



# The Role of Digitalization in the Shipbroking Business

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**Abstract:** The shipbroking discipline is the only non-regulated interdisciplinary subject providing consultancy service to the shipping world. Traditionally, practitioners provide tailor-made services to their clients by finding the best possible ships for the cargoes and, in return best possible cargoes for the ships. Consequently, brokers have to be familiar with the specific market such as supply and demand, specialization in the dry or wet market, sales and purchase market, specialized in specific geographical areas, and finally plays as a bridge between the principals and try to resolve any dispute with their diplomatic skills. There are no strict requirements to enter into this business, which makes the business more vulnerable, and as it is easy getting into this business, it is, in the same way, easy to get rid of the Shipping as well. The paper investigates the sustainability of the shipbroking business and its' short and long-term consequences and adaptability of the new technological developments and regulations that the shipping industry must comply with.

**Keywords:** shipbroking, sustainability, supply and demand, structural holes theory, blockchain

## 1. Introduction

Shipbroking is a highly dynamic industry where practitioners continuously strive to keep up to date with the market's regulatory developments. A ship is a commercial enterprise that requires a considerable investment; therefore, the owners look for the best returns. The reward of the shipowners will depend upon the market and the time of entering into the industry. Apart from the supply and demand fluctuations, the investment return will depend on two factors:

- 1-) the technical aspect of the Shipping, where the Masters, the Chief Engineers, the officers and the crew of the ship have to work hard to make a whole approved and seaworthy ship "**Strictly Regulated**", and
- 2-) the economic aspect, where the shipbrokers will be playing a vital role by connecting the shipowners with cargo owners and negotiating the deals on their behalf. (Buskens) "**Not Regulated but competitive**".

In the past, the commercial side of the Shipping was performed by the previously experienced seafarer, but the commercial aspect requires more marketing than technical skills. However, knowing the ships, specifications of the cargoes, geographical features and the market in which the ships trade need be a central piece of knowledge that the shipbroking industry requires. Though the onboard experience will always be given preference, this experience will not be essential for shipbroking. However, brokers pre-involved in Shipping's operational, commercial and technical side will always be in considerable appreciation for performing their duties.

At a glance, the shipbroking business looks like the brokers are only functioning to find the cargoes and ships, but in reality, becoming a shipbroker is far apart from this, having long stand history behind it (Tonguç, 2021). Brokers are the drivers of Trade and Shipping, and for being sustainable, they have to reshape their structures as per the market pattern continuously (Patsadas, 2016, 2017). Because of the new development in the shipping industry, new trading routes, and the innovation of information technologies, the shipping industry has reshaped rapidly, so the shipbroking industry must comply with all changes (Zolkiewsky, Izrin).

## 2. Milestone of the Shipbrokers

Shipbroking business lies before 1000 AD. where Viking society called the brokers "brokunar-madr", which means "go-between" (Fischer, 1993). Brokunar-madr meant to define a person who acts between shipowners, shipbuilders and merchants and negotiate the deal with them. From the 1200s till the end of 1800, the broking business was regulated. The broker had to be registered for performing the business and granted a license against the £ 5 annual fee. To assure that the brokers abide by specific rules and behave in an honourable fashion, they must be sworn accordingly. Otherwise, any misbehaviour would be answerable to the Court of Aldermen. This system lasted for an extraordinary six centuries, giving rise to the term 'Honest Broker'.

*"there shall be no brokers in the City except those who are admitted and sworn before the warden or Mayor and Alderman".*

There have been many shipbrokers in western Europe since the 17th century when Shipbrokers activities were regulated by law. However, since most transactions, together with personal connections, continued to suffice, the demand for a broker remained relatively constrained until the post-1850 revolution in Shipping and Trade, which altered this system forever. After this alteration, a structure will keep the brokers standard at a certain level, and in 1903 "The Baltic Mercantile & Shipping Exchange Ltd" has been created. This institution's purpose was to keep the high professional standard and regulate the brokers' conduct. Brokers were previously acting as a principal. With the new adjustment, the profession changed from principals to a broker the only role and sign a "Broker's Letter". Shipbroking practitioners were giving their statement that they will be acting only on behalf of their clients. The main reason for all brokers to act and always sign "on behalf of" derived from this point onward.

