

# International Logistics and Operations a Strategic View

Silvio Montes Pereira Dias<sup>1</sup>, Luis Claudio Bernardo Moura<sup>1</sup>, Carlos Alberto Nunes Cosenza<sup>1</sup>, Harvey José Santos Ribeiro Cosenza<sup>1</sup>, Silvio de Macedo Amaral<sup>1</sup> and Marco Pereira de Souza<sup>1</sup>

<sup>1</sup>UFRJ - Universidade Federal do Rio de Janeiro -Rio de Janeiro - RJ. Brazil

**Abstract**— Globalization has shortened spaces and brought borders closer together, therefore, it has increased the stimulus to the development of competition in the international market scenario, which, in turn, has intensified the search for operators with logistical skills to meet global operational needs. Therefore, it became necessary and vital for companies to have the knowledge of the processes involved in an international logistics operation, to optimize procedures with the application of quality maintenance and in the incessant search for lower costs to gain greater power. competitiveness in the face of global competition. Observing this precept, the present work presents a model to be adopted to improve the processes involved in international operations and the consequent increase in the competitive power of the companies involved. The present model will contribute to the development of the academic and professional community, active in international trade and logistics, aiming at implementing a strategic vision aimed at optimizing the processes involved in import and export operations, through the application of methods based on the structuring and standardization of procedures aimed at reducing costs and time involved.

key words

International logistics; Foreign Trade Model; Logistic Strategies; Customs Logistics.

## 1 INTRODUCTION

The global economy is during major upheavals that affect the global supply chain strategy in all sectors. Today, companies face enormous pressure to restructure, redesign, and rethink where and how products are produced, inputs are purchased, and customer demand is met. The determinants of this change include all the usual factors, such as market volatility, cost differentials and interruption of technology. (MORRIS; HAU) "[6]".

The search for efficiency through the application of techniques and strategies of international operations and logistics, which applied with emphasis on cost reduction and quality improvement, allow companies to win important positions on the world stage, with regard, for example, to:

1. Brand Strengthening.
2. Increase and stability of the Market Share.
3. Loyalty and commercial partnership.
4. Financial Stability.
5. Constant profitability.

According to Silveira "[8]", Logistics allowed for the implementation of planned methods, the reduction and removal of obstacles, as well as physical, operational and institutional bottlenecks, minimizing the need for government controls (simplification of customs and handling processes) by applying bureaucratic regulations and procedures and by creating legislation to support these processes.

For Saltos "[7]", the primary function of Logistics is to organize activities so that they fulfill their fundamental role, in the case of international trade. In fact, such processes and procedures are made more complex by the increase of intervening factors in international trade, in the search for an efficient and successful administration within the scope of an international

negotiation.

For Silveira "[8]", Logistics also helped in the development of technologies in transport systems and territorial planning, thus cooperating in all aspects, however, without being part of any of them, standing out as a strategy, a planning, a form of management that involves and incorporates all these elements.

In this way, there is an urgent need for logistics with high levels of efficiency at international levels, seeking the development of international transport through integration with the global supply chain.

It is also necessary to seek the elimination of barriers, both internal and external, which can literally be called anchors. These anchors that fix a country in underdevelopment, not allowing its unconditional and sustainable development necessary to the gains in quality and productive capacity necessary to meet world demands.

As shown in Fig. 1, international negotiations provide extremely important factors in the development of the sprinkling of alliance and well-being of the Nations, allowing the peoples to come together, making them partners through commercial ties, seeking a harmonious and egalitarian form of coexistence. Among the most explicit variables in this relationship, the following stand out:

1. Strengthens and approximates the ties between nations.
2. Demand and establish agreements.
3. Standardize processes, procedures, and understandings.
4. Exchange knowledge and technology.

