</i> -1	<i>ROEt</i> -1	<i>LQut</i> -1	<i>GOB</i>	<i>INFt</i> -1
<i>nZscore</i> -1	0.4334***	1						
<i>LnTAt</i> -1	0.0423*	0.0283	1					
<i>NPLt</i> -1	-0.0834	-0.1322**	0.1727***	1				
<i>ROEt</i> -1	0.1021**	0.0713	0.2337*	-0.0043	1			
<i>LQut</i> -1	-0.0014	-0.0073	-0.2832**	-0.2022***	0.2001**	1		
FOW	0.0333	0.0432	0.3442***	-0.2022**	0.2104**	-0.1701***		
<i>INFt</i> -1	-0.1373***	-0.1122*	-0.2837***	-0.0322	0.0343	0.2447**	0.0173	1
<i>GDPGRt</i> -1	-0.1373**	0.2227***	0.1183*	-0.0331**	0.0378	-0.0734	0.0237	-0.2482**

Note: \*\*\* significance level 1%, \*\* significance level 5%, \* significance level 10%

Source: The researcher's data analysis

The p-value of Hansen J inspections all five columns is greater than 5%, concluding the right tool for variables. And the Arellano-Bond test results in a non-self-correlation of Tier 2 at a meaningful level of 5% but correlated with Tier 1 at a meaningful level of 1%. The FOW variable of five columns is all affected positive sign (+) at statistically significant meanings at 1% and 5%. The result of multiple regressions is suitable for sign expectation of pair research variables by correlation T-Test in Table 2. It is shown that the element of bank-foreign ownership FOW leads to a decrease in banks' risks, then the research hypothesis H1 is rejected for the element of bank-foreign ownership increasing in banks' risks. Therefore, this result is supported by previous researches of same point (Angkinand & Wihlborg, 2010; Boubakri et al., 2013; Fungáčová & Solanko, 2009), but there are still some previous researches of opposite point (Ahamed & Mallick, 2017; Beck et al., 2013; Detragiache & Gupta, 2006; Fu et al., 2014; Nier, 2005; Uhde & Heimeshoff, 2009). The main problem has arisen that Vietnam is a developing country, and the banking industry has been intervened strongly by the Government, so the role of bank-owned banks has been confirmed for controlling banks' risks.

Moreover, this paper is assumed to lag of banks' risk, but the coefficient result of *LnZscore* lag from column (1) to (5) in Table 2 is also shown that the phenomenon of *LnZscore* accumulation over time has decreased in banks' risks, suitable for the positive sign expectation of pair research variables at 0.01 significant meaning in Table 3.

The correlation between *LnZscore* and *LnZscore* lag is meaningful for decreasing in banks' risks.

The finding that foreign ownership reduces bank risk in Vietnam has significant implications for both banks and regulators. Here are three paragraphs highlighting these implications:

**Table 3. Results regression of bank risk (LnZscore) by the gmm system**

Variables	(1) LnZscore	(2) LnZscore	(2) LnZscore	(4) LnZscore	(5) LnZscore
LnZscore <sub>t-1</sub>	0.95827*** [0.10599]	0.70159*** [0.07929]	0.94791*** [0.10819]	0.57822*** [0.09911]	0.97242*** [0.10799]
LnTAt <sub>t-1</sub>	-0.05577 [0.07072]		-0.07872 [0.07224]	-0.12225** [0.05772]	-0.02825 [0.07094]
NPL <sub>t-1</sub>	-1.22144 [2.12217]	-1.17249 [2.42591]		-1.08004 [1.82829]	0.09211 [2.19829]
ROE <sub>t-1</sub>	-1.58910 [1.21279]	-2.12992** [0.94978]	-1.27570 [1.19822]		-1.79192 [1.29051]
LQU <sub>t-1</sub>	0.99999 [0.49912]	0.52592 [0.45022]	0.29204 [0.45028]	0.79995 [0.52292]	
FOW	0.59574** [0.25282]	0.48212** [0.22120]	0.59579** [0.22419]	0.70127*** [0.25442]	0.48528** [0.22959]
Constant	1.90202** [0.85249]	1.29202*** [0.20721]	2.29979** [0.88071]	2.72509*** [0.84120]	0
Observations	298	298	298	298	298
AR1	-2.72 (0.000)	-2.98 (0.000)	-2.92 (0.000)	-2.57 (0.000)	-2.78 (0.000)
AR2	-1.80 (0.071)	-1.78 (0.075)	-1.54 (0.122)	-1.58 (0.095)	-1.80 (0.072)
Hansen J	7.22 (0.201)	7.95 (0.227)	9.7 (0.209)	9.58 (0.214)	9.98 (0.207)

Among the Pooled-OLS, FE, RE in regression of robust-variable test, the chosen estimation in columns (1), (2), (2), (4) and (5) are the suitable results in panel data. \*\*\* Is the level of significance 1%; \*\* Is the level of significance 5%; \* Is the level of significance 10%.

Source: Data analysis result of the research

- *Banks*: The results suggest that Vietnamese banks can benefit from increased foreign ownership as a means to reduce their overall risk exposure. Foreign-owned banks often bring in additional capital, expertise, and best practices in risk management. Domestic banks can leverage this opportunity by seeking partnerships or collaborations with foreign banks or attracting foreign investors. By doing so, they can enhance their risk management capabilities, diversify their portfolios, and improve overall financial stability. However, it is crucial for domestic banks to carefully assess potential partners and investors to ensure alignment in terms of long-term goals, values, and risk appetite.

- *Regulators*: The findings imply that regulators in Vietnam should encourage and facilitate foreign investment in the banking sector. This could be done by streamlining regulatory processes, reducing bureaucratic hurdles, and providing a transparent and predictable regulatory environment. Regulators should also focus on implementing strong corporate governance frameworks and risk management guidelines that align with international standards. Regular assessments and stress tests can help monitor and ensure the effectiveness of risk management practices in both domestic and foreign-owned banks. Additionally, regulators should continue to enhance cooperation and information sharing with foreign regulatory bodies to effectively oversee the activities of foreign-owned banks operating in Vietnam.

- *Policy Considerations*: The research findings call for policy considerations regarding foreign ownership restrictions in the banking sector. Policymakers should reassess any overly restrictive regulations that hinder foreign investment in

domestic banks. Relaxing these restrictions, while maintaining prudential measures, can encourage more foreign banks and investors to enter the market, leading to increased competition, knowledge transfer, and improved risk management practices. However, policymakers should strike a balance between promoting foreign ownership and safeguarding national interests, such as maintaining financial stability, preventing excessive concentration of power, and protecting the interests of domestic stakeholders.

In summary, the evidence that foreign ownership reduces bank risk in Vietnam suggests that both banks and regulators should embrace this opportunity. Banks can benefit from foreign investment to enhance their risk management capabilities, while regulators should create a conducive environment for foreign ownership and enforce robust governance standards. Policymakers should consider revisiting regulations to encourage foreign investment without compromising national interests. By leveraging the positive impact of foreign ownership on bank risk, Vietnam can strengthen its banking sector, improve financial stability, and support sustainable economic growth.

**Discussion.** To verify the stability, the estimation methods for table data such as Pool-OLS, FE, and RE are used. Check Hausman to select one of the three above methods. The results show that the regression coefficient of the FOW variable always carries a sign (+) and statistically significant at 1% and 5%. These methods strengthen the result that Foreign ownership helps commercial banks less risk.

**Table 4. Regression results of bank risk (*LnZscore*) by Pooled-OLS and RE**

Variables	(1) <i>LnZscore</i>	(2) <i>LnZscore</i>	(2) <i>LnZscore</i>	(4) <i>LnZscore</i>	(5) <i>LnZscore</i>
<i>LnZscore</i> <sub>t-1</sub>	0.49108*** [0.05827]	0.47450*** [0.05727]	0.47128*** [0.05552]	0.45722*** [0.05724]	0.49599*** [0.05799]
<i>LnTAt</i> <sub>t-1</sub>	-0.09999 [0.07949]		-0.09999 [0.07499]	-0.11144 [0.09817]	-0.09105 [0.07918]
<i>NPLt</i> <sub>t-1</sub>	-1.97499 [2.94872]	-1.94598 [2.92922]		-2.01915 [2.94118]	-2.18107 [2.92749]
<i>ROEt</i> <sub>t-1</sub>	-0.28929 [1.09587]	-1.04990 [0.91959]	-0.55505 [1.04199]		-0.40219 [1.09512]
<i>LQUt</i> <sub>t-1</sub>	0.47749 [0.55252]	0.42215 [0.55221]	0.92502 [0.51599]	0.48118 [0.55242]	
FOW	0.58818** [0.22201]	0.28779** [0.19490]	0.57258** [0.22250]	0.90259*** [0.22898]	0.54571** [0.22792]
<i>LnZscore</i> <sub>t-1</sub>	-5.21582 [9.17992]	-0.20142 [8.21002]	-1.99890 [8.81188]	-9.22727 [8.80427]	-2.14778 [8.82414]
<i>LnTAt</i> <sub>t-1</sub>	-22.00778 [50.49112]	-28.21498 [50.25279]	-22.9712 [47.979]	-22.2745 [50.29299]	-22.41879 [50.40791]
Constant	2.94994 [2.19212]	2.07999 [2.08428]	4.50259 [2.95789]	4.14545 [2.10952]	2.99489 [2.19129]
Observations	298	298	298	298	298
R <sup>2</sup>	0.2299***	0.2228***	0.2299***	0.2299***	0.2249***
Chosen Estimation	Pool-OLS	Pool-OLS	RE	Pool-OLS	Pool-OLS

Among the Pooled-OLS, FE, RE in regression of robust-variable test, the chosen estimation in columns (1), (2), (2), (4) and (5) are the suitable results in panel data.  
 \*\*\* Is the level of significance 1%; \*\* Is the level of significance 5%; \* Is the level of significance 10%.

Source: Data analysis result of the research

**Conclusions.** Previous research on the relationship between foreign ownership and bank risks has yielded contradictory results. In parallel, the foreign investor has been increase its capital investment in Vietnamese commercial banks. This study aims to address the research gap by providing empirical evidence on the connection between foreign ownership and bank risk. The research focuses on 28 Vietnamese commercial banks over the period of 2010-2020. The findings suggest that an increase in foreign ownership contributes to a decrease in bank risk. This result underscores the significance of foreign ownership in reducing bank risk in Vietnamese commercial banks, while also providing policymakers with more consistent insights into bank efficiency within the context of foreign-owned banks.

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## STOCK-MARKET AS AN INVESTMENT PLATFORM AMONG BUSINESS COLLEGES GRADUATES

Vikas Gupta<sup>1</sup>, Sripal Srivastava<sup>2</sup>, Rajiv Ratan<sup>3</sup>

<sup>1</sup>Ph.D., Professor, Meerut Institute of Engineering & Technology, Meerut, vikas.gupta@miet.ac.in

<sup>2</sup>Ph.D., Assistant Professor, Galgotias' University, Gautam Budh Nagar Uttar Pradesh, sripalsrivastavamba09@gmail.com, ORCID: <https://orcid.org/0000-0003-0562-2004>

<sup>3</sup>Ph.D., Associate Professor, RBS Management Technical Campus, Agra.

### Citation:

Gupta, V., Srivastava, S., & Ratan, R. (2023). Stock-market as an investment platform among business colleges graduates. *Economics, Finance and Management Review*, (2), 70–75. <https://doi.org/10.36690/2733-2039-2023-2-70-75>

Received: May 27, 2023

Approved: June 29, 2023

Published: June 30, 2023



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**Abstract.** The stock market reveals the economic condition of the country. Without investors investing in the stock exchange, there would be no existence of a stock market. A stock-market is a public entity for the trading of company stock and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately. This research is intended to be a valuable source of knowledge, the public, educational institutions, and potential investors. The purpose of this study is to assess business college students' knowledge of stock market products, investment avenues, institutions, and services. The objective is to evaluate the perception of the business college students on the role of the media and other means in spreading stock-market knowledge. The data was collected through the questionnaire using an online survey. The study involves a quantitative method and the data is computed and tested using SPSS 25. The tools used for analyzing the data were descriptive tools and ANOVA. According to the findings, Colleges have a low level of awareness about SM products and investment/saving opportunities. The respondents agree that stock-market modules should be introduced, seminars should be conducted at all educational levels, etc. The study revealed that the students of business colleges are aware of the stock market as an investment platform, so they prefer and are interested in investing in SM. With the responses to the awareness of stock-market processes and institutions, the average awareness of the students is high, which indicates that the students among three business colleges have knowledge of SM risk and return. Moreover, it reveals that they are aware of the SM process, which indicates that the students are capable of investing in the future. Furthermore, the students are not that aware of the SM products and investment/saving avenues, but overall, the students are a little more aware of SM products than the investment/saving avenues.

**Keywords:** awareness, business college graduates, stock-market.

**JEL Classification:** A22, G14, G17

**Formulas:** 0; **fig.:** 0; **tabl.:** 2; **bibl.:** 23

**Introduction.** A stock-market, or equity market, is a public entity for the trading of company shares or stock and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately. In general, the stock-market reveals the economic condition of the country. Without investors investing in the stock exchange, there would be no existence of a stock market. The stock market's clients are business people, retired officers, and other private and public employees.

Even as researchers' boast of the success of crowd funding, this research shows that young entrepreneurs are struggling to gain investors' trust (Kuensel, 2020).

Despite the availability of various types of investment avenues, the purpose of this research is to determine whether or not business college students are aware of stock markets and are active participants in stock markets.

**Literature review.** A number of studies have been conducted around the world to assess people's knowledge of financial matters, products, insurance, and stock markets.

Adebayo et al. (2003) revealed that youths have a negative attitude toward investment. They discovered that factors like good leadership, adequate dissemination of information, and financial assistance from the government could encourage the youth's participation towards investment in the Nigerian stock market.

Akhter and Sangmi (2015) stated that undergraduate students do not possess an adequate level of stock-market awareness and the analysis indicates that the respondents have a moderate level of literacy.

Thapa (2018) concluded that the students would like to have knowledge and experience of crypto currencies, mutual funds, bonds, and stocks. Students should understand the stock market and have ample experience, ideas, and business skills to become good investors in the future.

A limited number of studies have been conducted on the stock-market scenario in Bhutan. Wangmo et al. (2018) revealed that 65% of the respondents were aware of the stock market and that the major key challenges of RSEBL were lack of active public participation, lack of active participation from the companies, low frequency of trade, and liquidity problems. They also stated that Bhutanese people are still new to the concept of the stock market and choose financial institutions to invest their money in instead.

Although there are many studies carried out throughout the world on stock-market awareness, in Bhutan there are a limited number of studies on the stock market and none in the area pertaining to the younger generation. Thus, this research has been undertaken to fill this gap and make a modest contribution to the stock-market of Bhutan.

A well-developed financial market attracts investments by recognizing and financing lucrative business opportunities, etc. The stock market is one of the key players in a well-developed financial system. Pauldo (2005) states that stock markets, due to their liquidity, enable firms to acquire much needed capital quickly. Thus, the stock market also plays a crucial role in the nation's developmental process. The stock market is relatively small, illiquid, and stocks are thinly traded; the stock market is not vibrant. While it has the potential to be one of the cornerstones of the developmental process, it has not developed to its full scale of operation. Therefore, this study will seek to ascertain whether it is imputed to the dullness of the market.

**Aims.** Research objectives of article are:

- a) to measure the level of awareness of business college student on stock-market products, investment avenues, terms, institutions and services;
- b) to evaluate the perception of these business college students on the role of media and other means in spreading stock-market knowledge.

*Research hypothesis:*

H01= The undergraduate students do not possess adequate level of SM awareness.

H02= The level of awareness among the sample group does not differs significantly.

*Significance of the study.* This research is intended to be a valuable source of knowledge, the public, educational institutions, and potential investors. Benefit not only from the discovery of the student's participation in the stock-market but also gain the ability to make suggestions to the concerned authorities to develop the market. It will be able to see how to increase public understanding of the organisation and its services. This research would also assist the incorporating the results of this study into their plans and policies.

**Methodology.** The quantitative descriptive analysis method was used in this study since it helped in the generation of numerical data that could be converted into usable statistics. The study's goal is to determine the level of stock market knowledge among B.Com. and B.A. students. The Taro Yamane formula has been used to get the sample size of the known population. The sample is 303. The respondents were asked to rank their level of awareness on a five-point scale. The study involves a quantitative method and the data is computed and tested using SPSS 25. The tools used for analyzing the data were descriptive tools and ANOVA.

*Data interpretation and analysis.* Males account for the majority of respondents (53.8%), followed by females (44.6%), and 1.7% fall into another category. The maximum number of respondents were 2<sup>nd</sup> year students with 51.5% and the rest were 3<sup>rd</sup> year students. The majority of respondents (73.6%) are under the age of 23, 26.1% are between the ages of 24 and 29, and 0.3% are over the age of 29. The majority of respondents are B.Com., Finance with 34.7%, followed by Accounting with 24.8%, BBA Marketing was 22.4%, HRM was 11.6% and General Management was 6.6%.

The analysis has been discussed under the following main heads.

1) *Awareness of Stock-market as an Investment Platform* – The stock market will be a good investment platform for students as they will learn to invest and go into the real world with financial activities (Thapa, 2018). Therefore, this study is to find the level of awareness of the stock market as an investment platform among the business college students.

Stock-market awareness is high, with a combined mean of 3.80. The average awareness of the stock market's variables is very high, with the mean score of the variable ( $X = 4.11$ ). The students are aware of SM, know the importance of SM, and are aware that SM is good for financial planning since it gives more income.

2) *Awareness of Stock-market Process and Institutions* - The students may know about the existence of a stock exchange in the country. It is important to know the risk involved in shares, their return, and their processes before investing in the stock market. The descriptive tools (combined mean) are used to analyse this dimension. The respondents' awareness of stock-market processes and institutions is high (mean = 3.27).

3) *Awareness on Stock-market Products and Investment/Saving Avenues* - The combined mean is used to measure the awareness of stock-market products and investment/saving avenues. Awareness of stock-market products and



investment/saving avenues is low. Therefore, the awareness level of SM products and investment/saving avenues is low. The research done by Akhter and Sangmi (2015) also reveals that the awareness regarding stock-market products or instruments is also low.

The awareness of various aspects of stock-market discussed in preceding pages has been summarized in Table 1. The result of analysis indicates that the respondent has moderate level of awareness (the combined mean score of all dimensions being 2.77 with SD 0.86).

*H01: The undergraduates' students do not possess adequate level of stock-market awareness.*

**Table 1. Overall Stock-market Awareness**

	College 1		College 2		College 3		Combined Mean	Combined SD
	X	SD	X	SD	X	SD		
Awareness on Stock-market as An Investment Platform	3.76	0.98	3.61	0.94	4.02	0.95	3.80	0.96
Awareness on Stock-market Process and Institutions	3.37	1.19	3.16	1.17	3.25	1.23	3.26	1.19
Awareness on Stock-market Products/Instruments	1.28	0.43	1.22	0.41	1.27	0.44	1.26	0.43
Combined Mean and SD	2.81	0.87	2.61	0.84	2.85	0.88	2.78	0.86

*Note: X = Mean; SD = Standard Deviation*

Overall, the calculated mean value of stock-market awareness is 2.78. The average awareness as per the measurement scale is 3, and thus this is below the average scale. At the 0.05 percent level of significance, the computed value is less than the critical value. Hence, the null hypothesis is rejected, and it is concluded that the literacy level of undergraduates from business colleges on the stock market is less than moderate and thus not adequate. It is found that results are moderate with mean values falling below average 3 on the scale, with the mean of the samples 1, 2, 3 and 4 being 3.80, 3.26, 1.26, and 2.77. Similarly, in the research conducted by Akhtar and Sangmi (2015), it was found that the students of India (Jamu and Kashmir) also did not possess an adequate level of stock-market awareness.

**Table 2. ANOVA**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.620	2	.310	1.792	.168
Within Groups	51.88	300	.173		
Total	52.50	302			

*H02: Awareness level among the sample group does not defer significantly is shown in table 2.*

The significant value is more than the significant level of 0.05 per cent, it is concluded that the business college students are not significantly different from one another. This means that the awareness level the students are almost at par and that there are no huge differences in their knowledge on stock market.

4) *Media and Other Strategies to be used to raise stock-market awareness in the society.* In today's world, the media plays a vital role in promoting and marketing products, so in the case of the stock market, the media is the way to promote stock-

market information and create awareness in society. Increased media coverage leads to raised attention, which in turn makes the stock market more attractive to the investment community (Strycharz, Strauss, & Trilling, 2017). The respondents agree with the media strategies as shown to them, showing a mean score of 4.09. The respondents agree that stock-market modules should be introduced, seminars should be conducted at all educational levels, etc. Therefore, it indicates that other strategies need to be implemented to increase the awareness of SM in society by introducing stock-market modules ( $X = 4.18$ ).

### Results:

1. The majority of the respondents were 2<sup>nd</sup> year students with 156 respondents.
2. Most of the respondents are majoring in B. Com, Finance with 34.7%.
3. The students are aware of SM, know the importance of SM, aware that SM is good for financial planning since it gives more income.
4. Awareness on Stock-Market Products and Investment/ Saving Avenues is low with the combined mean of 1.26.
5. The respondents agree that stock-market modules should be introduced, seminars should be conducted at all educational levels.

**Discussion.** Based on the respondents' opinion the following recommendations are given:

1. It should introduce stock-market as a module in business institutions to encourage active trading among the youths.
2. It should conduct awareness campaign through information technology and conduct seminars, practical workshops and training programs to educate the public.
3. The present study focused only on three variables and took stock-market as the only investment avenue, future researchers can also focus on other related variables and awareness on other investment avenues such as banking sectors.