## 3. Functions of the Shipbrokers

The shipping market is the interaction between supply and demand, where the shipbrokers have fulfilled a critical duty in this relation. They follow the demand and supply and create a suitable environment where they can match each other (Wang, 2019). In shipbroking, the demand means cargo owners/charterers and supply means the shipowner. Brokers have to keep a close relationship with both parties and provide the following services:

1. Continuously follow the supply (Ship-owners) and demand (Cargo-owners/charterer). Provide information for current, developing and projected markets;
2. Explore why individual efforts matter and how business can be more profitable;
3. Be an effective and efficient intermediary between the principals;
4. Coordinate the negotiations to conclude a "fixture";
5. Follow all fixture throughout the performance;
6. In case of any dispute, act "bona fide" as an arbitrator and try to bring the parties to an amicable agreement and avoid the parties going to the court, saving a massive amount of legal costs and time.

While performing the duties, the shipbrokers must also comply with strict regulations that owners and charterers must abide by. It is essential to underline that although the shipbroking business is not regulated, it deals in a heavily regulated industry (Prasad). This situation brings together that all brokers must be aware of endless legislative norms in Shipping.

Sustainability is the ability to reshape and adapt duties as per the new business environment (Dimitrakiev, 2010). The new regulations in the environmental issues and decarbonization require radical challenges, which brings uncertainties in the shipbroking business. This situation brings to mind the question if the broking business is adaptable! For shipbrokers to survive in the market, they must act sustainably and adapt to the new rules that the shipping business requires. So, adaptation make the business sustainable! The capability to survive during this technology evolution period depends on the fact that "it is not important how strong you are, but how adaptable to the changes you are"!

Sea Transport is increasingly becoming digitalized in the international market. Moreover, shipping business standards are continuously rising in an attempt to increase efficiency and profitability (Batrincea, 2008). The necessity to compete and survive, obliges the shipbrokers to adopt the daily technological developments and integrate into the digitalized world. One may ask, why the shipbrokers have to cope with digitalization? Is it the "Necessity" of increasing efficiency? It is at this point essential to remind the aphorism "The Necessity is the mother of all inventions". Shipbroking practitioners were adapting to new shipping market changes for the last hundred years, so they are still essential links between the shipowners and the cargo owners/charterers. The nature of the shipbroking business is a clear "link between the parties", and the role of the brokers can be re-described with Thomas Reid's Essays, that he published in 1785 under the name of "Intellectual Power of Man":

*"In every chain of reasoning, the evidence of the last conclusion can be no greater than that of the weakest link of the chain, whatever may be the strength of the rest".*

Shipbrokers are the link between the shipowners and the cargo owners, without which the business will not go further.

#### **4. Shipbroking business versus digitalization**

There is a concern about disruptive technologies and their impact on the Shipbroking business. The Shipbroker's job can be seen as an innovation to be managed and makes dialogue necessary. This profession is a business that heavily depends on know-how and relationship management. No electronic platform can replace that. The positive impact of new technologies should integrate into existing processes, which will ensure that broker businesses are not left out of the many networks that today rely on their expertise. The human factor was and always will be the natural winning element that leads the customer to choose one broker over another. By using the cloud and blockchain, broking companies can analyze data and improve their processes going forward by finding the optimal solution for the next client by running a few scenarios they had in the past (Viljanski, 2015). It also provides brokers with the edge when it comes to negotiation. There is a tremendous amount of inefficiency that we see in different industries where there are multiple intermediaries, and there is a lot of manual intervention and dependencies (Shen, 2013). To have something that one can work in real-time will bring risk-reduction and cost-reduction across the board. This process will inevitably improve operational performance.