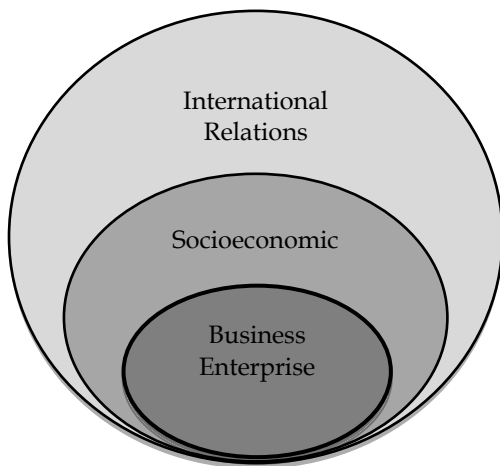


Fig. 1 - Factors of importance in international negotiations

Still in relation to Fig. 1, the benefits arising from international negotiations are paramount for the economic viability of the national industry, however, its greatest benefits can be seen in the country's socioeconomic development, with emphasis on:

1. Reduction in unemployment.
2. Poverty reduction.
3. Increase in per capita income.
4. Educational development.
5. Inflation Reduction.

In addition, there are also several direct and indirect benefits related to business, commercial and productive viability, such as:

1. Increase in sales volume.
2. Absorption of productive idleness.
3. Reduced production costs (economies of scale).
4. Reducing the impacts of seasonal demands.
5. Access to new markets.
6. Development of new products.
7. Development of international knowledge.

Therefore, there is a need to seek new alternatives, to make the sector more competitive, especially in view of the current competitive scenario in the international market. Thus, the present work aims to identify opportunities for improvements in the logistical operations involved in foreign trade, mainly in reducing the times and costs involved in the processes, by proposing a Foreign Trade model with an emphasis on efficiency and adopting management procedures. and optimization in logistics operations.

The objective, as in all supply chains, is to match supply with demand, but on a global scale. This is achieved through a hierarchy of decisions that determine flows, productive and material capacities at each manufacturing and storage location, as well as cash flows, costs allocated to flows and investments in technology. (MORRIS; HAU)"[6]"

The present research is of a qualitative-descriptive nature based on the deductive method and has an exploratory character, using bibliographic and field research techniques for this purpose, in addition to the tacit knowledge of the authors. The electronic bases used to search this research were Scielo Brasil (Scientific Electronic Library Online), in addition to articles published on the topic in the main national and international magazines.

This work is organized as follows: in Section 2, the proposition of an Efficiency Model stands out to be implemented by organizations in search of lower costs and better qualities of the processes involved in their international operations, in Section 3, Strategies integrated to the Model of Efficiency in Foreign Trade, explores the strategic tools used for the desired efficiency, the final considerations are in Section 4, followed by the references used in this text.

## 2 FOREIGN TRADE OPERATIONS - A MODEL OF EFFICIENCY

This chapter presents a proposition of a logistical model for activities in Foreign Trade, which allows a better visualization of the operations that are integral and fundamental parts in all phases, from the beginning of the need for a product that is beyond borders to the end of the year. effective termination of the process, that is, the receipt of the products in the desired specifications, as well as all commercial and tax discharges incurred in the process.

Fig 2 shows in its structure all the operational functionalities aimed at standardization, divided into 6 macroprocesses with the main activities that impact on the efficiency of exports and imports:

1. Licensing.
2. Negotiation.
3. Administrative Treatment.
4. Price formation.
5. Operations and Logistics.
6. Customs Clearance.