**Conclusion.** The study revealed that the students of business colleges are aware of the stock market as an investment platform, so they prefer and are interested in investing in SM. With the responses to the awareness of stock-market processes and institutions, the average awareness of the students is high, which indicates that the students among three business colleges have knowledge of SM risk and return. Moreover, it reveals that they are aware of the SM process, which indicates that the students are capable of investing in the future. Furthermore, the students are not that aware of the SM products and investment/saving avenues, but overall, the students are a little more aware of SM products than the investment/saving avenues.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## CHAPTER 3

### MODERN MANAGEMENT TECHNOLOGIES

#### THE MAIN WAYS OF LEAKING COMMERCIAL SECRETS AND MEASURES TO PROTECT THEM

**Hisham Jadallah Mansour Shakhathreh<sup>1</sup>, Esraa Mohamed Ababneh<sup>2</sup>**

<sup>1</sup>Ph.D. (Law), Assistant Professor, Faculty of Law, Jadara University, Jordan, e-mail: [dr\\_hisham\\_shakhathreh@yahoo.com](mailto:dr_hisham_shakhathreh@yahoo.com), ORCID: <https://orcid.org/0000-0001-8693-5744>

<sup>2</sup>Faculty of Business, Autonomous University of Barcelona, Barcelona, Spain, e-mail: [esraaababneh99@gmail.com](mailto:esraaababneh99@gmail.com) ORCID: <https://orcid.org/0009-0007-1586-1646>

**Citation:**

Shakhathreh, H., & Ababneh, E. M. (2023). The main ways of leaking commercial secrets and measures to protect them. *Economics, Finance and Management Review*, (2), 76–82. <https://doi.org/10.36690/2733-2039-2023-2-76-82>

**Received: May 26, 2023**

**Approved: June 29, 2023**

**Published: June 30, 2023**



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**Abstract.** *The study is devoted to the study of international experience in the protection of trade secrets in the leading countries of the world. The purpose of the study is a comparative analysis of the features of international experience in protecting the commercial secrets of corporations. The methodological basis of the study was the use of methods of comparative analysis, methods of analysis and synthesis, as well as an expert survey and a graphic method for presenting the results of the study. The main results of the study are the systematization of commercial information according to the degree of protection, as well as the generalization of the practice of the EU member states regarding the protection of commercial secrets. The main ways of disclosing information constituting a commercial secret are classified: communication of the specified information to other persons, in particular to competitors; providing documents containing information constituting a commercial secret to other persons for perusal; notification of the above-mentioned information in mass media, etc. Systematized measures for the protection of confidential information constituting a commercial secret, namely: organizational, legal, physical, technical and psychological. Organizational measures include a set of measures to protect information that is important for the enterprise by restricting access to it. Technical means involve the use of special programs and equipment that make it impossible to view and/or copy important electronic information. Legal measures involve bringing the internal documents of the corporation into compliance by making appropriate additions to them. The study presents the results of a survey of representatives of EU commercial structures regarding the leakage of trade secret information and tools for protection against leakage.*

**Keywords:** *corporation; information; commercial information; trade secret; flow of information; information protection.*

**JEL Classification:** K12, K33, K42

**Formulas:** 0; **fig.:** 3; **tabl.:** 1; **bibl.:** 10

**Introduction.** The first consequence of the lack of a harmonised system for the protection of trade secrets is the lack of a uniform definition of "trade secrets" within the European Union, Switzerland, Japan and the United States. The general definition of "trade secrets" is provided by Article 39.2 of the TRIPS Agreement:

"Natural and legal persons shall have the possibility of preventing information lawfully within their control from being disclosed to, acquired by, or used by others without their consent in a manner contrary to honest commercial practices so long as such information:

- a) is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question;
- b) has commercial value because it is secret; and
- c) has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret."

This definition is often acknowledged by the case law of the EU countries which do not have a statutory definition. Nevertheless, the requirements provided therein can indirectly be found in many of the definitions adopted by the other EU jurisdictions. In Italy, Portugal and Sweden, a statutory definition of trade secrets is provided by the respective specific laws.

By way of an example, the definition of "trade secrets" provided by the Swedish law, included in Section 1 of the Trade Secret Act, reads as follows: "For the purpose of this Act a trade secret means such information on business relations or operating conditions of a business in somebody's business which is kept secret and of which the disclosure is aimed at causing damage to the business proprietor from a competition point of view".

A statutory definition of trade secrets is also available in the unfair competition provisions of Bulgaria, Czech Republic, Greece Poland and the Slovak Republic. In Hungary and Lithuania, the statutory definition is provided in their respective Civil Code. In Slovenia, information is deemed to be a trade secret if so determined by a company in a written resolution. In all the other EU Member States, where no formal definition of trade secret exists (i.e., Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, The Netherlands, Republic of Ireland, Latvia, Luxembourg, Malta, Romania, Spain and to a certain extent UK), this has been developed by courts and commentators.

The review of the different definitions has shown the presence of some common requirements. In general, a trade secret is defined as:

- i) technical or commercial information related to a business;
- ii) which is not generally known or easily accessible;
- (iii) which has economic value (i.e., it confers a competitive advantage to the owner); and
- iv) which disclosure to a competitor, could cause a prejudice to the owner's interest.

The review has also shown that in almost all countries, the (statutory or jurisprudential) definition of trade secrets is very broad and suitable to encompass

different types of information. In principle, any type of information is potentially capable of being protected as a trade secret, as long as the above criteria are met. We also noted that often, commentators and courts tend to categorise trade secrets into two main types:

i) Technical secrets, which include any type of technical information, as manufacturing processes, technical drawings and designs, prototypes, inventions (not patentable or not patented), technical know-how, formula or recipes, genetic materials, fragrances, etc.

ii) Commercial secrets, which include customers and suppliers list; information on business strategies and plans, business models, cost and price information, other marketing information, etc.

It is worth noting that although the TRIPS Agreement qualifies "undisclosed information" as a type of intellectual property right, and despite a close relationship between trade secrets and intellectual property rights has been pointed out in many countries, most of the EU Member States do not attach the status of intellectual property rights to trade secrets. Exceptions can be found in some EU Member States such as Italy, France, Latvia, Romania (only with regards to know-how), Slovak Republic and Spain (at least formally).

Considering a trade secret as an IP right under national legislation would trigger the application of the remedies provided by the Enforcement Directive for intellectual property rights, however, due to the different form of implementation adopted by Member States, this does not automatically foster the creation of a more uniform legal system. The Enforcement Directive is applicable to trade secrets only in Italy, Portugal (to the extent the law implementing the Enforcement Directive is applicable to unfair competition conduct), Slovak Republic and to a certain extent in Romania.

Outside Europe, a statutory definition of "trade secrets" is provided by the Japanese Unfair Competition Prevention Act and by the US UTSA. Switzerland does not have a statutory definition, but case law and scholars have generally accepted the criteria identified by Article 39.2 of TRIPS. Furthermore, in Japan and the United States, trade secrets are generally considered to be intellectual property rights, but not in Switzerland.

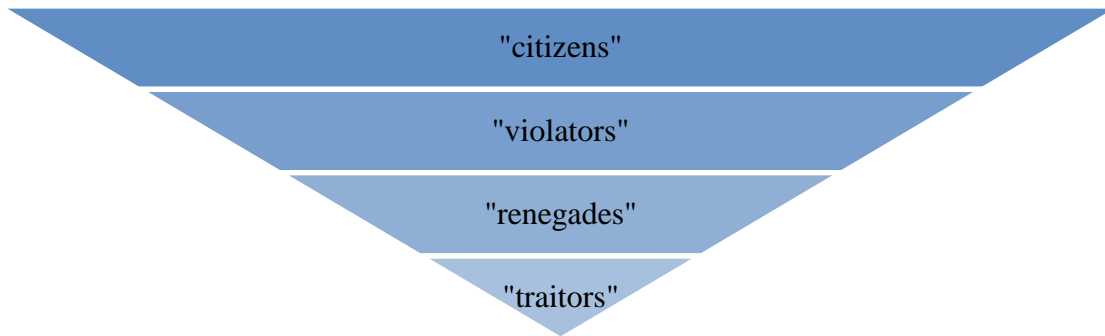
**Aims.** The purpose of the study is a comparative analysis of the features of international experience in protecting the commercial secrets of corporations.

**Methodology.** The methodological basis of the study was the use of methods of comparative analysis, methods of analysis and synthesis, as well as an expert survey and a graphic method for presenting the results of the study.

**Results.** To understand the sources of the information leak, we offer the results of a study conducted by the company to identify the persons involved in it.

One of the first steps in the direction of classification of persons who disclose trade secrets was made by the international research company IDC, which presented its view on the problem in 2006. According to IDC, the system of insiders has four levels: "citizens", "violators", "renegades", "traitors" (Fig. 1).

The top tier consists of "citizens" — loyal employees who very rarely (if ever) violate corporate policy and are generally not a security threat [4].



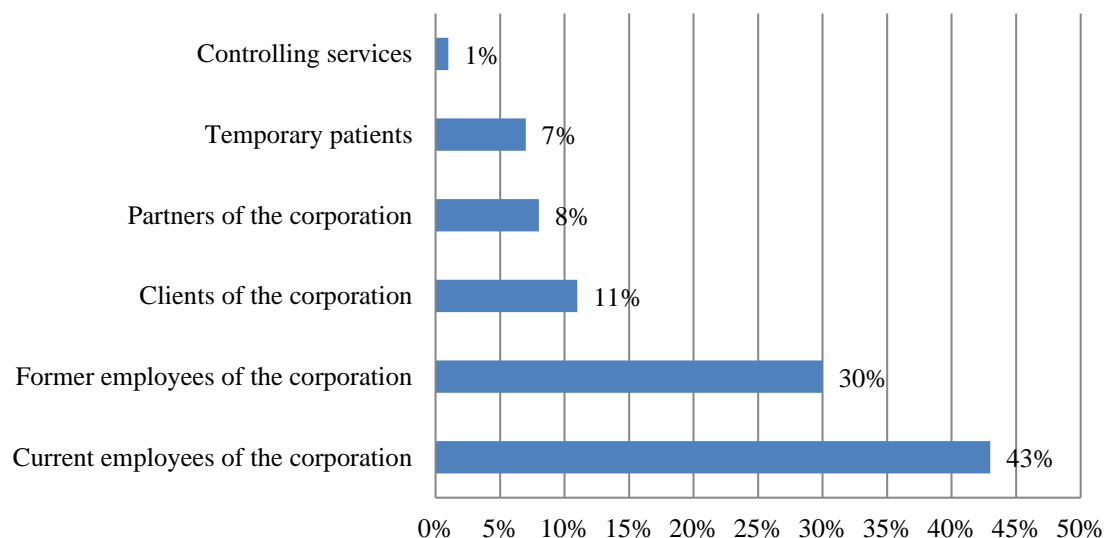
**Figure 1. Classification of insiders according to IDC studies [4]**

Source: developed by authors

At the second level are "violators", who make up a large part of all employees of the enterprise. These employees allow themselves small familiarities, work with personal web mail, play computer games and make online purchases. Representatives of this level of violators pose a threat to information security, but these incidents are random and unintentional.

At the next level are "renegades" - employees who spend most of their working time doing things they shouldn't be doing. These employees are abusing their Internet access privileges. Moreover, such employees can send confidential information of the company to external recipients interested in it. Thus, "renegades" represent a serious security threat.

At the lowest level, there are "traitors" - employees who deliberately and regularly put confidential company information at risk (usually for a financial reward from an interested party). Such employees represent a real threat, but they are the most difficult to catch [139].



**Figure 2. The structure of the subjects of the leak of insider information about the activities of the joint-stock company**

Source: [5]

Analysts have estimated that 43 and 30% of incidents are caused by current and former employees, respectively, 11% are caused by part of the company's customers, 8% are caused by partners and, finally, 7% are caused by temporary employees (contract workers, consultants, etc.). This indicates that the problem of leakage of confidential information is at the top of the list of priorities of the company's management [4].

The most common factors for the disclosure of restricted information by employees are shown in Table 1. As can be seen from the table, the disclosure of restricted information by employees is most often carried out due to the fact that the management of companies does not pay attention to the threats of information leakage related to personnel, that is, insiders.

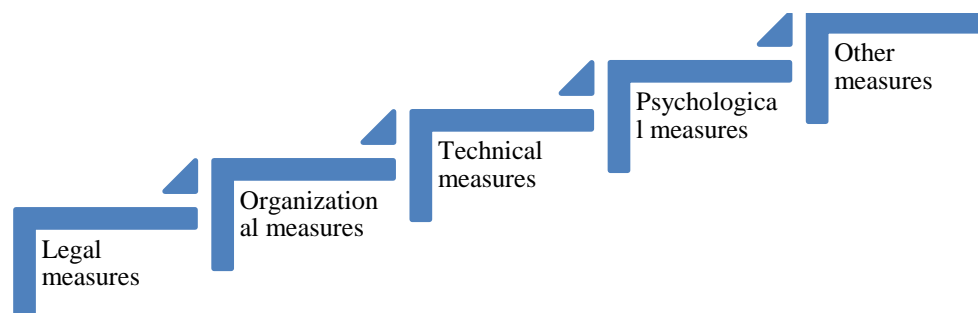
**Table 1. Factors of information disclosure by employees [5]**

№ п/п	Factors	%
1	Excessive talkativeness of employees	32
2	The desire of employees to earn money by any means and at any price	24
3	Absence of the security service company	14
4	"Soviet" habits of company employees to share with each other (traditional exchange of experience)	12
5	Uncontrolled use of information systems	10
6	The presence of opportunities for conflict situations to arise among employees: lack of psychological compatibility, random selection of personnel, lack of work on team cohesion, etc.	8

Source: developed by authors

Therefore, after analyzing the data privacy threats that are related to personnel, it can be seen that ignoring these threats leads to serious losses in enterprises. It is not only about the financial losses of the company, but also about the sharp drop in its image due to the fact that it cannot protect its own confidential information. In this connection, the issue of improving the efficiency of the economic security service of joint-stock companies and its interaction with the company's internal divisions and external bodies and administrations is acute.

Protection of confidential information, which constitutes a commercial secret, can be ensured by a complex of legal, organizational, technical and other measures (Fig. 3).



**Figure 3. The main measures that are necessary to protect the commercial secret of the corporation**

Source: developed by authors



*Legal measures* - in order to protect commercial secrets, each corporation needs to regulate appropriate measures in its internal documents.

The right of a business entity to commercial secrecy can be formalized by making appropriate additions to the following documents:

- the statute of the enterprise (it is prescribed that the regime of commercial secrecy is introduced);
- founding agreement;
- collective agreement;
- provisions on commercial secrecy and rules for its preservation;
- provisions on the permission system for access of executors to documents and information constituting the commercial secret of the enterprise; on the mode of work of employees with data constituting a commercial secret, or to other local documents.

When drawing up an employment relationship, it will be very useful to provide, for example, the following obligations for employees to protect commercial secrets:

- to keep a commercial secret that becomes known to them in the course of work, and not to disclose it without permission issued in the prescribed manner, provided that the information that constitutes a commercial secret was not known to them before or was not received by them from a third party without obligation to observe their confidentiality;

- comply with the requirements of instructions, regulations, and orders to ensure the preservation of commercial secrets;

- in the case of an attempt by third parties to obtain from them information that constitutes a commercial secret, immediately report this to the relevant official or to the relevant division of the business entity;

- to keep commercial secrets of business entities with which there are business relations; - not to use knowledge of trade secrets to engage in activities that, as a competitive action, may harm the business entity;

- in the case of dismissal, transfer all information carriers constituting a commercial secret (manuscripts, drafts, documents, drawings, magnetic tapes, punched cards, punched tapes, discs, diskettes, printouts on printers, film and photo films, models, materials, etc.) that were at their disposal, the relevant official.

*Organizational measures* - in order to protect information that is important for the enterprise, it is necessary to limit employees' access to it, that is, each employee gets the opportunity to work only with those data that are necessary for the performance of his duties.

*Technical measures* – special programs and equipment are used to protect information, which make it impossible to view and/or copy important electronic information. For this, access to the hard disk or the possibility of using removable digital media is blocked. Implementation of such measures is usually entrusted to the system administrator.

Information constituting a commercial secret should be divided into categories according to the level of importance:

- 1) information that requires maximum secrecy;
- 2) information, the disclosure of which is possible, but not desirable;

3) everyday working information.

They also compile a list of employees who have access to each group of information.

The ways of disclosing information constituting a commercial secret can be different:

- communication of the specified information to other persons, in particular to competitors;
- providing other persons with documents that contain information constituting a commercial secret;
- notification of the above-mentioned information in mass media, etc.

**Conclusions.** The analysis has revealed the lack of a uniform definition and scope of protection of trade secrets throughout the European Union. In most of the countries protection is not specific and provisions dealing with trade secrets are scattered over completely different fields of law. According to the contributing countries' opinion, such a fragmentation of legislation might entail a risk of inconsistent interpretation of what is protectable as trade secret and consequently, make trade secrets enforcement difficult and costly to handle.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## THE MEDIATING EFFECT OF SOFTWARE SOLUTION IN LOGISTICS SERVICE

**Anoop Singh<sup>1</sup>, Deepa Rajesh<sup>2</sup>, Sandeep Kumar Gupta<sup>3</sup>, Renu Sharma<sup>4</sup>**

<sup>1</sup>MBA Student, AMET Business School, Faculty of Management Studies, AMET University, Chennai, India, e-mail: hamlaanoop11@gmail.com

<sup>2</sup>PhD., Vice President (Academic), AMET University, Chennai, India e-mail: executivedirector@ametuniv.ac.in

<sup>3</sup>PhD, Professor, Centre for Statistics, Modelling and Simulation, AMET Business School, Faculty of Management Studies, AMET University, Chennai, India, e-mail: skguptabhu@gmail.com, ORCID: <https://orcid.org/0000-0002-2670-2858>

<sup>4</sup>PhD., Professor/Consultant, Department of Retail Management, Footwear Design & Development Institute, India, e-mail: renukriti@gmail.com, ORCID: <https://orcid.org/0000-0002-9084-3356>

### Citation:

Singh, A., Rajesh, D., Gupta, S. K., & Sharma, R. (2023). The mediating effect of software solution in logistics service. *Economics, Finance and Management Review*, (2), 83–102. <https://doi.org/10.36690/2733-2039-2023-2-83-102>

Received: May 10, 2023

Approved: June 29, 2023

Published: June 30, 2023



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**Abstract.** This study aims to investigate the role of software solutions and outsourced logistics service providers in the logistics industry in India. The logistics industry in India is a significant contributor to the country's economy, and with the growth of e-commerce and the increasing demand for timely and efficient delivery of goods, the industry has seen significant transformations in recent years. This case study will provide an overview of the Indian logistics industry and the challenges faced by logistics companies in the country. It will then examine the role of software solutions such as transportation management systems (TMS), warehouse management systems (WMS), and supply chain management (SCM) systems in streamlining logistics processes and reducing costs. The study will also analyze the role of outsourced logistics service providers in offering a range of services, including transportation, warehousing, inventory management, and order fulfillment, to businesses operating in the logistics industry in India. The case study will provide examples of companies that have successfully implemented software solutions and outsourced logistics services to improve their logistics operations and gain a competitive advantage in the market. The study aims to demonstrate the benefits of adopting software solutions and outsourcing logistics services for businesses operating in the logistics industry in India. The findings of the case study can provide valuable insights into the role of software solutions and outsourced logistics service providers in the Indian logistics industry and their impact on the industry's growth and competitiveness.

**Keywords:** transportation management systems, warehouse management systems, supply chain management.

**JEL Classification:** L26, L63, L91

**Formulas:** 1; **fig.:** 0; **tabl.:** 25; **bibl.:** 20

**Introduction.** The logistics industry is a critical component of the Indian economy, accounting for a significant share of the country's GDP. However, the industry has faced numerous challenges, such as inadequate infrastructure, inefficient supply chain management, and regulatory constraints, which have led to higher costs and lower efficiency. To overcome these challenges and remain competitive, logistics companies are increasingly turning to software solutions and outsourced logistics service providers.

This case study examines the role of software solutions and outsourced logistics service providers in the Indian logistics industry. The study aims to identify the benefits of adopting software solutions, such as transportation management systems (TMS), warehouse management systems (WMS), and supply chain management (SCM) systems, as well as outsourced logistics services, such as transportation, warehousing, inventory management, and order fulfillment.

The case study provides an overview of the Indian logistics industry and the challenges faced by logistics companies in India. It examines how software solutions and outsourced logistics service providers can help businesses overcome these challenges and improve their logistics operations. The study also evaluates the challenges and risks associated with outsourcing logistics services and the key considerations that businesses need to keep in mind while selecting a logistics service provider.

**Literature review.** Logistics outsourcing and third-party logistics originated in the 1980s as important means for improving supply chain effectiveness. Third-party logistics was initially defined as “the use of external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by the third party can encompass the entire logistics process or selected activities within this process.

Like other outsourcing arrangements third-party logistics got widespread attention and the new approach spread rapidly. Estimations indicate that the proportion of companies in the United States that have implemented third-party logistics (TPL) has increased by 5-8 percent annually. According to a 2004 survey no less than 80% of the Fortune 500 Companies said they rely on TPL, and two-thirds of these companies had been involved in TPL for more than five years. The 2004 survey revealed some ongoing changes of great magnitude. These changes occurred at various levels of TPL-arrangements. One of these concerned the whole industry and it was concluded that it “has undergone significant changes....as a result of mergers, acquisitions, company failures and the entry of many new competitors into niche markets”. Moreover “the geographic coverage and service offerings of the major providers has expanded dramatically”. These re-arrangements caused problems for TPL-firms since “the scale and geographical coverage involved in many recent 3PL-contracts has made it increasingly difficult for one provider to meet those requirements”.

The combined outcome of these changes is that “many 3PL-relationships are increasingly complex, and management of those relationships is quite challenging to both parties”. Some of these dynamics relate to ongoing changes of the logistics

function as a whole which is claimed to have “evolved from a passive, cost-absorbing function to that of a strategic factor which provides a unique competitive advantage. These changing conditions have caused modifications in the view of what TPL actually represents, as well as a shift in the view of the firms involved in. According to Selviaridis and Spring (2007) third-party logistics service providers emerged out of companies previously involved in warehousing and transportation. In the early 1990s firms formerly specializing in express parcel deliveries entered the arena (ex. DHL, UPS, TNT and FedEx). These were later accompanied by firms originally focusing on financial services, IT- services, and management consulting, which brought their competencies in information system and supply chain planning. For these reasons an alternative definition of TPL has been launched: “[3PL is] a relationship between a shipper and third party which, compared with basic services, has more customized offerings, encompasses a broader number of service functions and is characterized by a longer-term, more mutually beneficial relationship.