A good example is smart contracts which provide the capability to convey logic into those inefficiencies. We have already seen the invention and early adaption of smart containers. With the help of smart containers, shipbrokers can anticipate any potential supply shortage on a global scale and provide solutions by reaching out to other prospective cargo owners to arrange a new transaction to fill the supply shortage. This means that actually, the current landscape provides an opportunity for brokers to not only intermediate but also to initiate trades (Sozen, 2010). In a sense, it shifts the current vertical business model into a horizontal one, where brokers can take a more proactive role. This horizontal business model fits better in the complex world we live in, especially the ways in which we work are changing. We operate in a genuinely complex and ever-changing environment where adaptive precision is key. Such situations outpace a single leader's ability to predict, monitor, and control. Teamwork is a process of reevaluation, negotiation, and adjustment. Adam Smith's "invisible hand" of the market - the notion that order best arises not from the centralized design but through the decentralized interactivity of buyers and sellers – is an example of emergent intelligence and decentralization. It stands in direct contrast to what Alfred Chandler dubbed the "visible hand" of management – the reductive planning that has dominated most organizations for the past century. In Shipping, technology had outpaced the capacity of any individual practitioner to be on top of it all. Today we find ourselves in an equilibrium defined by constant disruption. The connectivity of trust and purpose imbues teams with an ability to solve problems that a single manager could never foresee – their solutions often emerge as the bottom-up result of interactions rather than from top-down orders.

Evolution indeed occurs when you build a model to suit your company and change it when circumstances demand. That is, companies have to be nimble (Dimitrakiev, 2018). The pandemic has altered how we view the traditional office. Any team has to think about how to adapt when people are at different locations. This is especially true for the shipbroking business. For a ship-broking company to scale successfully, teams and

employees should be able to work together successfully. To achieve this, we need an environment where we have less administration and more expertise and responsibilities. Unnecessary volumes of admin work can often get in the way of potential and the capacity of teams of people (UNCTAD, 2019). An effective distributed workforce requires a range of internal collaboration tools (Dachev, 2017). An organization's external, consumer-facing communications tech needs to integrate with the internal-facing tools used around the more comprehensive organization (Technology in shipping). Today's cloud communications solutions integrate with the new office standards, Teams and Zoom, to promote a collaborative and informed workforce, wherever the individuals may be.

Counterparty management is not just a process that could be optimized (Stefanova, 2022). It requires years of work, knowledge, responsibility, reliability, and many more angles which could not be replicated by technological advancement. In most businesses, there is a process known as **KYC**, where brokers particularly excel in. All this information is stored in a central database. The existing model rests on a database held at a trusted institution or intermediary and relying on that institution or third party to protect and manage the database robustly and securely.

Furthermore, this information sits in old paper archives that have not been updated with the latest available information in many instances. This introduces areas of risks that have to be mitigated, such as information tampered with. With the implementation of Blockchain technology, the concept of counterparty due-diligence rests on the premise that it is a distributed universal database to coordinate complex multi-party processes. **KYC**, **AML** (anti-money laundering), and **ESG** score are just a few of the dimensions that define the eligibility of a specific counterparty. Blockchain technology is a database where we need the approval of multiple participants in the chain to approve any change, making this database hard to change and essentially immutable. This situation boosts database security and can make counterparty management a robust and transparent process, where brokers would have on-demand access to the most up-to-date information related to the supply and demand side.

## 5. Conclusion

Technological advancements are the new norm. They do not put at peril the shipbroking industry. On the contrary - they complement the broker's role by increasing efficiency, transparency and flow of information. Distributed databases and horizontal management models are prerequisites for organizations to retain agility in an uncertain future of changing expectations. Brokers can use these tools to better forecast and manage the day to day tasks at hand. The roles of digitalization in the Shipbroking business can be improving relationship management through optimization and efficacy. It also makes easier decision-making processes when broking can take less time and effort but yield similar or better results.

The evolution of technology and intelligent ports can only enhance the shipbroking business rather than put its survival at peril. Where others might see a disadvantage, the shipbroking industry must adapt and grasp the opportunity to become more efficient and provide better, tailored solutions to its clients. This shift to a platform business model where the horizontal structure is based on team-of-teams could only lead to increased efficiencies and transparency, where all the information is stored on a decentralized database on the back of blockchain technology. Therefore, the shipbroking business's sustainability in this fast-growing technological era is a matter of finding the best route and optimal solution that requires human expertise, which can be enhanced by using digital tools, the internet of things and technological advancements big-data analysis.

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