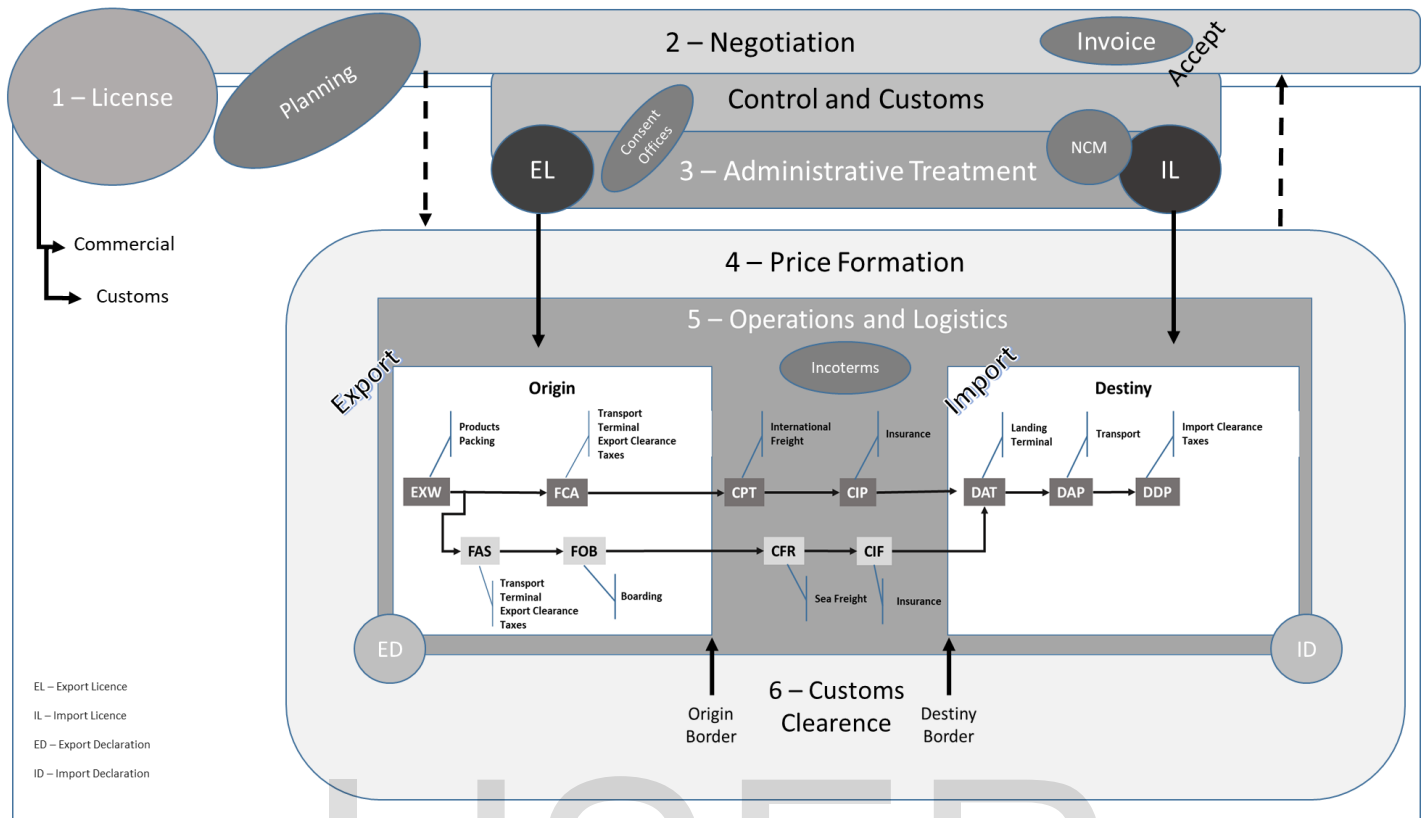


Fig. 2 - Proposed model for activities in foreign trade

Based on consultations with the specialized literature and the authors' experience, we will now explain each of these six activities relevant to foreign trade:

**(1) Licensing** - Of undoubted importance for the control of international operations, the qualification and registration of customs operators and interveners, seeks to eliminate risks arising from illicit operations that could bring losses to the market and to national production, human and animal health and the environment. environmental control. The registration and qualification of the actors active in international operations, allows the control and regulation to prevent the implementation of unusual transactions that have a negative impact on the domestic and international scenario, such as:

1. Companies and individuals that seek to practice illegal acts in the import and export of products.
2. Companies that support or are conniving attacks on human life through terrorism, banality of evil or genocide.
3. Companies and people involved in international trafficking in animals, weapons, drugs, among others.
4. Companies or people who participate in fraudulent commercial operations, such as: smuggling, embezzlement, classification fraud, among others.