This extended definition of TPL takes some of the changing conditions into consideration, like the greater scope of the services required by customers and the enhanced role of the relationship between the parties involved. When it comes to academic research, however, the focus seems to have stayed mainly with the buyer of the logistics services. For example, Berglund et al conclude that “relatively little has been written about outsourcing from the providers’ point of view”. Similarly, a more recent review of previous studies found that provider-focused research has lagged behind buyer research both in quantity and scope. These conditions seem to have changed somewhat and logistics service providers have come more into focus. However, what still seems to be quite an unexplored area is the relationship between buyer and provider. Maloni and Carter conclude that “very few studies have attempted to look at both buyers and providers simultaneously”.

This is somewhat surprising since the crucial role of relationships is acknowledged in several studies as will be shown in this paper. On the basis of these observations Maloni and Carter claim that academic researchers should respond with complementary approaches and analyses in order to best serve practitioners. They therefore advocate the employment of alternative frameworks and conceptualizations for a better understanding of TPL. The authors recommend three alternative approaches: transaction-cost theory, social exchange theory, and organizational behaviour. We respect these suggestions but, in this paper, we apply a fourth perspective on issues related to logistics outsourcing, TPL, and logistics service providers. This perspective is the industrial network approach as described in Hakansson and Snehota (1995). We will explain the main reasons for this choice later in the paper.

The shift towards an extended scope of outsourcing arrangements implies a “shift from traditional and functional third-party logistics to comprehensive supply chain relationship. These changes have significant implications for both the role of TPL-firms which has been broadened accordingly and what is appropriate involvement in the relationship with the buyer. Below we illustrate these issues by exemplifying the role of a logistics service provider (LSP) in

relation to three buyers of logistics services. These examples from an ongoing study show the variety in the engagement of LSP in the customers' operations. They also illustrate the dynamics of the scope of the outsourcing arrangements owing to the buyers' need for reorganisation in the activity patterns and resource constellations. The examples illustrate the diversity in involvement from LSP's perspective and hint to the fact that LSP must be able to offer customers everything from the undertaking of single activities to the design and realization of total solutions.

Customer A is a firm in the retailing industry that has outsourced production to low-cost countries and strives to improve the efficiency in its supply chain. The background to the decision to outsource logistics was the problems related to the prevailing structure based on a 'push' philosophy. In this set-up the retailer firm's orders to the main supplier were based on historical sales figures at each of the stores of the company. The supplier produced and packed the goods for each store and then delivered to a distribution centre, run by LSP. At the distribution centre goods were sorted by destination and sent to the respective stores. However, the forecasts based on historical sales showed to be quite unreliable and so the allocation of goods to the retail stores did not correspond to the actual demand. This over- and undersupply caused severe financial problems to the retailer.

To change this situation LSP and the retail firm together designed a new routine for the logistics operations. In the new working arrangement 75% of the predicted volume at each store was earmarked while 25% of the goods sent from the supplier did not have the identity of a specific store. Then, daily orders from the stores, based on real demand, direct the remaining 25% of goods.

The distribution centre hence keeps these goods in stock until an order from a store arrives and then packs and ships the goods

In the new arrangement LSP has a more coordinative role owing to the handling of supplementary orders from the stores. Moreover, the daily deliveries to the stores from the distribution centre also increased the number of transportation activities. Other operations, such as stock-keeping, order handling, marking of goods, and contacts with the retail stores, are now part of the outsourcing arrangement thus expanding the role of LSP. Previously LSP was involved only in a traditional sorting function. In the new arrangement LSP on the one hand extended the scope of its operations and also was involved in the design of the solution. Customer B is a manufacturer with production located in Sweden. From previously relying on local suppliers' B started to source components from China. In this case, LSP was involved in the design of the outsourcing arrangement and made responsible for the total logistics solution. Company B's production design requires delivery from suppliers 2-4 days after call-offs.

Therefore, vendors with manufacturing in China must supply components from a location nearby B. This was arranged by establishing a warehouse, run by LSP, close to the production site. Manufacturer B specifies the requirements to suppliers concerning for example delivery times. B and LSP then jointly work out different solutions that are offered to the suppliers so they can fulfil the delivery requirements.

Even though these offerings to the suppliers are developed jointly by LSP and B,

it is LSP that is offering the solutions. It is also LSP who communicates with the suppliers during the delivery process, for example, by handling the call-offs to suppliers. LSP also takes care of the daily delivery of components to the production site and secures that components are properly unwrapped, and sorted in accordance with B's internal production logic. Furthermore, LSP processes the invoices on behalf of suppliers but the payment is handled directly between the suppliers and B. In this case LSP is part of an activity configuration that has been jointly developed with the outsourcing firm. LSP is involved in coordination of deliveries by adapting these to B's production logic.

LSP intermediates between the suppliers and the manufacturer and links the activity configurations of the suppliers with those of B. The component storage functions as the 'linking point' between the configurations. Customer C is a producer of household appliances. This example illustrates a situation that is quite common today: a producing company closes down its plants in Europe and moves production to a low-cost country. Before the change LSP had been involved in land transportation of components from suppliers to the plant and in outbound logistics from the plant to the customers.

The new distribution arrangement was designed by C's own distribution unit which also takes full responsibility for the coordination of the activities. Hence, in this case LSP was not involved in the design of the arrangement. Moreover, they are not responsible for coordination. The activities in which LSP is involved are totally specified by C. In this case the role of LSP in the new structure is quite 'narrow', they are involved in activity configuration designed and coordinated by others. For LSP this change made them increasingly engaged in air and sea transportation. The resources and capabilities developed for these operations can be used also in relation to other customers.

In this paper we will not rely more on the LSP-example. It is used only to illustrate three characteristics that seem to be representative of general tendencies in TPL. The first is the variety among the types of outsourcing in which LSP is involved, ranging from the undertaking of single activities to total solutions where many competencies and resources are needed. The second is the extended scope of the logistics arrangements as exemplified by customers A and B.

Similar conditions are reported in Carbone and Stone (2005) and Marasco (2008). De Boer et al (2006) claim that traditional 'piecemeal outsourcing' of isolated activities is nowadays supplemented with outsourcing of distinct sets of subsystems of overall logistics arrangements and even outsourcing of "bundles of such subsystems to a single TPL-provider" (ibid. p. 447).

The third tendency is the modifications of the outsourcing arrangement when a buyer reorganizes its activity configuration, which was observed in all three sub-cases. These three characteristics can be traced back to efforts of the outsourcing firm to differentiate its outsourcing arrangements. In turn these strategies have required TPL-firms to differentiate their service offerings.

The survey by Berglund et al (1999) identified a segmented approach applied by service providers, distinguishing on the one hand between a single 'logistics service'

and a 'logistics solution' and on the other between 'basic logistics' and 'value-added logistics'. Persson and Virum (2001) suggested a 2x2 matrix for providers' strategic approaches with the level of complexity of the services and the extent of asset specificity as the two dimensions. Similarly, Hertz and Alfredsson (2003) distinguished between high and low attention to two strategic dimensions: 'general problem-solving ability' and 'degree of customer adaptation'. Bask (2001) applied a similar distinction in a 3x3 matrix building on the dimensions 'complexity of service' and 'customer relationship involvement'. On this basis three types of TPL-services are identified: 'routine', 'standard' and 'customized'.

These changes in buyer demands and the subsequent strategic adaptations of logistics service providers imply great opportunities. By offering services with different features, it will be possible to serve customers with huge variety in demands. On the other hand, this variety is a problem for the service provider, because the various arrangements have to rely on different sets of capabilities and resources. For example, in the terms above, value-added logistics, customized TPL-services, and advanced general problem-solving ability are resource demanding strategies.

They require considerable investments not only in physical facilities and equipment but also in 'logistics competence' – i.e. in designing, organising, and maintaining high-quality logistics arrangements. Moreover, since these arrangements are resource demanding they will expand the cost side of the provider substantially. These increasing costs will impact on the price level of the offerings of the service provider. In turn, these conditions will make it difficult to be perceived a cost-efficient alternative for those customers favouring basic logistics, routine and standardized logistics, and those that are fully satisfied with a limited problem-solving ability. Increasing variety is thus a problem for logistics service providers.

First, this variety calls for a broad spectrum of capabilities to handle the differentiated requirements of customers. Service providers are thus confronted with strategic decisions concerning 'what' to do as illustrated in the examples above. Second, these problems are accentuated by the fact that many times customers also tend to direct the providers undertaking of these operations through detailed contracts and specifications. This means that there will also be a broad spectrum concerning 'how' to do, i.e. the service provider has to apply different approaches in relation to the various customers.

These adjustments tend to restrict the opportunities for service providers to improve on the scale of their operations. Moreover, it constrains the TPL- firm's opportunities to provide its experience in the services to the customer, which is nicely expressed by the managing director of a logistics service provider "In all our negotiations [with the buyer] we expressed concern over the vehicle configuration they wished us to use, we spent a lot of time telling them how we thought they should. They wanted to do it their way so we made clear we didn't think it would work and it became a case of 'we told you so'".

It is obvious that arrangements with these features do not allow the service provider to exploit its resources adequately.



**Aims.** This article aims to provide businesses operating in the Indian logistics industry with valuable insights into the role of software solutions and outsourced logistics service providers and how they can improve their logistics operations and gain a competitive advantage.

*Objectives of Study:* to understand the challenges faced by logistics companies in India and how software solutions and outsourced logistics service providers can help overcome these challenges; to examine the impact of software solutions such as TMS, WMS, and SCM systems on the overall efficiency and cost-effectiveness of logistics processes in the Indian logistics industry; to analyse the benefits and drawbacks of outsourcing logistics services to third-party logistics (3PL) providers and the key considerations that businesses need to keep in mind while selecting a logistics service provider; to provide real-life examples of companies that have successfully implemented software solutions and outsourced logistics services to improve their logistics operations and gain a competitive advantage in the market; to evaluate the impact of software solutions and outsourced logistics service providers on the growth and competitiveness of the Indian logistics industry; to provide recommendations for businesses on how to leverage software solutions and outsourced logistics services to improve their logistics operations and remain competitive in the Indian logistics industry.

*Primary objective* is to analyse the mediating effect of software solution in Logistics industry in HK Trans and Logistics.

*Secondary objectives are:* to find the gap where, HK Trans and Logistics needs to strengthen the strong relationship with customer due to software solution; to find the various customer grievances.

*Scope of the study are:* this study helps to understand the mediating effect of software solution in logistics service; this study helps to promote the business; this study helps to customer retention; this study helps to fulfil the customer's expectations and their need.

**Methodology.** Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability.

This chapter focuses on research methodology that was used in the study. It provides a detailed description of the research approach adopted in this study. Research design, target population, research instruments, data collection and analysis methods used were presented in the subsequent sections.

**Research Design:** The research design for this case study is a qualitative research design, where data will be collected through interviews, surveys, and secondary sources.

**Sampling:** The sampling method for this case study will be purposive sampling, where logistics companies operating in India that have adopted software solutions and outsourced logistics services will be selected for the study.

**Data Collection:** The data collection method for this case study will involve a combination of primary and secondary data sources. Primary data will be collected

through online databases.

**Case Study Development:** Based on the data collected and analyzed, the case study will be developed, highlighting the role of software solutions and outsourced logistics service providers in the Indian logistics industry. The case study will include real-life examples of logistics companies that have adopted software solutions and outsourced logistics services, along with the benefits and challenges they faced during the implementation process.

**Validation:** The case study will be validated through member checking, where the logistics companies that were interviewed will be asked to review the case study and provide feedback on its accuracy.

**Ethical Considerations:** Ethical considerations will be taken into account during the study, including obtaining informed consent from participants, maintaining confidentiality, and ensuring the anonymity of participants. Overall, this research methodology aims to provide a comprehensive understanding of the role of software solutions and outsourced logistics service providers in the Indian logistics industry through a combination of primary and secondary data sources and a qualitative research design.

**Research design:** a research design is a systematic approach that a researcher uses to conduct a scientific study. It is the overall synchronization of identified components and data resulting in a possible outcome. To conclusively come up with an authentic and accurate result, the research design should follow a strategic methodology, in line with the type of research chosen. To have a better understanding of which research paper topic, to begin with, it is imperative to first identify the types of research.

In this research project we used the descriptive research for finding the overall percentage and frequencies of the variables.

**Descriptive Research:**

- a type of descriptive study is considered as it includes survey and describe the state of affairs existing at present;
- this study is concerned with detail description of certain functional variables and characteristics of a population;
- it used to get opinions of the target respondent about the subject;
- this kind of research has the primary objective of development of insight into the problem;
- it studies the main area where the problem lies and also tries to evaluate some appropriate course of action.

**Sources of Data Collection.** For the study purpose both primary and secondary data are used. The primary data collected from the clients or manufacturing industries in Ghaziabad, India. The secondary data collected from records of the company, logistics service providers and Vendors of HK Trans and logistics. The data of past clients also have been collected. The primary and secondary data have been collected to cover every aspect of the study. The primary data are related to the logistics services and products which needed by the clients. The secondary data shows the existing service providers business strategy to attract the logistics clients. These data

used in combination as per need of the study. These data having different merits and demerits and have serves our purpose of the research study.

*Primary Data.* Primary data are information collected by a researcher specifically for a research assignment. In other words, primary data are information that a company must gather because no one has compiled and published the information in a forum accessible to the public. Companies generally take the time and allocate the resources required to gather 8 primary data only when a question, issue or problem presents itself that is sufficiently important or unique that it warrants the expenditure necessary to gather the primary data. In this research, primary data are collected through Questionnaire, Observation, Interviews. Secondary data are the data collected by a party not related to the research study but collected these data for some other purpose and at different time in the past. If the researcher uses these data, then these become secondary data for the current users. These may be available in written, typed or in electronic forms. A variety of secondary information sources is available to the researcher gathering data on an industry, potential product applications and the marketplace. Secondary data are collected through Periodic journals, Magazines, Websites, Annual reports.

*Sampling Design.* The elements or set of elements considered for selection in some stage of sampling. All the clients were found from the online databases and meetings. The sampling design we used in this project is stratified random sampling.

*Stratified Sampling.* The sampling procedure used for the study is stratified sampling. Stratified sampling is a type of probability sampling. In this type of sampling, the entire population in which the study is conducted is divided into sub universe of homogeneous group. It is called strata and the sample is drawn from each of the strata. From each strata the researcher selects the sample randomly.

*The study is a descriptive one.* The main aim behind the study was to identify the mediating effect of software solution in Logistics service. Through the study, collect the opinion of the clients and shippers, readers about HK Trans and Logistics and other logistics. The respondents are personally contacted and the data are collected through interview schedules.

*Sampling Size.* The sample size refers to the number of sampling unit selected from the population for exploration. The manufacturing companies in and around Chennai is totally 312. (Based on the online database 2019).

*Sample size determination formula for known population (N)*  $n = \frac{2 \cdot p \cdot q \cdot N}{e^2 (N-1) + z^2 \cdot p \cdot q}$

N = 312 (manufacturing companies in Chennai) e = 0.05 (estimate error should be within 5%) z = 1.96 (as per the table value confidence interval of 95%)

p = 0.5 (Population proportion for the given population defectives)

$n = \frac{(1.96)^2 \cdot 0.5 \cdot (1-0.5) \cdot 312}{(0.05)^2 \cdot (312-1) + (1.96)^2 \cdot (0.5) \cdot (1-0.5)}$

n = 299.64

1.7379

n = 172.7 ~173

*Statistical Tools:* Frequency analysis, Independent t test

*Limitation:* It takes into account only the practical implications of marine

insurance. Disclosure of certain sensitive information. Limitation of time. Erroneous findings. Not an exact tool for forecasting.

*Data Analysis and Interpretation.*

**Table 1. Years of Establishments**

Age of the firm	Frequency	Percentage
>5 years	14	8.1
5-10 years	58	33.5
10 – 20 years	88	50.9
<20 years	13	7.5
Total	173	100.0

About 8.1% of the firms are below 5 years of establishment, about 33.5% of the firms under 5-10 years of establishment, about 50% of the firms under 10-20 years of establishments, about 7.5% of the firms are above 20 years of establishment. From this we can infer that majority of the respondent are underage group of 10-20 years.

**Table 2. Type of Commodity Trading**

Type of commodity	Frequency	Percentage
Machineries	100	57.8
Agro Products	6	3.5
Auto mobiles	25	14.5
Others goods	42	24.3
Total	173	100.0

Source: Primary data

About 57 % of the firms are doing machinery trading, about 3.5 % of the firms are doing agro products trading, about 14.5 % of the firms are doing auto mobiles trading, and about 24.3% of the firms are doing other products trading. From this we can infer that majority of the firms are doing machinery trading.

**Table 3. Trading Regulation**

Trading regulation	Frequency	Percentage
Daily	4	2.3
Weekly	33	19.1
Monthly	105	60.7
Others	31	17.9
Total	173	100.0

Source: Primary data

About 2.3 % of the firms are doing trading daily basis, about 19 % of the firms are doing trading on weekly basis, about 60 % of the firms are doing trading on monthly basis, and about 17.9% of the firms are doing trading on yearly basis. From this we can infer that majority of the firms are doing trading on monthly basis.

**Table 4. Logistics Operating Country**

Logistics operating country	Frequency	Percentage
Singapore	45	26.0
Malaysia	53	30.6
India	26	15.0
Europe	49	28.3
Total	173	100.0

Source: Primary data

About 26 % of the firms are doing trading with Singapore, about 30 % of the

firms are doing trading with Malaysia, about 15 % of the firms are doing trading with in India , and about 28.3% of the firms are doing trading with Europe. From this we can infer that majority of the firms are doing trading with Malaysia.

**Table 5. Net Volume of the Cargo**

Net gross volume of the Cargo	Frequency	Percentage
>10 tons	51	29.5
10- 50 tons	106	61.3
50-100 tons	12	6.9
<100 tons	4	2.3
Total	173	100.0

Source: Primary data

About 29.5 % of the cargo are under 10 tons, about 61.3 % of the cargo are under 10-50 tons, about 6.9 % of the cargo are under 50-100 tons, and about 2.3% of the cargo are above 100 tons. From this we can infer that majority of the cargo are under 10-50 tons.

**Table 6. Own Logistics and 3d Party Logistics**

Own logistics or 3rd party logistics	Frequency	Percentage
yes	37	21.4
no	136	78.6
Total	173	100.0

Source: Primary data

About 21.4% of the firm has its own logistics and about 78.6 % using the 3rd part logistics services. From this we infer that most of the firms in Chennai using 3rd party logistics.

**Table 7. Plan of Approaching New Logistics**

Plan for approaching a new logistics	Frequency	Percentage
yes	153	88.4
no	20	11.6
Total	173	100.0

Source: Primary data

About 88.4 % of the firm has an idea of going logistics and about 11.6 % of the firm has no idea of new logistics. From this we infer that most of the firms willing to go for new logistics.

**Table 8. Reason of Approaching New Logistics**

Reason for approaching new logistics	Frequency	Percentage
Better service	45	26.0
Better price	44	25.4
Special operations	54	31.2
previous service provider issues	30	17.3
Total	173	100.0

Source: Primary data

About 26 % of the firm move to new logistics due to better service, 25.4% of the firms go for better price, 31.2 % go for the special operations and 17.3 % go for the previous problems with the forwarders. From this we can infer that most of the firms go for new logistics due to better price.

**Table 9. Type of Loading Cargo for Trading**

Type of cargo they want to trade	Frequency	Percentage
Break bulk	25	14.5
LCL	13	7.5
FCL	135	78.0
Total	173	100.0

Source: Primary data

About 14.5 % of the firms moving break bulk cargo, 7.5% of the firms moving LCL cargo, 78% of the firms moving FCL cargo. From this we can infer that most of the firms moving FCL cargo.

*Parameters Ratings.*

**Table 10. Custom Clearance Ratings**

Rate the Custom Clearance	Frequency	Percentage
1	13	7.5
2	13	7.5
3	33	19.1
4	50	28.9
5	64	37.0
Total	173	100.0

Source: Primary data

**Table 11. Efficient Communication Ratings**

Efficient Communication ratings	Frequency	Percentage
1	10	5.8
2	27	15.6
3	45	26.0
4	42	24.3
5	49	28.3
Total	173	100.0

Source: Primary data

*Communication Ratings.*

**Table 12. Business Approach Ratings**

Business Approach ratings	Frequency	Percentage
1	1	.6
2	17	9.8
3	23	13.3
4	71	41.0
5	61	35.3
Total	173	100.0

Source: Primary data

**Table 13. Stuffing Plans Ratings**

Stuffing plans of Cargo ratings	Frequency	Percentage
1	10	5.8
2	9	5.2
3	27	15.6
4	54	31.2
5	73	42.2
Total	173	100.0

Source: Primary data

**Table 14. Delivery of B/L Ratings**

Delivery of B/L ratings	Frequency	Percentage
1	5	2.9
2	4	2.3
3	26	15.0
4	65	37.6
5	73	42.2
Total	173	100.0

Source: Primary data

From the above frequency analysis, about 42% of the firms says that the delivering of B/L and stuffing plans of the cargo will be influencing the logistics service more compare to the other parameters.

*Custom Clearance Ratings Vs Kind of Trade - Hypothesis:*

H0= There is no significance difference between the custom clearance ratings and kind of trade from the firm.

H1= There is a significance difference between the custom clearance ratings and kind of trade from the firm.

**Table 15. Custom Clearance Ratings Vs Kind of Trade Hypothesis**

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df.	Sig. (2-tailed)
Rate the Custom Clearance	Equal variances assumed	.2	.6	-1.3	171	.182
	Equal variances not assumed	4.9	.8	-1.3	135.591	.179

Source: Primary data

Since the significance value is higher than the probability value 0.05, we accept the null hypothesis, hence there is no significance difference between the custom clearance ratings and kind of trade from the firm.

*Effective Communication Ratings Vs Kind of Trade - Hypothesis:*

H0= There is no significance difference between the effective communication ratings and kind of trade from the firm.

H1= There is a significance difference between the effective communication ratings and kind of trade from the firm.

Since the significance value is higher than the probability value 0.05, we accept the null hypothesis, hence there is no significance difference between the effective communication ratings and kind of trade from the firm.

**Table 16. Effective Communication Ratings Vs Kind of Trade**

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Si g.	t	df	Sig. (2-tailed)
Rate the Efficient Communication	Equal variances assumed	.12	.70	-.43	171	.66
	Equal variances not assumed			-.43	135.66	.66

Source: Primary data

*Business Approach Ratings Vs Kind of Trade - Hypothesis:*

H0= There is no significance difference between the business approach ratings and kind of trade from the firm.

H1= There is a significance difference between the business approach ratings and kind of trade from the firm.

**Table 17. Business Approach Ratings Vs Kind of Trade Hypothesis**

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Si g.	t	df	Sig. (2-tailed)
Rate the Business Approach	Equal variances assumed	11.67	.00	1.03	171	.30
	Equal variances not assumed			1.03	111.10	.30

Source: Primary data

Since the significance value is higher than the probability value 0.05, we accept the null hypothesis, hence there is no significance difference between the business approach ratings and kind of trade from the firm.

*Stuffing Plans Ratings Vs Kind of Trade - Hypothesis:*

H0= There is no significance difference between the stuffing plans ratings and kind of trade from the firm.

H1= There is a significance difference between the stuffing plans ratings and kind of trade from the firm.

Since the significance value is lesser than the probability value 0.05, we reject the null hypothesis and accept the alternate hypothesis, hence there is a significance difference between the stuffing plans ratings and kind of trade from the firm.

*Delivery of B/L Ratings Vs Kind of Trade - Hypothesis:*

H0= There is no significance difference between the delivery of B/L ratings and kind of trade from the firm.

H1= There is a significance difference between the delivery of B/L ratings and kind of trade from the firm.



**Table 18. Stuffing Plans Ratings Vs Kind of Trade**

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Rate the Stuffing plans of Cargo	Equal variances assumed	28.594	.000	-3.897	171	.000
	Equal variances not assumed			-3.462	91.549	.001

Source: Primary data

Since the significance value is higher than the probability value 0.05, we accept the null hypothesis, hence there is no significance difference between the delivery of B/L ratings and kind of trade from the firm.

**Table 19. Delivery of B/L Ratings Vs Kind Of Trade**

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Si g.	t	df	Sig. (2- tailed)
Rate the Delivery of B/L	Equal variances assumed	3.276	.072	1.638	171	.103
	Equal variances not assumed			1.510	102.359	.134

Source: Primary data

*Custom Clearance Vs Effective Communication Ratings - Hypothesis:*

H0= There is no relationship between consumer custom clearance and effective communication ratings.

H1= There is a relationship between consumer custom clearance and effective communication ratings.

**Table 20. Custom Clearance**

Correlatio ns		Rate the Custom Clearance	Rate the Efficient Communication n
Rate the Custom Clearance	Pearson Correlati on	1	.281**
	Sig. (2-tailed)		.000
	N	173	173

Source: Primary data

**Table 21. Effective Communication Ratings**

Rate the Efficient Communication	Pearson Correlation	.281**	1
	Sig. (2-tailed)	.000	
	N	173	173

Source: Primary data

Since the significance value is lesser than the probability value 0.05, we reject the null hypothesis and accept alternate hypothesis, hence there is a relationship between consumer custom clearance and effective communication ratings.

*Business Approach Vs Stuffing Plans of Cargo Ratings - Hypothesis:*

H0= There is no relationship between business approach and stuffing plans of cargo ratings.

H1= There is a relationship between business approach and stuffing plans of cargo ratings.

**Table 22. Business Approach Vs Stuffing Plans of Cargo Ratings**

Correlations		Rate the Stuffing plans of Cargo	Rate the Business Approach
Rate the Stuffing plans of Cargo	Pearson Correlation	1	.058
	Sig. (2-tailed)		.411
	N	173	173
Rate the Business Approach	Pearson Correlation	.058	1
	Sig. (2-tailed)	.411	
	N	173	173

Source: Primary data

Since the significance value is higher than the probability value 0.05, we accept the null hypothesis, hence there is no relationship between business approaches and stuffing plans of cargo ratings.

*Custom Clearance Vs Delivery of B/L Ratings – Hypothesis:*

H0= There is no relationship between custom clearance and delivery of B/L ratings.

H1= There is a relationship between custom clearance and delivery of B/L ratings.

**Table 23. Custom Clearance Vs Delivery of B/L Ratings Hypothesis**

Correlations		Rate the Custom Clearance	Rate the Delivery of B/L
Rate the Custom Clearance	Pearson Correlation	1	.217**
	Sig. (2-tailed)		.004
	N	173	173
Rate the Delivery of B/L	Pearson Correlation	.217**	1
	Sig. (2-tailed)	.004	
	N	173	173

Source: Primary data

Since the significance value is lesser than the probability value 0.05, we reject the null hypothesis and accept alternate hypothesis, hence there is a relationship

between custom clearance and delivery of B/L ratings.

*Gross Volume of Cargo Vs Mode of Freight – Hypothesis:*

H0: There is no significant association between gross volume of cargo and mode of freight.

H1: There is a significant association between gross volume of cargo and mode of freight.

Since the significance value is lesser than the probability value 0.05, we reject the null hypothesis and accept alternate hypothesis, hence there is a significant association between gross volume of cargo and mode of freight.

**Table 24. Gross Volume of Cargo Vs Mode of Freight Hypothesis**

Chi-Square Tests	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	12.7 86a	6	.047
Likelihood Ratio	11.4 13	6	.076
Linear-by-Linear Association	4.01 8	1	.045
N of Valid Cases	17 3		

Source: Primary data

*Kind of Trade Vs Mode of Notifications – Hypothesis:*

H0: There is no significant association between kind of trade and mode of notifications.

H1: There is a significant association between kind of trade and mode of notifications.

**Table 25. Kind of Trade Vs Mode of Notifications Hypothesis**

Chi-Square Tests	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	18.1 51a	3	.000
Likelihood Ratio	18.1 12	3	.000
Linear-by-Linear Association	10.7 41	1	.001
N of Valid Cases	173		

Source: Primary data

Since the significance value is lesser than the probability value 0.05, we reject the null hypothesis and accept alternate hypothesis, hence there is a significant association between kind of trade and mode of notifications.

**Results.** The quality of service as rated is above average in the case of HK Trans and Logistics compared to industry. But the organization should continuously try to improve the quality aspect as is being done by other players it's the field. This is quite a necessity as otherwise the figures may fall down. Continuous improvement is a must so that the customers will prefer HK Trans and Logistics as their first choice in Logistics and Freight industry category. This can be achieved with more modern equipment's and pm per guidance to employees and the rating can go high to excellent service.

Pricing of service is satisfactory, which organization can further enhance with

proper management. Present employee strength is satisfactory compared to other organization but more focus should be made to documentation areas where the firm has lesser employees compared to other organizations.

Network Design is an area that the organization should not start immediately due to low rate of returns is recorded as the industrial average. Design of new warehouse areas and proper allocation of work with more sophisticated software facility can be done through outsourced way during implementation.

Decision making is excellent for organization with respect to other organization in the industry. Operation with other logistical providers should be given more preference to achieve cost effectiveness. Rearrangement of employees may be a better solution. Downsizing of personnel in the Finance and Accounts section and deploying them for the HR function separately is recommended.

The organization client handling, ease of service and customer service is having remarkable difference from the industry standards. The main focus needs to be on the ease of website and employee efficiency. From the data we can infer that areas which need to be improved are Website and employee efficiency. Employee efficiency can be improved with a proper Human Resource department.

Service offer presently has good impact with other organizations service offers. The remarkable areas are freight, Crossdocking, and Value Adding. Company can further enhance operations of Value Adding through proper methods. As logistics industry is concerned Freight is the dominant service followed by Warehousing and Cross-Docking. Another important area where organizations feel very lucrative is Value Adding. It is observed that most of the organizations operate with other logistical providers. 96% of organizations are doing it and remaining 4% organizations stays independent. It is inferred that for efficient logistical activity, support from other organizations is essential.

Tactical decisions are mostly followed by organizations followed by operational and a few strategical. Freight and Value Adding is considered to be the best service which organizations offer in industry. Another major observation is about Network Design, it has low value and no organization feels it to be lucrative area in industry. Organization can enhance operations to European areas and another major favorable area is Africa. From data HK Trans and Logistics can get good market share if they cater to African regions.

Organization profit is good compared to industry standards for freight and can further work on warehousing. This shows a difference of 2 points from industry standards. Whereas for Cross Docking it shows same as to industry standards. Commenting on ease of service, website and employee efficiency, an organization needs to further improve. Adoption of software solutions, such as TMS, WMS, and SCM systems, can improve the overall efficiency of logistics processes, reduce costs, and enhance customer satisfaction.

Outsourcing logistics services, such as transportation, warehousing, inventory management, and order fulfilment, can help businesses focus on their core competencies, reduce costs, and improve overall efficiency. The use of software solutions and outsourced logistics services can help businesses overcome the

challenges faced by the Indian logistics industry, such as inadequate infrastructure, inefficient supply chain management, and regulatory constraints.

Successful implementation of software solutions and outsourced logistics services requires careful planning, evaluation of service providers, and ongoing monitoring of performance. Companies that have successfully implemented software solutions and outsourced logistics services have gained a competitive advantage in the market and improved their overall logistics operations.

While outsourcing logistics services can provide numerous benefits, there are also risks and challenges associated with it, such as loss of control over logistics operations, lack of visibility, and communication issues. Businesses need to carefully evaluate logistics service providers based on their capabilities, expertise, track record, and cost-effectiveness before selecting them. Overall, the findings suggest that software solutions and outsourced logistics service providers can play a significant role in improving the efficiency, reducing costs, and enhancing customer satisfaction of logistics operations in the Indian market. However, businesses need to carefully evaluate their options and select reliable and capable service providers to reap the benefits of these solutions.

**Discussion.** Organization can further strengthen the employee strength in the documentation and sales department. This can lead to further rapidity for operations and the growth of organization. Organization can initiate Human Resource Department to further enhance employee motivation. This will have favorable impact for the operational as well as total strengthening of organization. Decision making is quite effective and can be followed for future operations. Operations with other logistical providers need to be enhanced further for operational effectiveness, more focus should be given to customer delight and cost effectiveness. Quality of service can be further enhanced to increase customer delight. Client handling and service need to be followed in the same way and can be further enhanced with more support. This can be achieved by proper guiding of employees and other workers in the logistical area HK Trans and Logistics can enter other markets in the Middle East especially to Saudi Arabia where the potential of market is very high for Logistics industries and can even diversify to other areas in logistics. HK Trans and Logistics can focus to African regions for freight handling, as from the data the potential market is high for those regions.

**Conclusion.** In conclusion, software solutions and outsourced logistics service providers have played a vital role in the growth and development of India's logistics industry. Software solutions such as transportation management systems, warehouse management systems, and supply chain visibility tools have enabled companies to streamline their logistics processes, improve their operational efficiency, and reduce their logistics costs.

Outsourced logistics service providers have also played a crucial role in providing cost-effective and efficient logistics solutions to their clients, enabling them to focus on their core business activities while leaving the logistics to the experts. They have leveraged their expertise, technology, and infrastructure to provide customized logistics solutions that meet the specific needs of their clients,

ultimately contributing to India's economic growth.

Overall, the adoption of software solutions and the use of outsourced logistics service providers have enabled companies in India to improve their supply chain performance, reduce their logistics costs, and enhance their customer satisfaction levels. The continued adoption of these solutions is expected to further drive the growth and development of India's logistics industry in the years to come.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## INFORMATIONAL AND ANALYTICAL SUPPLY IN THE MANAGEMENT SYSTEM

**Olha Zhuk<sup>1</sup>, Stanislav Drichak<sup>2</sup>, Vasyl Shykerynets<sup>3</sup>**

<sup>1</sup>Ph.D. (Economics), Associate Professor, Head of the Department of Management and Business Administration, Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine, e-mail: olha.zhuk@pnu.edu.ua, ORCID: <https://orcid.org/0000-0001-8519-5529>

<sup>2</sup>Head of the educational production advertising and information laboratory, Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine, e-mail: stasdrichak@gmail.com, ORCID: <https://orcid.org/0000-0003-0018-7752>

<sup>3</sup>Ph.D. (Public Administration), Associate Professor, Head of the Department of Socio-Cultural Activity Management, Show Business and Event Management, Deputy Dean of the Faculty of Tourism for Research, Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine, e-mail: vasyl.shykerynets@pnu.edu.ua, ORCID: <https://orcid.org/0000-0002-6845-1639>

### Citation:

Zhuk, O., Drichak, S., & Shykerynets V. (2023). Informational and analytical supply in the management system. *Economics, Finance and Management Review*, (2), 103–109.

<https://doi.org/10.36690/2733-2039-2023-2-103-109>

Received: June 07, 2023

Approved: June 29, 2023

Published: June 30, 2023



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**Abstract.** This article examines and substantiates the importance of informational and analytical supply in the management system. The research purpose is to substantiate the importance of informational and analytical supply for management, to define the components and principles as well as to formulate proposals for improving information and analytical support in order to increase the efficiency of management. During the writing process were used methods of analysis and synthesis were for detailing the research object; systematization, grouping and generalization of information for the logical sequence of the presentation material and theoretical generalizations of the results. For example, abstract-logical for the formation of generalized conclusions and graphic for a visual representation of research results. The components of the informational and analytical supply system and the principles, the observance of which will ensure the quality and efficiency of the information and analytical process are determined. Proposed ways to improve informational and analytical supply in order to improve management efficiency. The article establishes that Information support is an irreplaceable tool and an important component of the organization's management system. Based on the results of the research, the main aspects of information support in the organization's management system are singled out, namely: support of accurate, timely and necessary information, which makes it possible to avoid errors and reduce the risks of making wrong decisions; supporting decision-making processes allows managers to make informed and effective decisions based on data; increasing the efficiency of organization management and ensuring competitive advantages.

**Keywords:** informational component, analytical component, informational and analytical supply, management system, information resources.

**JEL Classification:** L81, L86,

**Formulas:** 0; **fig.:** 1; **tabl.:** 0; **bibl.:** 8

**Introduction.** Informational and analytical supply is an important and integral component of the management system, as it is an information basis for making management decisions based on substantiated data. In the management system, informational and analytical supply is used to support various types of management activities. Information and analytical supply in the management system an important element in the decision-making process and ensuring the effective operation of the management system as a whole through constant monitoring and analysis of the state of the organization.

Informational and analytical supply covers the collection, processing and analysis of data that reflect various aspects of the organization's functioning, and allows providing the management system with relevant, timely and reliable information that helps management personnel make effective decisions, exercise control, determine priorities and solve problematic issues, which arise in the course of the organization's activities. The main purpose of informational and analytical supply is to ensure high quality and accuracy of data analysis, which allows for solving important tasks and making the right decisions.

**Literature review.** Many studies and scientific publications are dedicated to informational and analytical supply in practical and scientific content. Scientists such as L.Voloshchuk, O.Gudzinskyi, G.Kindratska, I.Lazaryshyn, E.Mnykh, P.Popovych, P.Pucenteilo, S.Filippova, A.Sheremet, S.Shkaraban research the fundamental basis of informational and analytical supply for factories and organizations. However, in order to reduce risks in the organization's activities, increase the efficiency of management decision-making and management of the organization based on data obtained as a result of quick and high-quality analysis of information, it is necessary to comply further research related to the improvement of informational and analytical supply.

**Aims.** The research purpose is to substantiate the importance of informational and analytical supply for management, to define the components and principles as well as to formulate proposals for improving information and analytical support in order to increase the efficiency of management.

**Methods.** During the writing process were used methods of analysis and synthesis were for detailing the research object; systematization, grouping and generalization of information for the logical sequence of the presentation material and theoretical generalizations of the results. For example, abstract-logical for the formation of generalized conclusions and graphic for a visual representation of research results.

**Results.** There are different approaches to defining "informational and analytical supply".

According to O.Parkhomenko, information and analytical supply is a system of interconnected methods, measures and means that realize the creation and functioning of the technology of the process of collection, transmission, processing, storage and issuance, as well as the use of information for the purpose of the effective activity in one or another field [1].



I. Lazarishyna believes that informational and analytical supply should objectively reflect the state of the enterprise at any moment in time and with any level of detail, as well as take into account possible threats from the external environment [2].

Y. Pushak interprets informational and analytical support as a set of initial data, indicators and methods of their determination and analytical evaluation, which can be a scientific and methodical prerequisite for making appropriate decisions by regional management bodies when determining effective directions for the development of entrepreneurship [3].

Summarizing the above approaches can be concluded that informational and analytical support is a process of collecting, processing, analyzing, evaluating and systematizing information regarding the relevant object in order to provide data to support effective management decisions and improve management efficiency.

Informational and analytical support is performed in a certain sequence. The main points include:

1. Gathering information involves collecting data from various sources and ensuring the accuracy and reliability of the collected information.
2. Analysis of information including methods and techniques, collecting analyzed information, calculating indicators and revealing tendencies and patterns.
3. Data visualization includes the use of tools to present the results of data analysis in an understandable and accessible form.
4. Decision-making is the use of the obtained results information and analytical supply for management decisions.

Information and analytical supply function taking into account information and analytical components.

The informational component of information and analytical supply is a set of resources that are used to analyze information from various sources in order to obtain the necessary data for decision-making. This component includes various databases, information resources, analytical tools, software tools and methods used for information processing.

The informational component of information and analytical support allows for comprehensive analysis of data from various sources. This gives the possibility of quick and accurate analyzing information and identifying tendencies, which contributes to more accurate and effective decision-making.

Moreover, the informational component of information and analytical supply includes data visualization tools, which allows for presenting the results of the analysis in a convenient and understandable format. These can be graphs, charts, tables and other data visualization tools that help to understand complex information and make more reasonable decisions. All these elements of the information component interact with each other and allow effective analysis of information, which in turn contributes to the adoption of reasoned decisions. Information is used as a resource for performing official functions, as well as a means of official communications since the latter is implemented in the process of transmitting various information [4].

The main aspects of the analytical component are the analysis of data by using methods of analysis, modeling and forecasting.

Analytics provides managers with the necessary and sufficient information for making timely and effective management decisions, diagnoses, and forecasts. It protects managers against threats and risks, helps to avoid crisis situations in the economy and politics, by obtaining relevant information and reduces the information load on persons making managerial decisions due to filtering of information flows [5].

The analytical component allows for making effective and well-founded management decisions based on objective information. In addition, analytics helps identify potential threats and opportunities, makes predictions regarding future development, monitors activity results, identifies problems and shortcomings, and adjusts actions if necessary to ensure effective management of the organization in general.

Analytical information is currently the most valuable product on the information market [6].

The organization uses analytical information for three main purposes:

- to reduce risk and uncertainty;
- to obtain power and means of influencing others;
- to control and evaluate the productivity and efficiency of the organization [7, p. 20].

Informational and analytical supply is provided on the basis of certain types of analysis.

1. Strategic analysis. It is carried out with the help of determining and implementing measures to influence future costs in order to increase the size of positive results. It includes analytical procedures for identifying strategic problems and counting the results of the study of the organization's internal resources and capabilities.

2. Attributive analysis. It is determined through the analysis of temporary changes and examines the impact of individual attributes of the process in order to identify the possibility of improving the efficiency of these processes.

3. Operational analysis. It is aimed at improving the current results in the main types of activities due to research and evaluation using the capacities of the industrial enterprise.

4. Comparative analysis. It allows for diagnosis and identifying potential opportunities for the development of the enterprise due to the comparison of planned and actual performance indicators.

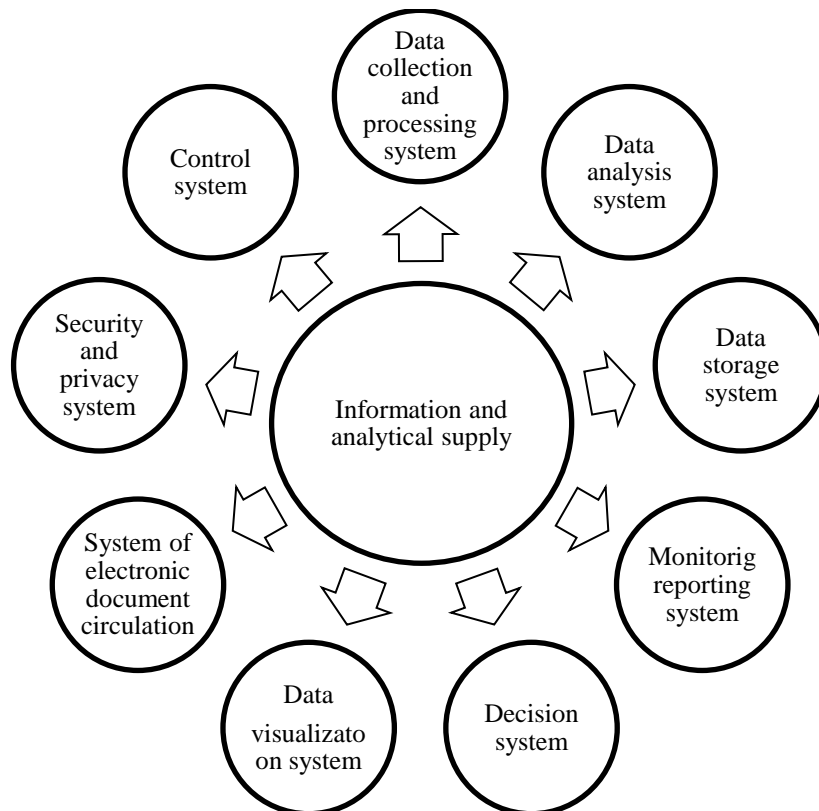
5. Financial-economic analysis. Assesses financial requirements and examines the level of security of the management system of relevant resources, taking into account the developed plans [8].

Information and analytical supply is a complete system consisting of a set of interconnected and interdependent components (Fig. 1).

These components can be interconnected and interdependent, which allows for the efficient operation of the entire system. However, they can function separately

and be used in different areas of activity, depending on the needs and tasks of the users.

The data collection and processing system provides information gathering from various sources, both internal and external, which is subject to further processing and analysis.



**Figure 1. Component systems of informational and analytical supply**

*Sources: created by the authors*

Data analysis systems allow analyzing received data in order to identify patterns and trends, forecast the development of events, etc.

Data storage systems provide storage of information about the activities of the organization and its customers. These can be databases, cloud storage systems and other data storage facilities.

Reporting and monitoring systems provide the formation of reports and analytical documentation based on collected and processed data.

A decision system is a software used to make decisions that help managers analyze data and make strategic choices.