5. Companies or persons who are involved in ticket operations or illicit foreign exchange remittances through currency evasion, money laundering, among others.

It is observed, by legality, that there is a need for two qualifications as follows:

**Commercial Qualification** - understand who can carry out import and export transactions at commercial levels, in this way, it is understood that only acts of commerce can be practiced by the legalization and constitution of legal entities.

**Customs Enabling** - after being legally qualified to carry out commercial transactions, the legal entity to operate in foreign trade activities, must be qualified and accredited to register their legal representatives for activities related to the use of foreign trade systems, as well as in proof of permission representation before the control bodies of such activities.

**(2) Negotiation** - Negotiation is the beginning of the operationalization of the import and export process, in which negotiations regarding purchases and sales will occur, consequently of the obligations and costs involved and attributed to buyers (importers) and sellers (exporters).

All concepts must be observed in the minimum application of costs, not negatively influencing the quality control of both the products and the process.

According to Dua & Sinha "[3]", Processes and documentation are important components in a multimodal supply chain. In fact, especially in international business, the number of docu-

ments and the complexity of the processes are significant. This complexity affects the performance of a multimodal chain. The players, active in the international scenario, argue that the results of supply chain performance are affected by the bureaucratic system, lack of standardization and low competence of service providers in matters related to the execution and documentation of processes.

**(3) Administrative treatment** - in this activity, it is observed the importance of regulation and control of the products to be imported or exported, if they require authorization prior to shipment and monitoring by the control bodies on the entry or exit of said products from the territory national, in addition, also, of the control of the bureaucratic necessity, in the presentation of the documents that support the instituted requirements.

**(4) Price Formation** - Price formation is the most important variable presented in international operations, as it is at this point that the costs and prices to be practiced in international negotiations are constituted and defined. Thus, it is of utmost importance to know the structures and processes in the formation of costs that will influence the prices to be charged.

The knowledge and definition of the entire process from the departure of its origin, through terminals, warehouses and transport to the place designated for the transfer of ownership, as any error or unidentified cost, can cause negative impacts reaching in some points the unfeasibility of the business or the measurement of losses in the operation.

**(5) Logistics and Operations** - The operations and logistics involved in international processes have their importance in maintaining the quality of the product and processes and, if applied efficiently, will minimize times, costs and damage. Due to the intense movement caused by the transfers involved in international transport, damage rates are high and, for this reason, attention must be paid to the hiring of highly trained operators, as well as the application of packaging that guarantees integrity of the products in overcoming the bad weather that will certainly occur.

Dua & Sinha "[2]", point out that the door-to-door service required a change in common Incoterms, such as: cargo inside the ship in the port of origin (FOB - free-on-board) and international paid sea freight (CIF - cost, insurance and freight), for the terms: delivery at the place negotiated (DAP - delivered at place) and delivery with taxes paid (DDP - delivered duty paid), respectively. In this case, salespeople should plan to deliver the product from end to end instead of focusing on the door-to-door part of the delivery process. This involves planning multimodal logistics that includes multiple modes of transport, multiple nodes (terminals) and multiple stakeholders.

Attention should also be paid to:

1. The agreed deadlines, because depending on the deadlines, the costs for hiring operators will vary depending on the speed or agility in crossing the borders of origin and destination.

2. The choice of transport modes and on their worldwide scales, with or without transfers.
3. Customs clearance for the export and import of these products, as these are procedures that may have a negative or positive impact on them, if observed at the strategic level and in order to seek operational efficiency.

Support services for the purchase and sale of goods, such as transport, ports, highways, containers, insurance, storage and multimodalism are strategic factors for the success of foreign trade policy.