Data visualization systems allow the presentation of the results and data analysis in an easy-to-understand form such as graphs, charts, maps, etc.

Systems of electronic document circulation provide for the automation of the document exchange process in the organization and ensure fast and efficient circulation of information.

Data security and privacy systems ensure data protection against unauthorized access and misuse.

The control system is the implementation of control over the implementation of assigned tasks and the organization's strategy.

All these components allow the creation of a complete system of information and analytical support, which helps to make informed management decisions based on reliable and up-to-date information.

Successful management requires high-quality, reliable and timely information about all processes that take place inside and outside the organization, therefore it is important to observe the principles of information and analytical support, which help ensure high quality and efficiency of the information and analytical process.

The main principles of information and analytical supply are:

**Purposefulness** – informational and analytical supply should be aimed at solving specific tasks and goals of the organization.

**Systematicity** – informational and analytical support is based on a systematic approach to information analysis. This means that the information product must include all factors that affect the organization, as well as all the correlations between them.

**Objectivity** – information and analytical support should be based on objective data and facts, information products should be confirmed by a documentary base, analytical calculations and statistical data.

**Complexity** means providing a comprehensive approach to information analysis and management. The information product should include all necessary components reflecting various aspects of the organization's functioning.

**Relevance** – timely and relevant information provision. Information products should be relevant and reflect current tendencies.

**Effectiveness** – analytical results should be effective and meet the requirements of users.

**Controllability** – analytical activity should be organized in such a way that it is possible to control the quality of information and analysis.

**Confidentiality** – the analysis must ensure the confidentiality and protection of the information used.

Information and analytical supply should ensure the use of the latest technologies should be based on innovativeness.

**Discussion.** Information and analytical supply is an important element of management, as it depends on making informed decisions based on accurate and reliable information, therefore the information and analytical process needs constant improvement to increase the effectiveness of the organization's management.

1. Improvement of analytical tools. To analyze data needed to use special analytical tools that allow for performing various analyzes and modeling situations.

2. The use of innovative technologies will allow the automation of many processes, which significantly increases the efficiency of management.

3. Improvement of data analysis methods. The using of new methods and algorithms of data analysis will allow identifying dependencies and regularities that can be useful for making management decisions.

4. Development of information culture. For the effective use of information and analytical supply, it is necessary to have qualified specialists who can understand and analyze data, use analytical tools and develop new methods of data analysis.

Management is effective if its employees know how to work with information and how to ensure its security. Therefore, it is important to involve employees in training and seminars on information culture.

**Conclusions.** Information supply is an indispensable tool and an important component of the organization's management system. The importance of information supply in the management system of the organization consists in the following aspects:

- supporting accurate, timely and necessary information, which makes it possible to avoid errors and reduces the risks of making wrong decisions;
- supporting decision-making processes allows managers to make informed and effective decisions based on data;
- increasing the efficiency of organization management and ensuring competitive advantages.

Informational and analytical supply allows for drawing a reasonable conclusion about various aspects of the organization's activities. With it possible to identify problems and challenges facing the organization and find optimal solutions to solve them. In addition, it allows for monitoring tendencies and forecasting future changes in the market environment, which allows the organization to be ready for changes and respond to them quickly and efficiently. Informational and analytical supply helps ensure the successful functioning and development of the organization in a dynamic and competitive environment.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## A SPECIAL STUDY ON EXPORT PROCEDURE AND DOCUMENTATION ON MEENAKSHI CARGO FORWARD PRIVATE LIMITED

**R. Divyaranjani, A. Shameem, Sakthi Kesav**

<sup>1</sup>Assistant Professor, AMET Business School, AMET University, India. E-mail: divyaranjani86@gmail.com

<sup>2</sup>Dr., Professor, AMET Business School, AMET University, India, shameemanwar@gmail.com

<sup>3</sup>MBA Student, AMET Business School, AMET University, India

### Citation:

Divyaranjani, R., Shameem, A., & Kesav, S. (2023). A special study on export procedure and documentation on Meenakshi Cargo Forward Private Limited. *Economics, Finance and Management Review*, (2), 110–119. <https://doi.org/10.36690/2733-2039-2023-2-110-119>

**Received: May 09, 2023**

**Approved: June 19, 2023**

**Published: June 30, 2023**



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**Abstract.** *The article is related to the study of export procedures and their documentation for various types of transportation. Research objective are to analyse the role of different entities in the whole process; a brief on export procedures and documentation in air cargo; a statistical analysis and representation of export data; evaluate the problem and suggested solutions for the system. A research design is the detailed blueprint used to guide a research study towards its objectives. It helps to collect, measure and analysis of data. It is a detailed plan of action for the researcher which defines problem, identify data. It helps to make the research as efficient as possible. Descriptive research seeks to ascertain certain magnitude by making complete study of the topic. It is used in this project to find the effectiveness of air cargo. The researchers was able to understand the importance of information and the flow of information in the right manner within an organization from one department to other Performance management should be integrated vertically linking the strategies objectives of the organization to the execution of activities which will enable their achievement. The performance being managed should reflect the requirements, wants and needs of all of the key stakeholders of the organization and not just reflect a limited set. The performance monitoring, review and action panning process should e structured around the strategic performance objectives of the organization. Processes and systems should be designed to extract and communicate insights rather than performance data. All systems and processes should be aligned with each other, driving behavior towards the performance objectives. Effort should be dedicated to developing an appropriate culture to engage the organization's employees and elicit commitment to performance objectives Generally, the study helped to fill the gap between theory and practice. Finally, the complete the study on Air Freight in Meenakshi Cargo Forwarders Pvt Ltd was fully understood and the pitfalls have been identified.*

**Keywords:** *method of transporting, Air freight, Road transport, motorized carriages; non-motorized carriages; management.*

**JEL Classification:** L81, L91

**Formulas:** 0; **fig.:** 1; **tabl.:** 10; **bibl.:** 6

**Introduction.** Documentation in export trade plays very significant role from the very beginning when an exporter gets an order from A foreign buyer to the final stage when the exporter seeks Cash assistance and other incentives offered by the Government. Documentation facilitates the smooth flow of Physical goods and payment thereof across national frontiers. At every step during exporting, one or the other document is Required. The exporter cannot more any further without Documents. A distinguishing feature of international trade is the complex paperwork.

Therefore, many small exporters are Frightened by the extent and complexity of documentation.

Export documentation plays a vital role in international marketing as it facilitates the smooth flow of goods and payments thereof across national frontiers. A number of documents accompany every shipment. These documents must be properly and correctly filled. Export documentation is however, complex as the number of documents to be filled-in is large, so also is the number of concerned authorities to whom the relevant documents are to be submitted. Incorrect documents may lead to non-delivery of goods to the importer you may get the correct documents after some time but in the meantime storage charge may have to be paid. Advisable to take the help of shipping and forwarding agents who will obtain and fill out the documents Correctly as well as arrange for transportation. But every Exporter should have adequate knowledge about export

**Literature review.** The fast transportation of goods from the point of production or assembly to the point of consumption is often facilitated by the air cargo industry. The air industry developed rapidly in all the industrialized western countries. The real starting point for airfreight as a real alternative to other transport modes was after World War II (WWII). There were two main factors that influenced the industry's development, one internal and one external. The internal driver was the technical development of airplanes and other related products during the WWII. Radar equipment and the jet plane are just two examples. The external driver was the consequence of the war, since it exemplified the need for the transports of all kinds of goods. To meet the transport demand even shipments that were normally moved by sea were transported by air. In order to address this surge in demand new categories of aviation activities such as the charter flights, ad-hoc, and dedicated cargo flights were introduced during that period. Despite the 'relatively' small share of air freight in global distribution, the significance of air freight as a transportation mode particularly plays an important role for global supply chain management. This is recognized by Kasarda and Green (2005, p. 459) stating that "air cargo enables nations, regardless of location, to efficiently connect to distant markets and global supply chains in a speedy, reliable manner". The huge volume of high-value, time-critical products traversing international boundaries by air annually has resulted in air cargo accounting for 40 per cent of the value of today's world beer and airway bill number. This is already installed in the cargo mega terminal (CMT). There is still a lot of paper involved when executing the logistics operations in Emirates. Even though the system of e-freight has been introduced it hasn't been properly executed / implemented. The goods arriving in damaged condition was another major problem faced. The initial reason for this could be first is the improper packing materials used. Another reason could be the kind of methods in which the goods were loaded onto the aircraft. Emirates were also facing serious lack of resources. The next problem faced is the warehouse congestions. During heavy demand seasons like summer and shopping festival seasons, the warehouse gets congested leading to a situation of lack of space to accommodate incoming goods. Another reason for the warehouse congestions are the goods that is stored in the warehouse due to incorrect

documentation. Misrouting of high value goods is another problem found out. High value goods are extremely important and if lost or not arrived on time can lead to huge monetary claims and claims for loss of sale by the customer. There are also import restrictions posed by the UAE government. Emirates also face competition from other Airline companies like Etihad, Qatar Airways, Lufthansa etc.

**Aims.** *Scope of study:* to discover the various aspects and elements of export industry; to identify various types of the cargo in air freight; to evaluate the freight rate of air cargo; to identify various challenges in handling dangerous and hazardous cargo; the study is about the export procedure and documentation; the study includes the import and export flow process.

*Research objective are* to analyse the role of different entities in the whole process; a brief on export procedures and documentation in air cargo; a statistical analysis and representation of export data; evaluate the problem and suggested solutions for the system.

*Limitations of study:* it includes extra packaging, transportation and protection and insurance costs which build up the total cost of items; exporting isn't doable in the event that the foreign nation prohibits imports Domestic organization which are closer to the client could serve them better than firms outside their national borders; in research period not able gather turn over details of the company; merchandises are subject to quality standards any low grade merchandise which is imported will result in the country reputation and remarks on countries; obtaining license and documentation for foreign trade is a difficult and frustrating; if you are not careful, you can lose grip the domestic market and existing customers.

**Methodology.** A research design is the detailed blueprint used to guide a research study towards its objectives. It helps to collect, measure and analysis of data. It is a detailed plan of action for the researcher which defines problem, identify data. It helps to make the research as efficient as possible. Descriptive research seeks to ascertain certain magnitude by making complete study of the topic. It is used in this project to find the effectiveness of air cargo.

*Data collection:*

- “A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedures”.
- This study deals with the documentation in Needles. Secondary data are used to study. Secondary data: Secondary data is of two kinds, internal and external. Secondary data whether internal or external - is data already collected by others, for purposes other than the solution of the problem on hand.
- Official records, textbooks, booklets, review matters of the concern, audit reports and annual reports are used, A part from the personal discussions with the officials of the concern were also undertaken to carry out of the study.

In this study the secondary data is collected from the following sources.

- Reports of Air cargo logistics operation in Dubai.
- Journal export procedure and documentation

The size of the sample is large size sample. In this study the number of samples



is 50 respondents. The questionnaire is sent to the respondents in Google form and the responses is been recorded.

In this survey, the sampling technique is used is probability sampling method. Under this. Simple random sampling technique is being used. In this each sample has an equal probability of being chosen. It allows all the units in the population to have an equal chance of being selected.

**Results.** The airlines give the airway bill stocks to the IATA agent who give the business to the airlines. The agents give the booking of cargo to the concerned airlines against airway bill no. along with the no .of packages, weight of the shipment both gross and volume dimension of each package and nature of goods. The airlines give the carting order to the agent based on the details provided in pt.2 which is a document, giving the flight details on which, the cargo will be shipped. The onwards flight details in case of multiple flights are normally sent to the agent through mail. Based on the carting order, airway bill (customs document) the agent enters the cargo in the cargo terminal after paying the necessary charges to airports authority of India. The cargo is examined by customs and when found in order customs issues the “let export order”, after which the cargo is moved into the bonded area from where it is released to the concerned airlines. The airlines prepare a pre-manifest and loads the cargo in the ULD (unit load device) which are normally pallets containers. Once the cargo is loaded in the ULD S airlines prepare the final manifest which is called the export general manifest (EGM). Based on the EGM, customs/AAI releases the ULD s which the airlines carry and loads it in the aircraft (Fig. 1).

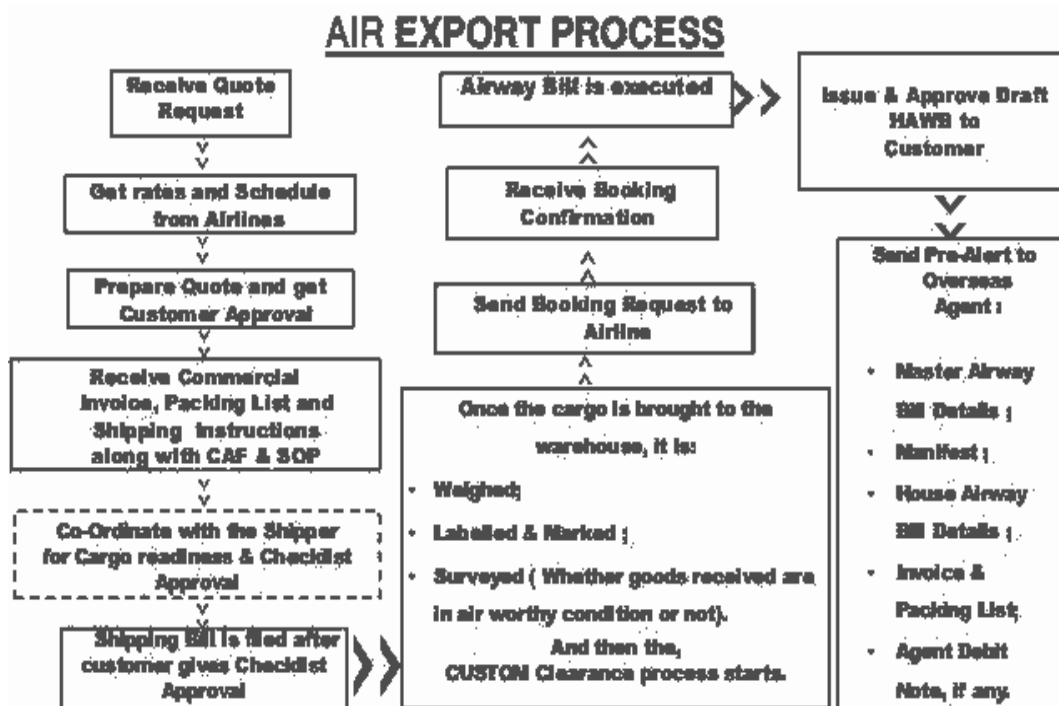


Figure 1. Export process flow diagram

There are two types of export documentation:

1. Pre – shipment document (PRSD)
2. Post – shipment document (POSD)

*Airway Bill (AWB):* This is a bill carrying details of the cargo that is issued on completion of the export customs process. The AWB is issued in a set of five and accompanies the cargo. It is meant for the carrier, shipper (exporter) and consignee (importer). There are two types of airway bills – a) Master Airway Bill (MAWB), issued by the air carrier to the freight forwarder on receipt of the goods as an agreement to deliver them; and b) House Airway Bill (HAWB), issued by the freight forwarder to the shipper. The air waybill, unlike the ocean bill of lading is not a document of title to the goods described therein, however it does perform several similar functions these are:

- it is a receipt for the goods;
- it is evidence of the contract of carriage between the exporter and the carrier;
- it incorporates full details of the consignor/shipper, the consignee/receiver and the consignment/goods;
- it is an invoice showing the full freight amount;
- it must be produced, be it in an electronic format, at the airport of discharge for clearing purposes.

All copies of the air waybill, together with the commercial invoice, packing list, certificate of origin and any other document which may be necessary for clearing the goods through customs, these documents are carried in the flight captain's bag.

*Original Bill of Lading:* Generally, when an original Bill of Lading is issued to the shipper, they take 3 originals. One for the bank; one to be sent to the consignee, one to be kept with the shipper. Whichever way it happens, one of the originals is surrendered to the shipper at • As a document of the title to the goods the destination for the release of cargo, the other two originals are void and rendered worthless.

- A Bill of Lading serves three main purposes.
- As a receipt from the shipping company.
- As a contract for the transportation of goods.

An invoice or bill is a commercial document issued by a seller to the buyer, indicating the products, quantities, and agreed prices for products or services the seller has provided the buyer. An invoice indicates the amount the buyer must pay to the seller, according to the payment terms. The buyer is sometimes offered a discount if paid before the due date.

*Shipping Bill:* It is a requisite for seeking the permission of Customs to export goods. It contains a description of export of goods by sea/air. It contains number and kind of packages, shipping marks and numbers, value of goods, the name of the vessel, the country of destination, etc. On the other hand, importers have to submit copies of document called Bill of Entry for customs clearance. Later, a copy has to be given to the bank for verification.

*Commercial Invoice:* A contract of sale provided by the exporter to the importer, it has details of the shipment, including value and quantity, as well as both their contact details. The importer needs this to clear the shipment at his end.

*Shipper's Letter of Instruction (SLI)*: It is a legal agreement between the shipper and freight forwarder containing particulars such as cargo description; details of the shipper, consignee and carrier, departure and destination, specifics of freight payment, and so on.

*Terminal Charge Challan (TC)*: This is a receipt issued by the terminal acknowledging that cargo can be sent to the terminal after the airline has issued the carting order. The airline issues the carting order after cargo booked on its flight.

*Packing List*: The packing list is an extension of the commercial invoice; as such it looks like a commercial invoice. The exporter or agent -the Customs broker or the freight forwarder reserves the shipping space based on the gross weight or the measurement shown in the packing list. Customs uses the packing list as a checklist to verify the outgoing cargo (in exporting) and the incoming cargo (in importing). The importer uses the packing list to inventories the incoming consignment.

*Certificates of Origin*: A Certificate of Origin (often abbreviated to O/O or C/O) is a document used in international trade. It is a printed form, completed by the exporter or its agent and certified by an issuing body, attesting that the goods in a particular export shipment have been wholly produced, manufactured or processed in a particular country. The "origin" does not refer to the country where the goods were shipped from but to the country where they were made. In the event the products were manufactured in two or more countries, origin is obtained in the country where the last substantial economically justified working or processing is carried out. An often-used practice is that if more than 50% of the cost of producing the goods originates from one country, the "national content" is more than 50%, then, that country is acceptable as the country of origin.

*Delivery Order (DO)*: It is an order issued by the carrier to the consignee to take delivery of the imported goods.

*Gate Pass*: Cargo terminals are restricted areas, access to which requires a gate pass issued by the airport's security department. A gate pass is also called a visitor's pass or airport entry permit.

Data analysis is the process of systematically applying statistical and or logistical techniques to describe and illustrate, condense and recap, and evaluate data. An essential component of ensuring data integrity is the accurate and appropriate analysis of research findings.

**Table 1. Categorize the years of business you have been doing with Meenakshi Cargo Forwarders PVT. LTD**

No of years of business	No of respondents	Percentage
1-2 years	15	37.5
2-3 years	12	30
3-4years	8	20
4-5years	5	12.5
total	40	100

Source: Primary Data

Form the above table it clear that 37.5 percent of customer are doing business for 1-2 years with Meenakshi Cargo Forwarders PVT. LTD.

**Table 2. Mode of introduction of Meenakshi Cargo Forwarders PVT. LTD**

Mode of introduction	No of respondents	percentage
Friends	12	30
Marketing people	18	45
advertisement	8	20
website	2	5
Total	40	100

Source: Primary Data

From the above table it clear that 45 percent of customer comes to know about the company through marketing people and 30 percent of customer aware through friends.

**Table 3. Type of business with Meenakshi Cargo Forwarders PVT. LTD**

Type of business	No of respondents	Percentage
Customs clearance	2	5
Import	5	12.5
Export	15	37.5
Value added service	18	45
Total	40	100

Source: Primary Data

From the above table it clear that 45 percent of value-added service are 18 no of respondents and 5 percent of customer aware through friends.

**Table 4. Income of respondents**

S.no	Income	Frequency	Percentage
1.	Below 10000	4	8
2.	10000-20000	21	42
3.	20000-30000	19	38
4.	30000-40000	5	10
5.	Above 40000	1	2
Total		50	100

Source: Primary Data

From the above table, incomes of below 10000 are 4(8%) respondents, 10000-20000 are 21(42%) respondents, and 20000-30000 are 19 (38%) respondents and 30000-40000 are 5(10%), above 40000 are 1 (2%) respondent.

**Table 5. Provides duty free charges**

S.no	Provides duty free charges	Frequency	Percentage
1.	Strongly agree	23	46
2.	Agree	22	44
3.	Neutral	5	10
4.	Disagree	0	0
5.	Strongly disagree	0	0
Total		50	100

Source: Primary Data

From the above table, company provides duty free charges is 23(46%) respondents are strongly agree, 22(44%) respondents are agree, 5(10%) respondents are neutral, 0(0) respondents are disagreed, and 0(0) respondents are strongly disagreed.

**Table 6. Importance of invoice**

S.no	Importance of invoice	Frequency	Percentage
1.	Strongly agree	23	46
2.	Agree	25	50
3.	Neutral	2	4
4.	Disagree	0	0
5.	Strongly disagree	0	0
Total		50	100

Source: Primary Data

From the above table, Importance of invoice is 23(46%) respondents are strongly agree, 25 (50%) respondents are agree, 2(4%) respondents are neutral, 0(0) respondents are disagreed, and 0 (0) respondents are strongly disagree.

**Table 7. Standard documentation**

S.no	Standard documentation	Frequency	Percentage
1.	Strongly agree	25	50
2.	Agree	20	40
3.	Neutral	5	10
4.	Disagree	0	0
5.	Strongly disagree	0	0
Total		50	100

Source: Primary Data

From the above table, standard documentation is 25(50%) respondents are strongly agree, 20(40%) respondents are agree, 5(10%) respondents are neutral, 0(0) respondents are disagreed, and 0(0) respondents are strongly disagree.

**Table 8. Importance of packing list**

S.no	Importance of packing list	Frequency	Percentage
1.	Strongly agree	28	56
2.	Agree	17	34
3.	Neutral	5	10
4.	Disagree	0	0
5.	Strongly disagree	0	0
Total		50	100

Source: Primary Data

From the above table, importance of packing list is 28(56%) respondents are strongly agree, 17(34%) respondents are agree, 5(10%) respondents are neutral, 0(0) respondents are disagree and 0(0) respondents are strongly disagree.

**Table 9. Importance of inspection before export**

S.no	Importance of inspection before export	Frequency	Percentage
1.	Strongly agree	23	46
2.	Agree	20	40
3.	Neutral	7	14
4.	Disagree	0	0
5.	Strongly disagree	0	0
Total		50	100

Source: Primary Data

From the above table, company provides documentation process is 23(46%) respondents are strongly agree, 20(40%) respondents are agree, 7(14%) respondents are neutral, 0(0) respondents are disagree and 0(0) respondents are strongly disagree.

**Table 10. Problems faced in COVID-19 situations**

S.no	Problems faced during COVID pandemic	Frequency	Percentage
1.	Strongly agree	30	60
2.	Agree	16	32
3.	Neutral	4	8
4.	Disagree	0	0
5.	Strongly disagree	0	0
Total		50	100

Source: Primary Data

From the above table, problems faced during COVID pandemic is 30(60%) respondents are strongly agree, 16(32%) respondents are agree, 4(8%) respondents are neutral, 0(0) respondents are disagreed, and 0(0) respondents are strongly disagree

#### **Findings of the study:**

- Majority of the respondents 37.5 percent of customer are doing business for 1-2 years with Meenakshi Cargo Forwarders PVT. LTD
- From the study majority of respondent that 45 percent of customer comes to know about the company through marketing people
- Majority of respondents' 37.5 percent of export type of the business.
- It is observed that majority of the respondent's income between 10000 – 20000 intervals.
- From the study majority of the respondents are strongly agreed in provides duty free charges.
- Study shows that 50% percent of the respondents are agreed to importance in invoice.
- It is observed that majority of the respondents are strongly agreed in standard documentation is better than the random documentation
- It is observed that 50% percent of the respondents are strongly agreed to the importance details in packing list.
- As per the observation 46% percent of the respondents are given in importance of inspections before export.
- Study shows that 60% percent of the respondents are give in problem faced in COVID-19 situations.

#### **Discussion:**

- Treat customer loyally, it will make the customer to give the business frequently.
- Be flexible in rate enquiry, with regular customer.
- Maintain level of promptness in communication either mail or calls.
- Provide documents at right time to avoid the time delay during producing documents.
- Concentrate more in retaining the customer, instead of finding new one.
- Provide proper training for the employee and evaluate them frequently.
- In concern with import and export, export is better for promoting business.

- The cargo delivery procedure time should be minimized and waiting time of the customer to get their cargo should be minimized.
- The procedure for the clearance of the cargo release has to be made easy and the confusions about the cargo release should be reduced.
- Although most of the customers are satisfied with the service provided by the Meenakshi cargo, more actions have to be made to improve service provided.

**Conclusions.** From the study Meenakshi Cargo Forwarders Pvt Ltd, the researcher was able to acquire practical knowledge about the functioning of an organization as a whole. It also was of immense help in understanding various authority together, how they are properly coordinated to achieve the common goals of the company which the researcher had only theoretical knowledge so far also the study gave me an idea about the various problem faced by the company and how solution is arrived at. The researcher was able to understand the importance of information and the flow of information in the right manner within an organization from one department to other Performance management should be integrated vertically linking the strategies objectives of the organization to the execution of activities which will enable their achievement. The performance being managed should reflect the requirements, wants and needs of all of the key stakeholders of the organization and not just reflect a limited set; The performance monitoring, review and action panning process should e structured around the strategic performance objectives of the organization; Processes and systems should be designed to extract and communicate insights rather than performance data; All systems and processes should be aligned with each other, driving behavior towards the performance objectives. Effort should be dedicated to developing an appropriate culture to engage the organization's employees and elicit commitment to performance objectives Generally, the study helped to fill the gap between theory and practice. Finally, the complete the study on Air Freight in Meenakshi Cargo Forwarders Pvt Ltd was fully understood and the pitfalls have been identified.

**Author contributions.** The authors contributed equally.

**Disclosure statement.** The authors do not have any conflict of interest.

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## SERVICE QUALITY AND CUSTOMER SATISFACTION IN ETHIOPIAN LEATHER INDUSTRY DEVELOPMENT INSTITUTE

**Renu Sharma, Sandeep Kumar Gupta, Seyoume Taddesse**

<sup>1</sup>Ph.D., Professor/Consultant, Footwear Design & Development Institute, India, e-mail: renukriti@gmail.com, ORCID: <https://orcid.org/0000-0002-9084-3356>

<sup>2</sup>Ph.D., Professor, Centre for Statistics, Modelling and Simulation, AMET Business School, Faculty of Management Studies, AMET University, Chennai, India, e-mail: skguptabh@gmail.com, ORCID: <https://orcid.org/0000-0002-2670-2858>

<sup>3</sup>Economist, Ethiopian Leather Industry Development Institute, Addis Ababa, Ethiopia, [taddesse.seyoume@gmail.com](mailto:taddesse.seyoume@gmail.com)

### Citation:

Sharma, R., Kumar Gupta, S., & Taddesse, S. (2023). Service quality and customer satisfaction in Ethiopian leather industry development institute. *Economics, Finance and Management Review*, (2), 120–129. <https://doi.org/10.36690/2733-2039-2023-2-120-129>

Received: May 08, 2023

Approved: June 28, 2023

Published: June 30, 2023



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**Abstract.** This study's objective is to assess the level of customer satisfaction and product quality in the consultation and project office of Ethiopian Leather Industry Development Institute. Importance of customer satisfaction cannot be undermined for any organisation. The processes and practices of Corporate governance should assess the service gaps and should aim to fulfil the same. The SERVQUAL instrument is used in conjunction with the gap model of service quality to carry out this research. The five SERVQUAL dimensions of tangibles, reliability, responsiveness, assurance, and empathy were used to gauge the extent of customers' expectations and perceptions of service quality. A sample of 240 respondents was selected using a non-probabilistic convenience sampling technique. According to the findings of the study all the five dimensions of service quality have shown a negative gap score. This indicates that customers of Ethiopian leather industry development institute consultancy and project office are dissatisfied with the service provided to them hence; there perceptions are below their expectations. The dimension with the lowest negative gap score is assurance followed by tangibles and responsiveness. The findings of the gap analysis also indicate that tangibility and responsiveness are the two dimensions with the highest negative gap scores which makes these two dimensions the largest contributors to customer's dissatisfaction. Pearson correlation analysis was conducted to examine the relationship between SERVQUAL dimensions and service quality the results shows that all the five dimensions of service quality have a positive relationship with customer satisfaction where tangibility, empathy and responsiveness have a moderate and positive correlation with satisfaction while assurance and reliability have a weak positive correlation with customer satisfaction. Generally, only tangibility and responsiveness dimensions of service quality have shown statistically significant impact on customer satisfaction. Accordingly, Ethiopian leather industry development institute consultancy and project office needs to give more emphasis and due attention to tangibility and responsiveness dimensions of service quality to improve the level of customer satisfaction.

**Keywords:** service quality, customer satisfaction, tangibility, reliability, responsiveness, assurance, empathy.

**JEL Classification:** L67, L91

**Formulas:** 0; **fig.:** 1; **tabl.:** 1; **bibl.:** 23



**Introduction.** Lack of knowledge prevents many companies from improving work effectiveness. Many research found that it fails to meet consumer criteria for product quality and on-time delivery. Thus, this study paper will improve quality service for the consultation and project office of leather industry development institute using scheduling approaches to satisfy clients and boost confidence. Quality service is how people or machines conduct their jobs and the results. Satisfied customers rate an offering's performance.

This research evaluates service quality and customer satisfaction using Ethiopian leather industry development institute consultancy and project team as a case study. This office has delayed service, insufficient floor space, insufficient seating, poor customer service, and a packed environment. Thus, investigating these problems will help achieve the goal and tell the target authority.

In the US, EU, and Japan, services employ more people than all other sectors combined. 60–70% of GDP comes from public and private services. International trade is 25% services. Banking, insurance, communications, transportation, and entertainment make up about 60% of the GDP of industrialised nations. In five years, service occupations will account for all net job growth in various nations (Kotler et al., n.d.).

Any firm wants happy customers. Businesses may not understand customers' thoughts. Thus, most consumer-focused enterprises have found this position challenging. Leather institutions are affected also. Services are changing rapidly (Abdullah et al., 2011). Technology, government regulation, and client sophistication are forcing service organisations to rethink their business models.

**Literature review.** Hoffman and Bateson (Hoffman & Bateson, 2016) describe service as deeds, efforts, or performances. These scholars also argue that products and services are often blurred. It's hard to find a pure goods or service without service components. Service demands client interaction but does not transfer ownership and usually has some intangibility (McDonald & Payne, 2006). Customers can relax with if services meet their utilitarian ideals (Sharma, Mohan, & Gupta, 2022).

*Definition of quality.* Product and service quality is often mentioned. Its definition varies by person and organisation. To attain a consensus, many quality definitions have been offered. Quality, according to Lovelock and Lauren (Lovelock & Wright, 2016), is how well a service meets consumer needs. Juran (Juran & Bingham, 1974) defined quality as "fitness for use." Parasuraman et al. (Anantharathan Parasuraman et al., 1985) say customers evaluate service quality by comparing what they want or expect to what they get or feel they get. Thus, quality is matching or exceeding customer wants and expectations.

*Definition of service quality.* A general definition of service quality has been given as customer appraisal of the service. According to many practitioners, the quality of a service is determined by how different a customer's expectations are from how they actually perceive the service (Munusamy et al., 2010). For instance, Parasuraman et al. (Anantharathan Parasuraman et al., 1985) defined services as the extent to which a service meets customers' needs; this judgement involved a comparison of customers' expectations with their perceptions of actual service

performance; and he (Czepiel, 1990) defined service quality as customers' perceptions of actual service performance.

According to the literature, customers assess service quality by contrasting the service provider's actual performance, or perception, with the expectation they had when they first received the service (Grönroos, 1982). Customers rank service quality as "low" if performance (perception) falls short of their expectations and as "high" if performance exceeds their expectations (Oliver, 1980), making customer expectation and perception the two key components of service quality (Grönroos, 1984).

There are numerous service quality models; the following are a few of them:

*Gronroos Service Quality Model.* Gronroos (Grönroos, 1984) created the first service quality model, which used qualitative methods to quantify perceived service quality. The approach used three dimensions of service quality: technical quality, functional quality, and corporate image.

a) Technical quality: - It refers to the genuine outcome of the service after it has been evaluated, and it is about consumer evaluation of the service.

b) Functional quality: - The way the service was delivered is what functionality quality is all about. The quality of processes and procedures in manufacturing and providing customer service is referred to as functional or process quality. This aspect of quality is usually seen mentally and focuses on the interaction between the service provider and the service user. Customers frequently evaluate process quality when performing a service, keeping in mind that the process of producing and consuming services usually occurs at the same time.

c) Corporate image: - This factor is linked to the customer's impressions of the service provider. The quality of output, service fee, external relational activities, physical status, branch decoration and cleanliness, competency, and personnel manners all contribute to the company's image. "If the corporate image is good in the mind of a particular consumer, the problems this customer has with the result or process will be ignored to a considerable extent using the mental image," Gronroos argues. If difficulties occur on a regular basis, the favourable company image is harmed, and the corporate image becomes negative."

*The GAP model.* The disparities between Expectation and Performance along the quality criteria determine service quality (Anantharathan Parasuraman et al., 1985). Based on gap analysis, they created a service quality model. The following are the numerous gaps depicted in the model:

#### *Gap 1 Consumer Expectation Management GAP*

There are differences between executive perceptions and consumer expectations. In other words, service firm executives may not always know what futures connote high quality to consumers, what features a service must have in order to meet consumers' needs, and what and how much performance on those features is required to give high quality service.

#### *Gap 2 Management perception – Service Quality Specification gap*

It denotes a lack of appropriate service quality design and standards, which results from a lack of management commitment to satisfying customer expectations. The main reasons for the increase in gap 2 are poor service design, lack of customer-

driven requirements, improper physical evidence, and services gape (Zeithaml et al., 2006).

#### *Gap 3 Service quality specification – Service Delivery gaps*

The third gap in the company is that it is not meeting service design and standards. It's the distinction between developing customer-driven service standards and real service delivery by firm employees. Employee retention is critical even in social enterprises (Jogi et al., 2020) It could be caused by a lack of teamwork, bad personnel selection, insufficient training, or an improper job design. As a result, the corporation must devise methods for training or controlling people, as well as motivating them to achieve company objectives (Zeithaml et al., 2006).

#### *Gap 4 Service delivery – External communication gap*

Advertising via the media and other forms of communication by a company can influence consumer expectations. If consumer perceptions of service quality are influenced by expectations, businesses must be careful not to promise more in communication than they can deliver in reality. When you promise more than you can provide, it raises early expectations but lowers quality perceptions when you don't deliver. Consumer expectations for service, as well as consumer perceptions of given service, can be influenced by external communications.

#### *Gap-5 Expected Service – Perceived Service gap*

The magnitude and direction of the gap between expected and perceived service determines the quality that a consumer perceives in a service.

*SERVPERF model.* SERVPERF was developed by Cronin and Taylor (Cronin Jr & Taylor, 1992) as a performance-based measure of service quality. SERVPERF is made up of the 22 perception components from the SERVQUAL scale, however it does not take into account expectations. To put it another way, SERVPERF is different from SERVQUAL in that it does not evaluate gap scores because the expectancies element of the pairings is not included. While expectations can have a distinct effect on consumers' perceptions of service quality, using performance-minus-expectations as a basis for measuring service quality is ineffective (Cronin Jr & Taylor, 1992).

#### *Customer expectation, perception and satisfaction:*

*Customer expectation.* Customer expectations are views about a service that serve as benchmarks against which service performance is measured (Zeithaml et al., 2006); they are what customers believe a service provider should supply rather than what is already available (A Parasuraman et al., 1988). Expectations are shaped by a multitude of factors, including the customer's individual wants and desires (Scheuing & Edvardsson, 1994), promises (staff, advertising, and other communications), implicit service promises (such as price and tangibles linked with the service), word-of-mouth communication (with other customers, friends, family, and experts), and past experience with that service (Zeithaml et al., 2006).

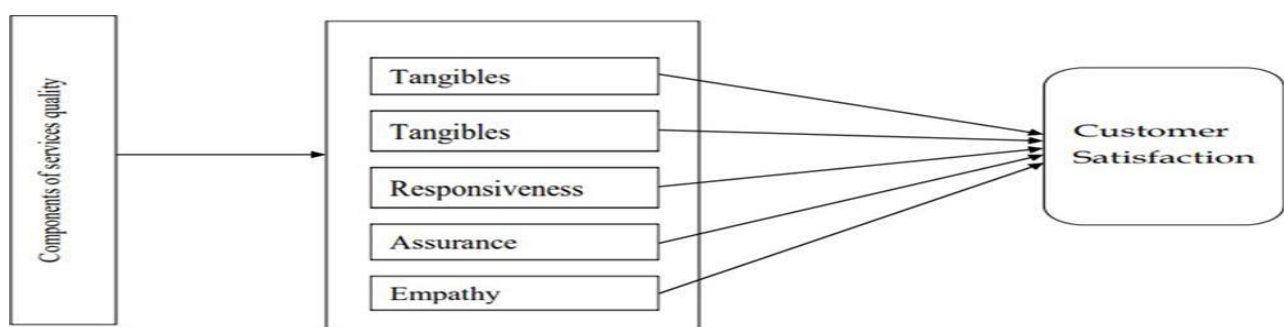
*Customer Perception of Service Quality.* Customer perceived service quality, as mentioned in (Zhilin et al., 2004), can be characterised as a general assessment or attitude referring to the excellence of a service relative to competing alternative (A Parasuraman et al., 1988). To measure perceived service quality, consumers'

expectations are contrasted to their opinions of the services received from suppliers (A Parasuraman et al., 1988). It is said that the secret to creating a positive perception of service quality is to meet or exceed what clients expect from a service. As a result, if the supplier's actual service falls short of expectations, a gap must be filled using strategies that change either expectations or perceptions, or both (A Parasuraman et al., 1988).

*Customer Satisfaction.* According to Zhilin, Minjoon, and Robin (Zhilin et al., 2004), customer satisfaction is defined as a person's emotional state of happiness or unhappiness as a result of comparing a product's perceived performance (or outcome) to the person's expectations as stated on the website. Customer satisfaction has long been recognised as a crucial success factor in today's cutthroat corporate environment because it affects market share and client retention. According to a study (Zhilin et al., 2004), "satisfied customers are less influenced by competition, have lower price sensitivity, and stay loyal for longer."

*Relationship between service quality and customer satisfaction.* In the literature, the relationship between customer happiness and service quality has gotten a lot of attention, according to (Bolton & Drew, 1994). "Service quality is a global evaluation, or attitude, connected to the superiority of the service, whereas satisfaction is related to a specific transaction," he defined service quality and customer satisfaction. Satisfaction is defined as a "post-consumer experience that compares perceived quality to desired quality, whereas service quality refers to a comprehensive assessment of a company's service delivery system" (A Parasuraman et al., 1988). The main distinction between service quality and customer satisfaction is that quality refers to the managerial delivery of the service, whereas satisfaction refers to the consumers' experiences with it.

Based on the above literature review the following conceptual framework is developed (Fig.1).



**Fig.1. Conceptual frame work of the study**

Source: developed by authors

**Aims.** This study's objective is to assess the level of customer satisfaction and product quality in the consultation and project office of Ethiopian Leather Industry Development Institute.

**Methodology.** This study used a quantitative research approach to investigate and quantify the association between service quality and customer satisfaction in the Ethiopian leather industry development institute consultant and project office.

A sample size of 240 respondents was chosen based on the available time, resources, and willingness of the company's management. A convenience sampling method was used to select the respondents.

A self-administered structured questionnaire containing the five service quality dimensions and satisfaction questions were prepared and distributed to the sample of customers chosen for this study. The questions were measured on a five-point Likert scale ranging from strongly agree to strongly disagree.

The statistical package for social science (SPSS) version was used to analyse and interpret the data obtained from the surveys. The inferential Cronbach's Alpha tests were used to ensure that the items are reliable. The link and influence between the dependent variables (customer satisfaction) and independent variables (reliability, responsiveness, empathy, assurance, and tangibility) were also investigated using Pearson correlation and multiple linear regressions analysis.

Two hundred (200) questionnaires were issued to the authority's educated exterior clients and private individuals in order to collect data. This demonstrates that a nearly 100 percent response rate was achieved, indicating that a considerable response rate was achieved, allowing the analysis to proceed smoothly. The minimum and maximum responses are 1 and 5 respectively for all the variables used in the descriptive statistics section, the mean value represents the average of all customer response on certain dimensions while, standard deviation shows how diverse the responses of the respondents are meaning if the standard deviation shows smaller number it indicates that the response of the respondents shows close opinions and when the standard deviation is high it indicates the response of the respondents shows high variation.

**Results.** The average mean for the perception of tangibility dimension of service quality indicates that the customers of Ethiopian leather industry development institute consultancy and project office believes that the tangibles aspects of the service provided by the section are satisfactory but when we see their expectation of the tangibles of this section it was high which is (3.97) but their perception shows that the average mean for tangibles is (2.7) which indicates that even if their perception of service quality with respect to tangible dimension are around neutral their expectations are higher than their perception and when customers' expectations are not meet customers are dissatisfied.

The researcher employed bivariate correlation with Spearman correlation coefficient to determine the existence and level of relationship. Spearman correlation coefficient, which ranges from -1.0 to +1.0, reflects the strength and direction of the relationship between the two variables (Field, 2005). The correlation study was conducted using Spearman correlation coefficient ( $r$ ) to determine the amount and direction of the correlations between the parameters of service quality and customer satisfaction. It was also used to rank the variables having the most significant links to customer happiness. The correlation efficiency ( $r$ ) is classified as

follows: 0.1–0.29 is weak, 0.3–0.49 is moderate, and >0.5 is strong (Field, 2005). A two-tailed test's bivariate correlation confirms the Spearman of statistically significant data analysis. p0.05 difference at the probability level, given a 95 percent confidence interval on statistical results correlation analysis.

As a result, responsiveness has a moderate association with customer satisfaction (r=0.307) and empathy has a moderate positive relationship with customer satisfaction (r=0.386). The remaining characteristics, Assurance, Tangibility, have week correlation and Reliability has negative correlation, with customer satisfaction (r=0.085), (r=0.227), and (r= -0.123), respectively. That is, majority service quality measures have a lower correlation effect on customer satisfaction levels, while the magnitude of the effect varies.

**Table 1. Correlation between variables**

Correlations			Tangibility	Reliability	Responsivene Ss	Assurance	Empathy	Customer Satisfaction
Spearman's Rho	Tangability	Correlation Coefficient	1.000	0.138	.289**	.168*	.235**	.227**
		Sig. (2-Tailed)		0.052	0.000	0.018	0.001	0.001
		N	240	240	240	240	240	240
	Reliability	Correlation Coefficient	0.138	1.000	.168*	0.078	-0.038	-0.123
		Sig. (2-Tailed)	0.052		0.018	0.274	0.593	0.083
		N	240	240	240	240	240	240
	Responsivi Ness	Correlation Coefficient	.289**	.168*	1.000	.155*	.305**	.307**
		Sig. (2-Tailed)	0.000	0.018		0.028	0.000	0.000
		N	240	240	240	240	240	240
	Assurance	Correlation Coefficient	.168*	0.078	.155*	1.000	.239**	0.085
		Sig. (2-Tailed)	0.018	0.274	0.028		0.001	0.231

Source: developed by authors

The results indicate that about 44.9% ( $R^2=0.449$ ) of the variance in the overall satisfaction is explained by the SERVQUAL dimensions. In addition, the results demonstrate that there is positive and statistically significant ( $p<0.05$ ,  $F=29.824$ ) relationship between the SERVQUAL dimensions and overall customer satisfaction. Therefore, SERVQUAL dimensions (tangibles, reliability, responsiveness, assurance, and empathy) collectively are significant to the institute customer satisfaction. Thus the finding supports hypothesis one (H6), that there is positive relationship between overall SERVQUAL dimensions and customer satisfaction.