**(6) Customs Clearance** - Customs clearance for export or import is the materialization of acceptance by the countries of origin and destination regarding the departure or entry of products in their market, such acceptance is characterized by the denationalization of the product at the time of customs clearance. of export, which allows the exit from the national territory of the products included in the export declaration, which formalizes and registers such authorization, on the other hand, the acceptance by the countries of destination, is characterized by nationalization through the application of customs duties for the collection of goods. taxes linked to the import operation of the products included in the import declaration.

In summary, Fig. 2, brings in its structure the search for improvement and technical knowledge through visualization of the processes and procedures necessary for the incorporation of better quality and mitigated costs, generating, consequently, an increase in the power of competitiveness, as well as a greater profitability for supply chain stakeholders. It is expected that such a power of competitiveness will allow stakeholders to have a self-sustaining participation that will allow maturity in market participation to last for a long time.

### 3. STRATEGIES INTEGRATED WITH THE FOREIGN TRADE EFFICIENCY MODEL

The times of the operations practiced in the international logistic systems, constitute a fundamental element in the formation of stocks and, therefore, in the total costs of the systems, which consequently are added to the formation of the export prices to be practiced.

The use of joint strategies is part of the main characteristics of logistical efficiency, especially when linked to processes to enable cost reduction and the technical professional involvement of third parties in the quality required for processes in which the contractor does not have sufficient qualification to maintenance.

For this reason, prior planning and the adoption of strategies integrated into the processes of an international operation are directly related to the success or failure of international negotiation.



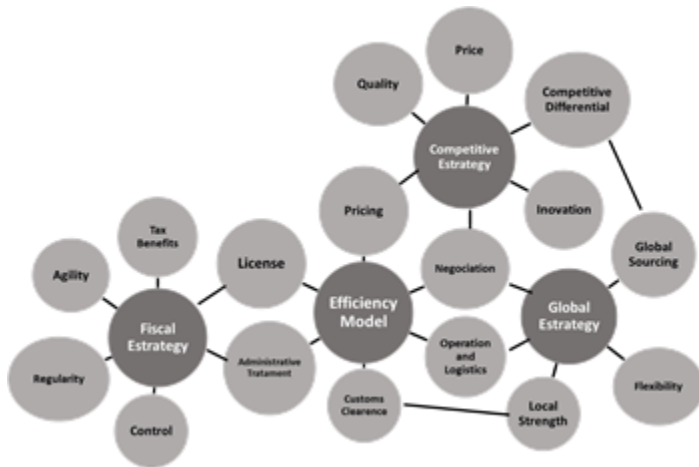


Fig. 3 - Strategies integrated with the Efficiency Model.

Fig. 3 allows to observe strategies integrated to the efficiency model in the search for lower costs and better qualities applied to international operations as follows:

### Fiscal strategy

International logistics is responsible for all administrative, normative and regulatory control procedures vis-à-vis the control and customs agencies of the exit, passage or entry operations of the countries that are part of the import and export processes, whether temporary or definitive.

For this reason, special attention must be given to the influence of the actions and requirements of public institutions linked to foreign trade processes, at the time of dispatch of export and import cargo. Anyway, there are several logistical factors that can lead to the success or failure of commercial transactions between exporters and importers.

According to Morris and Hau"[6]", there are restrictions imposed by government policies in each country of operation. While many objective functions can be formulated for the problem of global supply chain strategy (for example, maximizing global profit after tax, maximizing corporate market value, increasing growth, etc.), most large companies also recognize that their global supply chains can act to mitigate the many risks they face when operating globally. These risks include fluctuations in the exchange rate, market demand and price volatility, uncertainties in trade policies and decisions made by the competition.

When there is an increase in process time (lead time), the impact on the indicators is negative, making commercial transactions costly, and the negotiation between buyer and exporter may become unfeasible. For this reason, the reduction in lead time in the international logistics chain must be analyzed on a case-by-case basis by all operators involved in the process, that is, exporters, importers, customs brokers, bonded depositaries, as well as by representatives of the Federal Government agencies. active in the sector.