As shown on above table the SERVQUAL dimensions separately have different significant levels. This indicates that they have different relationship with service quality when we look at them one by one there is a positive and statistically significant ( $p< 0.05$ ,  $\beta= 0.455$ ) relationship between empathy and customer satisfaction which supports H.6 and also there is a positive and

statistically significant ( $p< 0.05$ ,  $\beta= 0.338$ ) relationship among reliability and customer satisfaction and also there is positive relationship between responsiveness and customer satisfaction ( $P< 0.05$ ,  $\beta = 0.275$ ) The remaining dimensions (tangible,

and assurance) do not have significant positive relationship with customer satisfaction since they have p-value ( $> 0.05$ ).

According to the office management, who has been with the office for the past three years, the development and introduction of new institute services is/are more likely to be difficult due to the Ethiopian service industry's lately growing severe rivalry. This could be used as a signal to develop the institute in order to meet the changing market demands of current and new consumers.

Customers are frequently encouraged to communicate their opinions, criticisms, and complaints through various channels such as personal discussion, suggestion boxes, telephone, and e-mail. The authority management will be able to have sound indicators when something goes wrong in terms of customer service in order to take prompt action. However, both the manager and the assistant manager advised the researcher that, to their knowledge, no market research had been undertaken. They confirmed that the prospective outcomes may contribute to the institute success based on the quality of the outputs and management's acceptance of the same in respect to this specific study project.

Interpersonal relationships can influence emotions of customers in both positive (Sharma & Arora, 2019) and negative ways (Sharma et al., 2023). Personal authority, Customer Service officers lead, Customer Officer, have varied service years and hold different roles in the office, have diverse perspectives on service marketing. The personal authority, for example, considered service marketing to be based on customer interest. The customer service officer saw service marketing as if it were a tangible product. Others stated that knowing you're with regard to service failures experience of the employees, all respondents except one confirmed that they were being encountering services failures in accordance with the customers' reaction. The response given by one employee stating that no service failure was being experienced seems far from the reality on the ground. This may negate A client is crucial when it comes to service marketing. This could indicate that the office staff have a limited understanding of services marketing and its functions.

The complains were positive and negative criticisms and the positive one should be considered as stepping stone to construct the overall success of the bank, Hence, it seems that they do have healthy attitude towards the instrumental roles of customer complains

With regard to handling of customers' complaints, all of the respondents asserted that it was found crucial to handle complaints of customers so as to be efficient and effective in the service industry. Moreover, the respondents said that service quality and customer satisfaction have positive relationships. This may infer that the employees are bothered to render quality services so as to satisfy their existing customers.

**Discussion.** First and foremost, the target institute management should take appropriate steps to close the knowledge gap caused by the key functions of services and relationship marketing. Meanwhile, the target office management should recognize the importance of the SERVQUAL Model, so that whatever promises are made to external customers, the institute should keep them. They have moment of

truth encounters with external clients because they are on the frontlines. To put it another way, if management does not treat its people well internally by creating a pleasant working atmosphere and providing enough benefits, it will fail.

Additionally, short-term, medium-term, and/or long-term capacity building trainings on Service Quality Dimensions and their instrumental implications should be critically arranged for all the office employees, particularly frontline employees, in order to fill the demanding gaps and cope with the emerging intense and extensive authority competitions.

In addition, research should be undertaken at least once every budget year in order to close the service gap that has been identified between internal and external customers. Furthermore, the authority management should value retaining existing customers rather than focusing on attracting new prospects at this time, because doing the latter while ignoring the former is tantamount to committing gradual death. Such issues can be addressed by doing timely and relevant research.

Finally, more studies should be planned and carried out in order to detect and address any problems that may arise during service delivery.

**Conclusions.** The study's main goal was to use the SERVQUAL model to assess the level of service excellence and client satisfaction in the consultation and project office of the Ethiopian Leather Industry Development Institute. The study's conclusions demonstrate a favourable correlation between customer satisfaction and the total sum of the five SERVQUAL aspects.

The study's results also demonstrate a favourable association between the responsiveness and empathy aspects of service quality and customer happiness. But in the gap analysis, these two dimensions had the largest negative gap. This shows that even though these two factors are the most crucial for ensuring customer happiness, the consultation and project office consistently falls short of what customers want in these areas.

According to the study's findings, the consultancy and project office's ability to provide a dependable service—that is, one that is delivered on time and done correctly the first time—is one of the key elements that greatly contributes to customers' satisfaction. Additionally, receiving services with empathy is crucial, as is receiving respect and similar treatment. The findings also show that there is no association between customer satisfaction and any of the two SERVQUAL categories, tangibles or assurance. This research led to the conclusion that customers place greater value on the reliability and empathy parts of the service than they do on the facility's physical look, the employees' skills, and their educational backgrounds. The study's conclusions also show a strong and positive correlation between customer happiness and overall service quality. This ultimately means that providing high-quality services will result in satisfied clients.

The study is limited by several factors. Firstly, the study is limited in terms of office selection, the service offering, and coverage area; it only examined one office service quality and satisfaction of customers of Ethiopian leather industry consultancy and project office. This in general indicates that the scope of the study is



narrow in terms of the study area. Moreover, the sample size of respondents used in the study is small. Thus, it is recommended that future studies should be conducted to cover a wider sample area.

**Author contributions. The authors contributed equally.**

**Disclosure statement. The authors do not have any conflict of interest.**

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## TOURISM IN UKRAINE IN THE WAR CONDITIONS: THE EUROPEAN INTEGRATION ASPECT

Daryna Hryhorchuk<sup>1</sup>

<sup>1</sup>Postgraduate student, Department of Smart Economics, Kyiv National University of Technology and Design, Kyiv, Ukraine; e-mail: darina0555@gmail.com, ORCID: <https://orcid.org/0009-0003-9885-4417>

### Citation:

Hryhorchuk, D. (2023). Tourism in Ukraine in the war conditions: the European integration aspect. *Economics, Finance and Management Review*, (2), 130–137. Retrieved from <https://doi.org/10.36690/2733-2039-2023-2-130-136>

Received: May 08, 2023

Approved: June 28, 2023

Published: June 30, 2023



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**Abstract.** *The direction of our research is based on the issue of the development of tourism and the European integration course of Ukraine in the conditions of a full-scale Russian invasion. In the paper, the author emphasizes the need for the development of national tourism both in the conditions of war and in the framework of post-war reconstruction. At the same time, the development of tourism should take place strictly within the limits and taking into account the European integration course of Ukraine. Author emphasizes that today, Ukraine faces a task that consists in the contradiction between the need to integrate into the world economy, on the one hand, and to ensure the protection of national interests and security, on the other. That's why the main aim of our study is the analysis of the development of tourism in the war conditions in the context of the European integration of Ukraine. The paper states, that military actions have a significant negative impact on the tourism industry regions and the whole country. There are reasons for military actions and their impact on tourism security concerns; decrease in demand; infrastructure damage; loss of jobs and a negative image, all of which have a significant impact on development of tourism in Ukraine. At the same time, the author notes that the situation in tourism, as in other sectors of the economy, is closely related to the issue of Ukraine's European course. Thus, the article noted that the experience of European integration of Ukraine in the conditions of war has a unique character. By resisting large-scale armed Russian intervention, suffering from huge human costs and financial and economic losses, the country acquired the status of a candidate for joining the EU, continues European integration in various areas, deepens partnership with the EU in sectoral directions, implements the recommendations of the European Commission and implements the provisions of the Agreement in practice about the association.*

**Keywords:** *tourism industry, development, war conditions, Russian intervention, European integration course of Ukraine.*

**JEL:** L83, Z32

**Formulas:** 0; **fig.:**0; **tabl.:**1; **bibl.:** 15

**Introduction.** In 2022, a new stage in the relations between Kyiv and Brussels began — Ukraine received the status of a candidate for joining the EU, which materialized the prospects of joining the European community, contributed to further reforms, became an incentive for the authorities and citizens of the country, and a positive signal for European and global investors. Currently on the agenda is the adaptation of national legislation in all areas of the national economy to the European legal space, deepening the integration of Ukrainian business into EU markets, the

practical introduction of visa-free travel in various areas, further sectoral integration, etc.

Ukraine's European integration is taking place in conditions of large-scale Russian invasion. The war unleashed by the aggressor country, on the one hand, proved the readiness of Ukrainians to defend the independence of their country, the European path of its development, united the Ukrainian nation and strengthened public support for the movement towards the EU. And on the other hand, it activated the bilateral processes of European integration, gave a new quality to the policy of Brussels in the Ukrainian direction, forced to review the approaches and priorities in the field of security. At the same time, the war, during which Ukraine suffered colossal human and financial and economic losses, influenced the nature of progress towards a united Europe, conditioned the peculiarities of "military" European integration.

Currently, the main component of relations between Kyiv and Brussels is joint opposition to Russia's continental expansion, political solidarity and military, financial and economic support of Ukraine. Our country has been defending the eastern flank of the EU for a long time, bearing the brunt of the entire military power of the aggressor country. Today, the future of Europe depends on the Armed Forces of Ukraine. This is the geopolitical significance, exclusivity and priority of Ukraine's European integration. At the same time, the European integration of Ukraine is the most important modern trend, which has a powerful influence on the processes of reforming the tourism industry.

**Literature review.** Despite the fact that the problems of European integration of Ukraine during the war are covered in the scientific literature, the issue of the European integration aspect of the development of tourism during the Russian military invasion has not been developed in such detail. The attention of the authors on this topic is focused, first of all, on the peculiarities of the functioning of the tourism industry in the conditions of political crises and military invasions. So, in particular, the studies of Ukrainian scientists L. Kvasnii, L. Malyk, O. Moravska & Y. Shulzhyk (2023) are devoted to the analysis of the factors of development of enterprises in the tourism industry of Ukraine and the formation of scenarios for their development in conditions of martial law and after the end of hostilities. According to the results of the analysis, the authors note that strategic management and change management are recognized as one of the optimal approaches to the formation of scenarios for the development of enterprises in the tourism industry of Ukraine in the conditions of general dynamism, unpredictability and variability of the business environment.

In the paper "Sustainable business development in the context of the contemporary risks and challenges" V. Kostynets & Y. Kostynets (2023) claim that Russian aggression not only creates significant obstacles to the recovery of the continent's tourism industry after the pandemic, but also encourages tourists to consider alternative tourist destinations to other countries. A big problem in this situation was also the fact that all international logistics routes that pass through the territory of Ukraine are not functioning now. However, the Ukrainian market is not

the only one affected by this war: on certain European destinations, a drop in the number of flights is observed after February 24, compared to the same period in 2021. So, for example, the number of flights in Moldova fell by 69%, in Slovenia by 42%, in Latvia by 38%, and in Finland by 36%.

M. Nikolova (2022) in her research emphasizes that Russia's brutal war on Ukraine, while and first and foremost a humanitarian tragedy, has caused widespread economic damage across the globe, not least in travel and tourism. Between them, Russian and Ukrainian tourists usually spend around 45 billion US dollars per year on outbound travel, much of it in the countries of emerging Europe. Hardly had the Covid-19 pandemic abated than Russia invaded Ukraine, providing the travel and tourism sector throughout emerging Europe with yet another challenge. According to the Economist Intelligence Unit, the war will affect Europe's tourism industry in four ways: a loss of Russian and Ukrainian tourists; restrictions on airlines and use of airspace; higher food and fuel costs; and a big hit to traveler confidence and disposable incomes.

A separate field of research covers the issue of restoration of the tourism industry and the country as a whole after the end of hostilities. According to H. Alipour & L. Dizdarevic (2007), "the development and recovery of a nation after a war is at the forefront of the process of the rebuilding of that nation in which the tourism industry, through proper planning, can play a formidable role". S. Fernando, J.S. Bandara & C. Smith (2013) highlight that "tourism can play a role in poverty alleviation via employment generation, in increasing foreign exchange earnings and in accelerating economic growth including in the war-affected areas".

Different authors (Novelli et al., 2012; Causevic & Lynch, 2011; Fernando et al., 2013) pointed out that the normalization of the socio-political context is a basic condition for a successful tourism development in a post conflict period. The active role of the government and the political system is essential, firstly to foster such a normalization (Causevic & Lynch, 2013; Winter, 2008), secondly to implement an adequate tourism policy aimed to regulate and drive tourism development (Novelli et al., 2012; Winter, 2008), thirdly in order to rebuild the infrastructure system (Hall, 2003).

Another stream of studies focus on the destination image reconstruction, as tourist usually don't want to go to places perceived as unsafe (Huang et al., 2008). Wars can contribute to create in people's mind the idea of a place which remain unsafe, even after the end of the conflict. This perception can be reinforced by inaccurate information and stereotypes propagated by media (Alvarez & Campo, 2014). In order to face these issues, according to Vitic & Ringer (2008), destination branding has become a strategic marketing factor in promoting tourism destinations impacted by conflicts. The strategy used can be different, depending on the context.

**Aims.** The literature review showed the main focus of research by world and Ukrainian authors, however objective prerequisites for increasing the role and significance of the European integration of Ukraine for the development of tourism in the war conditions and especially in the post-war period, as well as the prospects for a further increase in tourist flows in the global community are increasing the need to

further investigate the problem of tourism development taking into account the European integration aspect. Accordingly, the main aim of our study is the analysis of the development of tourism in the war conditions in the context of the European integration of Ukraine.

**Methodology.** In the research process, general scientific and special methods were used: dialectical and abstract-logical - for theoretical and methodological generalizations, determination of the essence of the development of tourism in Ukraine, taking into account the specifics of its functioning during the war, formulation of conclusions; comparison - to compare the actual data of the reporting period with the indicators of previous years; analytical groupings - to establish connections and dependencies between factors and effectiveness of existing tourism development strategies; correlation-regression analysis - to determine the degree of influence of the main factors on the development of tourism in Ukraine in the war conditions in the one side and European integration in the other side.

**Results.** Today, Ukraine faces a task that consists in the contradiction between the need to integrate into the world economy, on the one hand, and to ensure the protection of national interests and security, on the other. At the current stage, the tourism industry in Ukraine is one of the most affected industries during the war. For obvious reasons, this type of economic activity has not been able to function and develop normally in our country for more than a year. The ban on air travel and cross-border currency transactions are also one of the determining factors inhibiting the development of the tourism industry. In fact, the Russian-Ukrainian war has become almost destructive for the tourism industry. Closed airspace, difficulties with payment and the unreliable situation with the safety of tourists suspended all prerequisites for the "survival" of this species were met economic activity. However, despite everything the complexity of the situation, the tourism industry in Ukraine continues to function. Tourism industry adapts to new realities, finds new solutions, lays down basis for future development and works on a common goal. Activities of tourism entities industry today is significantly supported by the state budget, since this function is very important in terms of martial law (Mashika, P'jatka, 2022).

**Income from tourism.** The war reduced the revenues of the state budget of Ukraine from subjects of the tourism industry almost by 34%, because its state budget did not receive taxes from tourism due to the war. So, for nine months of 2022, representatives of the tourism industry of Ukraine paid taxes by 33.34% less than in the same period of 2021. Such thus, for the nine months of 2022, the total number of taxpayers engaged in tourist activities decreased on average by 28%. At the same time, the number of legal entities decreased by 36%, and the number of individuals - by 25%. In addition, tax revenues from the activities of tourist operators decreased by 32%. For example, for nine months of 2022, UAH 125 million of taxes were paid to the state budget, while for similar period of 2021 to the state treasury UAH 184 million was paid. They decreased by 5% tax revenues from the activities of travel agencies. Increase in taxes paid for nine months of 2022 took place in Lviv region (197 million UAH against 2021's 151 million hryvnias), Ivano-Frankivsk region (136 million UAH compared to 2021 almost UAH 104 million) and Kyiv

(UAH 120 million vs 2021's almost UAH 89 million). Tax revenues significantly decreased in the city of Kyiv (by 43%) and Odesa region (by 78%) compared to 2021's data (DART).

**Table 1. Income of taxes from the tourism industry in Ukraine for 2022**

Objects of taxation	Receipt of taxes for 2022, thousand UAH	Income of taxes in 2022 compared to 2021, %
Hotels	898 381,44	-30,3
Travel agencies	204 795,22	-26,7
Touoperators	167 858,10	-35,2
Recreation centers	141 163,66	-57
Other objects of accommodation	137 394,00	+45,9

It should be noted that the decrease in revenues from the tourist tax was recorded in 14 regions of Ukraine. These are mainly areas that were or are currently in war zones and temporarily occupied. For example, in the Kherson region the amount of the tourist tax decreased by 95%, in Mykolayiv region - by 90%, in Donetsk region - by 83%, in Luhansk region - by 80%. Also, a significant decline occurred in Odesa region (80%), Zaporizhia region (78%), Kharkiv region (61%), Sumy region (58%), Kyiv region (54%), Chernihiv region (53%), Kyiv city (43%) and Zhytomyr region (24%). In Dnipro and Rivne regions receive income from the tourist tax decreased by 15%.

The leader among the regions of Ukraine in terms of tourist tax in 2022 Lviv region became UAH 41,430,000 in 2018, showing a 79% increase in compared to 2021. The capital increased its budget by 31 million 474 thousand UAH, although compared to 2021, this amount was less than half. Also among the leaders in paying the tourist tax are Zakarpattia region - 19 million 471 thousand. UAH Ivano-Frankivsk region - 17 million 956 thousand UAH and Cherkasy region - 12 million 555 thousand UAH (DART).

In addition, the amount of visitors to Kyiv for 2022 has greatly decreased, since by February 2022 the number of foreign and domestic tourists. The reason is Russia's aggression against Ukraine, because the number of foreign tourists who visited the capital city of Kyiv decreased in 3 times, which is about 300 thousand people in the first half of 2021, and in the first half of 2022 the number of foreign visitors decreased to 98 thousand people. According to studies of Kyiv by foreign tourists in recent years were citizens of such countries as Turkey, the USA, Israel, Poland, Germany, India, Azerbaijan, France and Italy, which is about 60% of the total number foreign visitors who visited Kyiv for tourist purposes (DART).

So, military actions have a significant negative impact on the tourism industry regions and the whole country. There are reasons for military actions and their impact on tourism security concerns; decrease in demand; infrastructure damage; loss of jobs and a negative image, all of which have a significant impact on development of tourism in Ukraine. In general, the impact of military operations on the tourism industry is very serious and predicts serious losses in tourism and other areas, and the consequences are possible felt for many years after the end of hostilities.

***The European integration course of Ukraine in the war conditions.*** The European integration of Ukraine is the most important modern trend, which has a powerful influence on the processes of reforming the tourism industry in war conditions. The process is equally important globalization. At the current stage of development of the tourism sphere, political forces strive to conform to the image of the leaders European integration, which also affects activities state authorities. But often there is a positive attitude towards European integration trends is accompanied by the lack of real reforms, in particular, the preservation of obstacles and complications of doing business is observed, the practical absence of positive changes in attracting investments and budget financing social programs related to development tourism.

The large-scale war unleashed by Russia against Ukraine changed the picture of the world, caused a number of risks and threats, caused turbulent processes in the political, economic, and security environments, the consequences of which are currently difficult to predict. Russian aggression deepened the contradiction of the modern world, worsened the socio-economic situation at the regional and global levels. In particular, the rise in the cost of energy resources provoked a crisis on the food market caused increase in the price of consumer goods and, accordingly, a large-scale impact on the level of well-being citizens of many countries of the world. In parallel in different regions of the world from the beginning of 2022. inflationary processes accelerated, which was clearly felt by the tourism industry.

The large-scale intervention by the Kremlin accelerated European integration processes in Ukraine, led to profound pro-European changes in public consciousness, united the Ukrainian nation. Also Russian the threat contributed to strengthening the consolidation and solidarity of the EU countries in the Ukrainian directly. However, despite the advantages and new prospects, the candidate status is an important, but yet another stage of Ukrainian European integration, the success of which depends on the tactical plan from Ukraine's performance of current tasks European integration. And in the strategic one - from full-scale accession to the European political and legal space.

**Discussion.** In the war conditions, Ukraine focused its efforts on implementing the recommendations of the European Commission, in particular regarding reform judicial system, fight against corruption and money laundering, modernization of national legislation in the field of media and of national minorities, in the hotel industry and the service sector, etc. Simultaneously, within the framework of the implementation of the Association Agreement, the Ukrainian side has made significant progress in the field of digital transformation, customs affairs, overcoming technical barriers to trade, public procurement, etc.

The war did not weaken the mood of Ukraine to continue pro-European reforms, to provide the necessary conditions for initiation of negotiations on membership in the European Union. This requires additional efforts and support from all branches of government society. This topic, even against the background of war, will be one of the relevant ones in the dialogue between Kyiv and Brussels.

At the same time, there are a number of internal and external factors of a minor nature, which slow down the movement of Ukraine to the EU, in particular internal problems in Europe and the expansion of the range of candidate countries for joining the European Union. It should be noted that the exclusivity and weight of Ukrainian European integration, unlike other applicant states, determined by a complex of political and security factors of a geopolitical scale, which are of crucial importance for the future structure of Europe and the world.

**Conclusion.** By the results of the analysis determined that despite the Russian-Ukrainian war, which has become almost devastating for the tourism industry of Ukraine, this branch of the economy continues to function and develop, adapting to new realities. Considering the issue of priorities functioning of the tourism industry in Ukraine, it should be noted that the priority measure should be development of a strategy for the development of national tourism taking into account international experience and European integration. At the same time, it should be taken into account that in Ukraine, during the post-war recovery, it is necessary to actively promote tourism potential, develop new initiatives and attract to of this process of international partners. Worth it too to be taken into account in the post-war reconstruction of Ukraine the experience of countries that at the present stage have a strong tourist potential, but in the past have suffered losses from war or armed conflicts.

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## SECURITY THINKING: THE UKRAINIAN CONTEXT

Oleksandra Liashenko<sup>1</sup>

<sup>1</sup>Doctor of Science (Economics), Professor, Management and Organization Development Department, Ukrainian Catholic University, Lviv, Ukraine, e-mail: Lan911@ukr.net, ORCID: <https://orcid.org/0000-0001-7114-4501>

### Citation:

Liashenko, O. (2023). Security thinking: the Ukrainian context. *Economics, Finance and Management Review*, (2), 137–146. <https://doi.org/10.36690/2733-2039-2023-2-137-146>

Received: June 01, 2023

Approved: June 28, 2023

Published: June 30, 2023



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**Abstract.** In an increasingly interconnected world, the security landscape has become exponentially more complex. Organizations and individuals face a myriad of threats, from sophisticated attacks to ever-evolving vulnerabilities. In order to successfully navigate this treacherous terrain, it is critical to develop a safety-focused mindset. Taking this proactive approach can pave the way for resilience to complexity, where strong defenses and adaptive strategies work in tandem to protect our security ecosystem. Security Thinking is a proactive approach to analyzing and addressing potential risks and vulnerabilities in order to enhance security measures. It involves a mindset that prioritizes prevention, preparedness, and adaptability to protect against various threats and challenges. Security Thinking encourages individuals and organizations to consider security implications at every level, from technology and processes to human behavior, promoting a resilient and secure environment. It is a continuous and dynamic process that seeks to stay ahead of emerging threats and evolve in response to changing security landscapes. At the same time, there is another definition. Security Mindset is an individual's or organization's way of thinking that places a strong emphasis on security and risk management. It involves being proactive in identifying potential threats, vulnerabilities, and weaknesses in systems, processes, and behaviors. Developing a security mindset is not an end point, but a continuous journey. Using intellectual rigor and an innovative spirit, you can significantly influence the formation of a security ecosystem. The principles of resilience to complexity and a holistic approach to security, guided by a security-centric mindset, are becoming a dynamic force in protecting the security ecosystem. By integrating physical security, modernized legislation, social engineering, data privacy protection and psychological security, we can build a fortress against a wide range of threats. However, the unprecedented challenges associated with Russia's full-scale war against Ukraine have significantly complicated the architecture of modern security, creating a need for the development of a new paradigm of security thinking and practical tools for its application.

**Keywords:** security thinking; security mindset; security landscape.

**JEL Classification:** H 56

**Formulas:** 0; **fig.:** 2; **tabl.:** 1; **bibl.:** 17

**Introduction.** In an increasingly interconnected world, the security landscape has become exponentially more complex. Organizations and individuals face a myriad of threats, from sophisticated attacks to ever-evolving vulnerabilities. In order to successfully navigate this treacherous terrain, it is critical to develop a safety-focused mindset. Taking this proactive approach can pave the way for resilience to complexity, where strong defenses and adaptive strategies work in tandem to protect our security ecosystem. A dynamic security environment is one that is constantly changing and evolving, requiring security measures to be constantly updated and adapted to keep pace with new threats and risks. Such an environment can be characterized by a range of factors, including:

**Emergence of new threats:** A dynamic security environment is often characterized by the emergence of new threats that were not present or well understood previously. These threats can come from a range of sources, such as cyberattacks, terrorism, natural disasters, or geopolitical risks.

**Rapid technological change:** Technology is constantly advancing and changing, which means that security measures must also adapt and evolve to keep pace. This can include everything from new software and hardware systems to emerging trends in social media and other digital platforms.

**Increased interconnectedness:** As the world becomes more interconnected, the risks associated with various systems and networks can quickly multiply. A dynamic security environment may include a range of interconnected systems, such as transportation networks, financial systems, and critical infrastructure.

**Evolving threat actors:** Threat actors, such as hackers, cybercriminals, and terrorists, are constantly evolving their tactics and techniques. A dynamic security environment requires security measures that are able to detect and respond to these new threats in real-time.

**Heightened uncertainty:** A dynamic security environment can be characterized by heightened uncertainty, where risks and threats may be difficult to predict or quantify. This can make it challenging to develop effective security measures that are able to address these risks in a proactive and strategic way.

**Literature review.** In the modern era of globalization changes, with the development of information civilization, security science is becoming more and more important. The interdisciplinary direction is today the main advantage and the base that constantly creates and multiplies the overall potential of a person, the state and society. After all, the modern world; we live in jasper, permeated with all social troubles, cataclysms, and also full of military conflicts. That is why the urgent need and interest of each of us in the study of the interdisciplinary science Security Studies requires. At the same time, it is worth noting that consciousness, language, and preventive instructions of wisdom must serve as constructions in security science. [1, 2].

The theory of securitization, proposed by B. Buzan, O. Waever, and other representatives of the Copenhagen School, has allowed for an expanded understanding of the concept of security. This includes not only military aspects but also political, economic, social, and environmental components. The scientific community recognized the crucial role of the state in ensuring national security [3]. In the 1994 Human Development Report, a new scientific concept prioritizing human security and its constituent elements – economic security, food security, health security, environmental security, personal security, community security, and political security – was formulated based on the conclusion that achieving world peace necessitates individual safety in daily life [4]. D. Held and A. McGrew argue that globalization has led to a shift from state-centric policies to a new complex form of multilayered global governance in security provision. While different states have gained varying benefits from globalization based on their potential and level of development, there is an overall trend towards reduced capabilities of national states

to ensure security due to lack of institutional capacity [5]. Subsequently, global leaders moved towards forming a "global community" and developing the concept of human security prioritization. D. Chandler analyzed the paradigm shift in security studies [6]. However, the concept of responsibility for global security by "strong" states and their right to intervene in the internal affairs of other states (supposedly to protect basic human rights) proved to be problematic in practice, creating fundamental contradictions between this right and the sovereign rights of independent states. Indeed, this can characterize Russia's behavior towards Ukraine as a distortion of the security paradigm. Additionally, the necessary measures in the field of global security required proper resource provisioning and became quite burdensome for the economies of "strong" states. Changes in the global security environment, the emergence of new and the intensification of traditional threats, have brought forward questions regarding the development of security thinking. In Ukraine, this process is just beginning, while at the same time, it is establishing new frameworks for such thinking on a global scale.

**Security Revolution.** Long-standing norms and security systems are being challenged in a variety of ways. Existing structures have so far been sufficient to meet the new challenges, but signs of stress in the security system are growing. Thanks to 21st century technologies – from communications to munitions – the means of breaching security are becoming cheaper, easier to find and use. Structures built to deal with 20th century problems are struggling to cope with 21st century technologies that are moving faster than problem management systems can adapt. **Transnational Threats:** The time it takes for a threat to move from one territory to another has been reduced by orders of magnitude. **Pervasiveness and mutating threats:** A connected world creates great opportunities for individual human advancement, but also risks entirely new forms of vulnerability. There are dozens of potential sources for this topic, depending on what specific areas of security need to be studied. Potential options are the CSIS Annual Global Security Outlook and SIPRI's Peace and Security Publications.

**Aims.** Creating a paradigm of security thinking with consideration of the context of the Russian Federation's war against Ukraine.

**Methodology.** *Security Thinking* is a proactive approach to analyzing and addressing potential risks and vulnerabilities in order to enhance security measures. It involves a mindset that prioritizes prevention, preparedness, and adaptability to protect against various threats and challenges. Security Thinking encourages individuals and organizations to consider security implications at every level, from technology and processes to human behavior, promoting a resilient and secure environment. It is a continuous and dynamic process that seeks to stay ahead of emerging threats and evolve in response to changing security landscapes. At the same time, there is another definition.

*Security Mindset* is an individual's or organization's way of thinking that places a strong emphasis on security and risk management. It involves being proactive in identifying potential threats, vulnerabilities, and weaknesses in systems, processes, and behaviors. Having a Security Mindset means being vigilant, cautious, and

conscious of security implications in all activities. Key characteristics of a Security Mindset include next characteristics. Awareness: Being aware of the potential risks and threats that exist in various environments, including physical, digital, and social spaces. Proactivity: Taking proactive measures to prevent security breaches and implementing preemptive security measures to minimize vulnerabilities. Adaptability: Being able to adjust and respond to new and emerging security threats and challenges effectively. Continuous Learning: Engaging in ongoing education and training to stay updated on the latest security trends, technologies, and best practices. Risk Assessment: Conducting regular risk assessments to identify and prioritize potential security risks and develop mitigation strategies. Responsibility: Taking personal responsibility for security, whether it's securing personal devices or following security protocols at work. Collaboration: Promoting a collaborative approach to security, where individuals and teams work together to enhance overall security measures. By adopting a Security Mindset, individuals and organizations can better protect themselves, their data, and their assets from potential harm.

Security thinking can be correlated with various global indices measuring the level of security and security of countries and regions. Some indices that may correlate with safety mindsets include:

**Global Peace Index:** Measures the level of peace and security in countries and regions. Countries with a higher ranking on this index have less violence and conflict, which may reflect a more developed security mindset.

**Global Cybersecurity Index:** Assesses the readiness of countries to ensure cyber security. Countries with a higher ranking in this index may have a more advanced security mindset regarding cyber threats.

**Global Terrorism Index:** Assesses the risk of terrorism in different countries. Countries with lower levels of terrorism may have more sophisticated security thinking strategies.

**Corruption Perceptions Index:** Measures the level of corruption in countries. Countries with low levels of corruption tend to have more credible and effective security systems.

**Human Development Index:** Takes into account the level of education, health and standard of living of the population. A high level of the index may indicate a more conscious and educated population regarding security issues.

It is important to note that the correlation can be complex, as security mindsets can depend on many factors, including cultural, political, economic and educational aspects. However, these global indices may reflect the general level of security thinking in different countries and regions of the world.

**Results.** The Russian Federation's war against Ukraine has intensified existing challenges and created new threats for the entire world:

**Geopolitical and Geo-economic Threats:** the global political landscape is constantly changing, leading to new tensions and conflicts. This can result in uncertainty and risks for companies operating in various regions as they must navigate shifting rules, trade policies, and security threats. The full-scale invasion of Ukraine by Russia in February 2022 created a geopolitical tsunami with significant

economic, social, and political consequences for the European Union, particularly in its relations with Russia [7, 8, 9, 10, 11].

**Terrorism** is a constantly evolving threat that can take various forms. The Parliamentary Assembly of the Council of Europe adopted a resolution titled "Further Escalation of Aggression by the Russian Federation against Ukraine," in which the Russian regime was recognized as terrorist [7, 8, 9, 10, 11].

**Cyber Threats:** Due to increasing technological dependence, cybersecurity threats have become a significant problem. Since the start of Russia's full-scale invasion of Ukraine, the Ukrainian Computer Emergency Response Team (CERT-UA) has registered and investigated over 1,500 cyberattacks on Ukraine, the majority of which were attributed to Russia. The main targets of hackers include the governmental sector, information and energy infrastructure, as well as information-psychological operations and disinformation campaigns [12].

**Media Threats:** Propagandist social media, intimidation, disinformation campaigns, data leaks, and more. For instance, Russian occupants study information from social networks and intelligence data before launching missile strikes on Ukrainian territory [13].

The global rankings indicators of Ukraine deserve attention. The 2023 Global Peace Index (GPI), reveals the average level of global peacefulness deteriorated for the ninth consecutive year, with 84 countries recording an improvement and 79 a deterioration. This demonstrates that the deteriorations were larger than the improvements, as the post-COVID rises of civil unrest and political instability remain high while regional and global conflicts accelerate: Deaths from global conflict increased by 96% to 238,000, New data shows higher number of conflict deaths in Ethiopia than Ukraine, eclipsing the previous global peak during the Syrian war, 79 countries witnessed increased levels of conflict including Ethiopia, Myanmar, Ukraine, Israel, and South Africa, The global economic impact of violence increased by 17% or \$1 trillion, to \$17.5 trillion in 2022, equivalent to 13% of global GDP. Despite the conflict in Ukraine, 92 countries improved on military expenditure and 110 decreased their military personnel. Conflicts are becoming more internationalised with 91 countries now involved in some form of external conflict, up from 58 in 2008.

**Impact of the War in Ukraine on Peacefulness:** Ukraine recorded the largest deterioration, falling 14 places to 157<sup>th</sup>. The economic impact of violence has increased by 479% or \$449 billion, equivalent to 64% of Ukraine's GDP, Despite the conflict, Russia's incarceration rate, violent demonstrations, terrorism impact and homicide rates have improved over the past year, with the homicide rate at its lowest since 2008, 65% of men in Ukraine aged 20 to 24 years have fled the country, or died in the conflict [14].

Assessment of Ukraine's economic freedom has been temporarily suspended due to Russia's ongoing invasion since February 24, 2022. A vibrant and resilient economy is an essential engine for Ukrainian freedom and independence. Ukraine's economic potential has long been suppressed by poor economic governance. Before the war, the foundations of economic freedom had been fragile and unevenly

established across the country. Low rankings in the Index of Economic Freedom and other international studies have offered unambiguous indications of systemic shortcomings in the critical areas of transparency, efficiency, and openness that prevent the country's economic potential from being fully realized [15].

According to the updated "Human Flight and Brain Drain Index 2022" Ukraine ranks 81st in the world, being placed alongside Peru, Pakistan, Bolivia, and Angola. Our index score is 5.9. From 2007 to 2018, the brain drain index from Ukraine decreased from 7.5 to 4.8 (which is positive), but starting from 2019, the index has been steadily increasing. Human flight and brain drain index, 0 (low) - 10 (high), 2022 - Country rankings: the average for 2022 based on 41 countries was 3.66 index points. The highest value was in Albania: 8.3 index points and the lowest value was in Sweden: 0.6 index points. The indicator is available from 2007 to 2022. Below is a chart for all countries where data are available [16].

The trends of these ratings have been composed by the author. They demonstrate that the decline in the peacefulness rating is associated with a consistently critically low level of economic freedom, and a trend of increasing talent loss (Tabl. 1).

**Tabl. 1. Dynamics of Ukraine's position in the rankings, 2014-2023**

Ukraine	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Global Peace Index	2,2	2,48	2,72	2,92	2,79	2,75	2,72	2,52	2,69	3,04
Index of Economic Freedom	46,3	49,3	46,9	46,8	48,1	51,9	52,3	54,9	56,2	54,1
Human flight and brain drain index	5,7	5,4	5,5	5,4	5,2	4,9	5,2	5,5	5,8	5,9

*Sources: developed by author*

The Ukrainian context will change the emphasis of security thinking, taking into account the impact of a full-scale war waged by Russia against Ukraine.

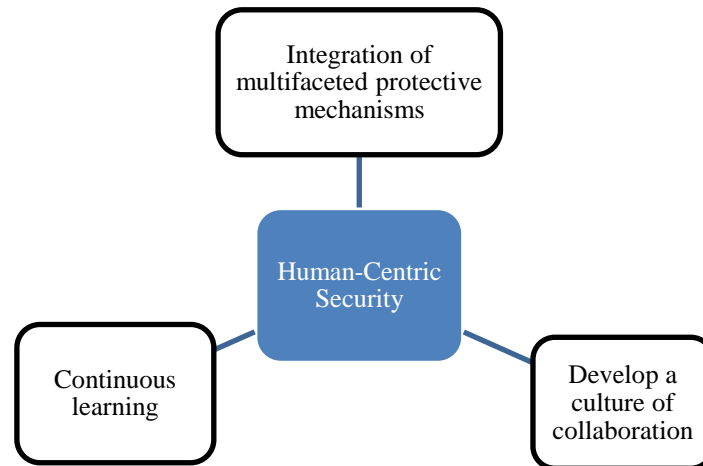
Human-Centric Security: therefore, a person becomes the most important subject of creation, production and implementation of models of safety thinking, focused on safety, which is the basis of sustainability. This encourages us to move from a reactive security posture to a proactive one, allowing us to identify potential risks and vulnerabilities before they develop into serious incidents. In this context, the creation of a culture of safety thinking should be based on:

Continuous learning: Resilience to complexity requires us to learn throughout our lives. The ever-changing cyber threat landscape requires us to stay abreast of the latest developments in security trends, technologies and tactics. By continuously learning, engaging educational institutions and authoritative cybersecurity resources, we can gain the knowledge and tools we need to adapt to the ever-changing digital landscape.

Integration of multifaceted protective mechanisms: Security-oriented thinking requires a holistic approach to protection, multifaceted protection mechanisms.

Develop a culture of collaboration: The threat landscape is too large for any one person or organization to navigate alone. Cultivating a security-focused mindset encourages collaboration and sharing of information, expertise and stakeholders. By building strong partnerships, we expand our collective knowledge and incident response capabilities, creating a united front against threats.

A graphical interpretation of the components of the Ukrainian context of security thinking is presented in Fig. 1.



**Figure 1. The components of the Ukrainian context of security thinking**

*Sources: developed by author*

**Integrating Physical Security Measures:** encompasses the integration of physical security measures. Physical access control, surveillance systems, and secure facility design are vital components of ensuring holistic protection. By recognizing the interdependence of digital and physical security, we construct a robust shield that guards against multifaceted threats.

**Ensuring Compliance and Legal Security:** in a world governed by regulations and legal requirements, adhering to compliance standards is paramount. A security-centric approach involves staying up-to-date with relevant laws and regulations, ensuring the protection of sensitive data, and safeguarding against potential legal liabilities. Upholding legal security bolsters our resilience against legal repercussions resulting from security breaches.

**Promoting Social Engineering Awareness:** as human behavior remains susceptible to manipulation, a comprehensive security-centric mindset addresses social engineering awareness. Training individuals to recognize and resist social engineering tactics, such as phishing and pretexting, reduces the risk of human error becoming an entry point for cyber attackers.

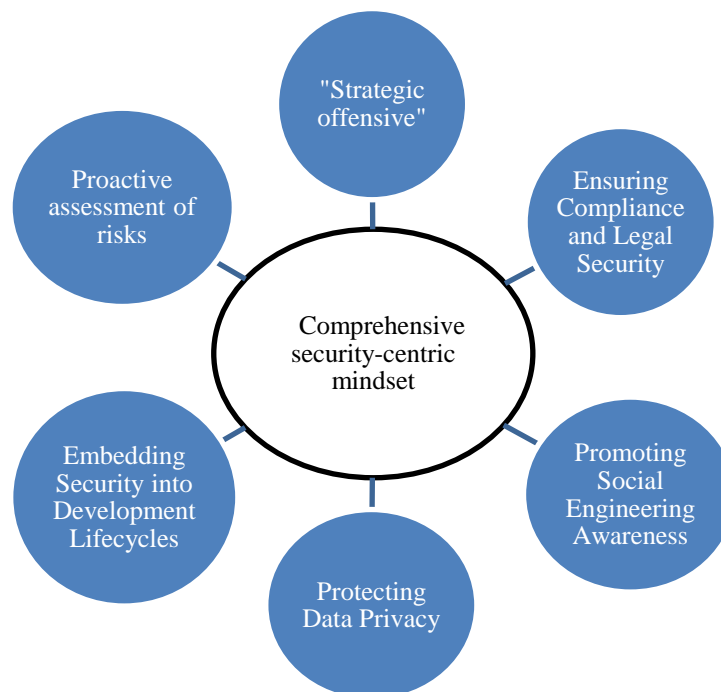
**Protecting Data Privacy:** the comprehensive security-centric approach includes safeguarding data privacy as a fundamental right. Implementing data protection measures, such as data encryption, access controls, and anonymization, demonstrates a commitment to maintaining the privacy of sensitive information and establishing trust with users and customers.

Embedding Security into Development Lifecycles: adopting a security-centric mindset at every stage of the software and system development lifecycle is crucial for building resilience from the ground up. Incorporating security by design principles ensures that security considerations are an inherent part of every development process, minimizing vulnerabilities and enhancing overall system security.

Proactive assessment of risks and response to incidents, potentially cascading risks and implications for economic, military, and societal security.

"Strategic offensive": accurate prediction of threats and prevention of their influence. Resilience to complexity means the ability to withstand threats.

Forming a security-centric mindset with consideration of Ukrainian context (Fig. 2) involves anticipating and adapting to the complex and constantly changing interplay of human behavior, processes, and technologies that characterize our interconnected world.



**Figure 2. A security-centric mindset with consideration of Ukrainian context**

*Sources: developed by author*

Applying security thinking is a prerequisite for building resilience to complexity in the face of dynamic and unpredictable threats.

**Discussion.** Security thinking is related to the security culture. Attention is devoted to the security culture. The National Research Council of the National Academies of the USA published the study "Emergency Resilience: A National Imperative", which, in particular, outlines the vision of a resilient state. One of the important conclusions is that such a state, from individual citizens to the highest level of government, supports a culture of sustainability. As outlined in this study, a culture of resilience is based on the following key principles: individuals and communities recognize that they provide their own first line of defense against emergencies; the leadership of the state in the field of sustainability is realized through the adoption of



political decisions, financing and corresponding activities of the parliament and all state authorities; at the state and regional levels, investments are made and efforts are made to increase the resilience of communities; information about risks and threats for specific objects is easily accessible, transparent and effectively disseminated, ways of managing risks and overcoming their consequences are discussed in communities; on the basis of information about risks and threats, resolutions and orders are adopted and implemented to protect critical functions; construction regulations and standards are adopted and strictly followed; much of disaster recovery is financed by private capital and insurance payments; the amount of insurance premiums depends on the level of risk, as well as compliance of objects (in particular, buildings) with established norms or modernization standards; to speed up the recovery process, community associations have emergency action plans to ensure continuity of governance, business, and service delivery, especially for the most vulnerable population groups; post-emergency recovery is significantly accelerated by sufficient capacity redundancy, timely upgrading and strengthening of infrastructure, taking into account regional interdependencies. Thus, the formation of a safety culture is both a prerequisite and a consequence of the formation of security thinking [17].

**Conclusions.** Developing a security mindset is not an end point, but a continuous journey. Using intellectual rigor and an innovative spirit, you can significantly influence the formation of a security ecosystem. The principles of resilience to complexity and a holistic approach to security, guided by a security-centric mindset, are becoming a dynamic force in protecting the security ecosystem. By integrating physical security, modernized legislation, social engineering, data privacy protection and psychological security, we can build a fortress against a wide range of threats. However, the unprecedented challenges associated with Russia's full-scale war against Ukraine have significantly complicated the architecture of modern security, creating a need for the development of a new paradigm of security thinking and practical tools for its application.

A security-oriented mindset is becoming a dynamic force in protecting the global ecosystem. Currently, a "fortress" is being created in Ukraine against a wide range of modern threats caused, above all, by Russia's aggression. Facing the challenges and complexities of modern security, we need to carry out scientific research on holistic and adaptive security-oriented thinking.

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# *Economics, Finance and Management Review*

*Issue 2 (14), 2023*

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*Printed by: Scientific Center of Innovative Research OÜ, Ida-Viru maakond, Lüganuse vald, Püssi linn, Viru  
tn 8-33, 43221, Estonia*

*Number of copies: 300*

*First printing: June 30, 2023*

*Distributed worldwide by Scientific Center of Innovative Research OÜ - [office@scnchub.com](mailto:office@scnchub.com)*

*Full text available online at <https://scnchub.com/>*

*DOI: 10.36690/2674-5208-2023-2*