### Competitive strategy

Of fundamental importance, information about markets, whether it is about cultural, religious, political habits, as well

as purchasing habits, supply and distribution chains or seasonal periods of consumption. Observing, for example, which products, which markets and which seasons, are beneficial for sales negotiations, shipping and maintenance of stocks for consumption or for contingencies, observing in this way, better qualities and lower costs.

In relation to prices, it is noteworthy that the values practiced in the system constitute portions of costs for international trade operators, in any form of purchase / sale agreed upon in relation to the rules presented by the International Trade Terms, or Incoterms rules (International Chamber of Commerce, 2020), commonly used in international trade negotiations.

For the development of the decision support model, on which Incoterms to choose, the Mark-up method was used for its constitution, as it is understood that this method is more effective. This flexibility is particularly attractive in environments when it is desired to infer the complete distribution of the mark-up between companies and products over time in different manufacturing sectors. With the observed prices, the marginal costs of the mark-up estimates can be recovered directly. (LOECKER et AL) "[4]".

Most of the processes involved in international operations and negotiations do not have organization, control or guidance to direct them and make it possible to obtain time minimization, cost reduction and tax benefits, which inversely, due to their lack, lead to time increases. and costs, due to the application of fines, causing problems that are difficult to solve and in addition to increased costs involved in the entire process, ultimately making the negotiation financially unfeasible, thus generating losses due to dropouts and abandonments of cargo and processes.

### Global strategy

It is noted that the global strategy must be based on seeking to meet global needs, however, it must also be noted that such a global strategy is of paramount importance for the maintenance of the brand and consequently of the product, both in the local market., as in the global. As a result, it is understood that there will be a significant reduction in:

1. Costs with international trade barriers.
2. Financial and exchange costs.
3. Production and process costs.
4. Deadlines to meet the demands of the global market.

Currently, one of the processes with great influence and of paramount importance for the global supply chain, covering not only handling and storage, but also manufacturing at global levels, is called Global Sourcing.

Global Sourcing is understood as the integration of the international supply chain through a joint effort with partnerships and alliances to meet the demanding needs of global markets. In summary, global sourcing is sought:

1. Long-lasting relationships and partnerships.
2. Product and process quality at international levels.
3. Reduction of costs involved in products and processes.

4. Ability to adapt to international markets.
5. Increase the power of local and global competitiveness.

Development and maintenance of the brand in distant markets.

With the adoption of global sourcing, the need to search for partners committed to the alignment of global processes, thus increasing the performance and quality of products and processes, thus conquering a significant increase in competitive power in the world scenario.

Currently, supply chains are increasingly dependent on information sharing, made possible by the automations and technologies that have recently emerged and are shaping companies' supply chain models (KACHE; SEURING)"[5]"

However, for the success of international partnerships, there is a need for resources and procedures that must be adopted by all members of the chain, such resources and procedures are basically related to the communication network, where the members must always seek improvement for better adaptation and for quick resolution of possible problems that may occur, such resources and procedures are:

1. Intensive use of technological resources.
2. Absence of natural barriers between partners (language, currency, culture, etc.).
3. Adaptation and flexibility to the international geopolitical scenario.

#### 4. FINAL CONSIDERATIONS

The Planning involved in the international negotiation processes, are directly related to the success or failure of the international buying and selling operations. Being of utmost importance, as it is in this process that all operational plans must be drawn up, as it concentrates all the information of the environment (scenario).

International negotiation is characterized as a process that concentrates the information contained in the environment to create a database that is useful for the procedural, documentary, and operational development of the transaction, considering all the physical and informative content from the point of origin (beginning of the system) to the destination point (end of the system).

As it is a modal with characteristics for transporting large volumes at low cost, maritime transport ends up standing out in international logistical operations, assuming the leadership of international cargo transport when it comes to large volumes and large transported weights.

No less important are foreign trade operations, such as air transport, which, due to their own characteristics, reduces time and increases quality in the integrity of the physical goods transported, reflecting the shorter time of exposure to risks, due to the speed of transport. process, as well as awareness that the transported good has added value differentiated from other modes.

Another aspect of fundamental importance exercised in the international negotiation phase, can be presented by the effi-

ciency in the search for information contained in the foreign trade environment.

All information that circulates in the foreign trade system has its importance, however, if observed in an analytical and judicious way, they will have greater relevance in the improvement of the import and export processes.

Finally, it is highlighted that some of the variables must be analyzed in view of their importance for the implementation of a strategic planning integrated to the processes of foreign trade:

1. Road and transport infrastructure, storage and storage, to be analyzed, paying attention to positive and negative factors from their origin to their destination, as well as their use at strategic levels.
2. Packaging for packaging and marketing, form of handling, methods of unitization and deunitization, consolidation and deconsolidation, massive use of containerized shipments due to the agility of loading and unloading operations, as well as cargo security, also observing the securing or affixing the cargo in small or large packages, for your safety and minimizing damage.
3. Customs Tax, legal, sanitary, and tax benefits and requirements, among others, applicable to products, agreements, packaging, and the modality of the applicable customs regime.

In the current situation, it can be seen, with reference to the planning and use of strategic methods to increase the power of competitiveness, that few companies and professionals who are active in foreign trade seek to managerially visualize the processes involved in import and export operations, that of the majority involved is limited to fulfilling stages, not carrying out any prior planning. Most of these processes do not have an organization or orientation that makes it possible to obtain tax benefits or cost reductions, in practice, due to their lack, they lead to fines, problems of difficult resolution and increases in costs involved in the processes of import and export which, in the end, in the majority, ends up making these processes financially unfeasible, consequently, generating dropouts and abandonments.

#### REFERENCES

- [1] BERG, Van Den R. (2015). Strategies and new business models in intermodal hinterland transport. Eindhoven: Technische Universiteit Eindhoven. 206 p.
- [2] DUA, A. & SINHA, D. (2018). Identification of factors affecting quality of multimodal transportation for containerised export in Indian scenario. International Journal of Business Excellence. 16. 324-340. 10.1504/IJBEX.2018.10016690.
- [3] DUA, A., SINHA, D. (2019). Assessment of Quality of Multimodal Transportation for Containerized Exports. IIM Kozhikode Society & Management Review. 8. 227797521881061. 10.1177/2277975218810613.
- [4] LOECKER J. D., GOLDBERG P. K., KHANDELWAL, A. K., PAVCNIK N. (2016). Prices, Markups, and Trade Reform. Journal of the Econometric Society. Volume84, Issue2, pp 445-510.
- [5] KACHE, F. and SEURING, S. (2017). Challenges and opportunities of digital information at the intersection of big data analytics and supply chain man-

- agement. International Journal of Operations & Production Management, 37(1), pp.10-36.
- [6] MORRIS A. Cohen, HAU L. Lee (2020). Designing the Right Global Supply Chain Network. Manufacturing & Service Operations Management, Vol 22, pp.15-24.
- [7] SALTOS, Marcos Xavier Vásquez. Plan de Negocio para la Creación de una Empresa Consolidadora de Carga. Ecuador: UDLA Escuela de Negocios, 2018. p. 8. available at <<http://www.http://200.24.220.94/bitstream/33000/8413/1/UDLA-EC-TMAEM-2018-06.pdf>> mai. 2020.
- [8] SILVEIRA, Marcio Rogerio. Transportes e a Logística Frente à Reestruturação Econômica no Brasil. Fortaleza: Mercator, 2018., available at <[http://www.http://www.scielo.br/scielo.php?pid=S1984-22012018000100208&script=sci\\_arttext](http://www.http://www.scielo.br/scielo.php?pid=S1984-22012018000100208&script=sci_arttext)> mai. 2020.

IJSER