

Student Number	1872451	MSc MPSM
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Title of your proposed research (15 words maximum)

A data set measure of China-US trade tension on container shipping strategies under uncertain demand.

Aims and Objectives/Research questions (35 words maximum)

Briefly explain the objective for your research: what are the research questions that you hope to answer, or what are the research outcomes you hope to achieve?

1	Build a big data set to support strategies-setting to mitigate uncertain demand of container shipping industries.
2	Estimate the uncertain demand for shipping logistics due to global protectionism.
3	Apply financial instruments to reduce risk exposure of volatility in container demands.

Keywords

List the three most relevant keywords that are applicable to your research

1	China-US trade tension
2	Container shipping services
3	Demand uncertainty

Project Code

If you have developed your proposal from one of the mini-projects given in the directory, please include the reference number here, otherwise leave this box blank.

Project Code	2019-005
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Research Method(s) (250 words maximum)

Explain which method(s) you will use in the conduct of your study, with appropriate justification for the selection.

This section presents methods used in this research. This paper applies models on both financial and statistic perspectives. Not only conventional demand analysis such as sensitivity analyze and rationing for companies operation strategies, but also investment appraisal analysis at risks by using discount cash flow (DCF) analysis, to be more specific, net present value (NPV) methods and Internal rate of return (IRR) methods to support container shipping companies on their investment strategies decision making. Despite the limitations of this method, managers could use it to confirm or override their results in an alternative strategy such as financial derivatives (Bendall, 2002). As financial instruments play a role of risk management, shipping companies could apply derivatives as a way to mitigate risks due to uncertain demands in China- US trade conflicts. This

paper will adapt few financial derivatives including options, forward and swap to hedge risks and test the confident of resolution.

Statistic methods will be used to give the correlation between variables when setting assumptions to formulate and modeling. I will apply recession analysis and provide Hausman test to test Endogeneity to ensure reliability of the proposed model. Statistic models will also be used in data analysis to build the big data set and these objective data are extracted from the Clarkson research Studies (2020), classified into data before and after trade tension, comparison could reduce impact on the independent variables and enhance reliability of the thesis.

Software supports to statistically analyze data involve SPSS and MATLAB.

Envisaged data source(s) (100 words maximum)

Clearly explain the source(s) of data for your dissertation

Secondary data would be used in this paper, official websites of nations website will be assessed. web-based information system such as Clarksons Shipping intelligence network, Data-stream will be assessed. Also, journal articles and other publications relate to the topic will be retrieved from scholar websites. newspaper articles will be accessed through BBC news official websites. In addition, annual reports of Hapag-Lloyd group and CMA-CGM group will be retrieved from their official websites.

Research Ethics (100 words maximum)

Explain any ethical implications of your research, and the actions you will take to address these in the conduct of your study.

I will use secondary data from sources such as Bloomberg, Data-stream, Lloyds List and Clarksons Shipping intelligence network without interviews (or questionnaires/ surveys). I will submit ethic forms and relate documents to the university's ethics approval committee to seek for ethical approval.

I will be submitting the following Ethics Form number
TWO

ZERO ONE

Literature Review (1,500 words maximum)

Provide an up-to-date assessment of the existing academic knowledge relevant to your proposed topic.

Past three decades saw an expended in general of China-US economic relationship. China developed to be the US's second-largest merchandise trading partner, third largest export market, and biggest source of imports (Li, C. et al. 2018). Recently, the trade war between China and the US becomes more intense. China and the US impose tariffs on hundreds of billions of dollars' worth of products against each other. Academic interests of general economic and policy risks such as trade protectionism in shipping industries is growing under the condition of China-US trade conflicts. This risk arises mainly on international trade, referring to a macro-economic control that governments try to interrupt and manipulate markets based on their interests. by altering policies, which may disrupt business operation position. (Kobrin 1979). Lun et al. (2006) claimed that Shipping services

is closely related to international trade. Similarly, Lun and Quaddus (2009) suggested that demand for freight transport service highly determined by international trade. To be more specific, Kang (2016) believed container shipping industry is one of the most unstable and capital-intensive industry among all businesses and there will be more significant impact on container shipping services than in other shipping services.

China and United States carried on an ongoing trade conflicts via the World Trade Organization (WTO), researcher like Loridas (2011), who believed this is a signal of protectionism. In the first quarter of 2018, US and China imposed tariffs against each other and they started to implement protectionist policies on each other (Yılmaz, 2020). Although protectionist policies may protect domestic industries, these policies are still likely to place global economy under risks. According to UNCTAD (2019), Global protectionism may adversely impact on not only the world economy, but also global shipping services. Cho (2020) believes protectionist policies are likely to significantly reduce international trade and demand for global logistics service by applying dynamic general equilibrium model and trade-cargo-container conversion methodology. Also, evidence to support this view could be found in various source, such as The Financial Times, Supply Chain Digital, Inbound Logistics.

Most of researchers show negative attitudes on the impact of China-US trade conflicts in shipping industries. However, there are some macro-economic analysts think positively. Expectations of the demand for shipping companies are formed on the basis of the macro-environment of the major economies and the resultant pattern of world trade. A report provided by United Nations (2020) suggest that although the recession in global economy along with high level of potential risks due to prolonged trade disputes and policies, there will still be a slight growth in global economic condition. Similarly, Peter Sand (2019), who is the chief shipping analyst at Baltic and International Maritime Council (BIMCO) believed that shipping industry had already adapted in the fluctuation due to changes in tariffs. He also believed although facing challenges of contracting in Global trade volumes, there would still be a slow growth in Global economic condition. He analyzed this slow growth in economy may cover up the fact there is large differences of trade around the world. He identified this growing figure is mainly due to a long- distance trade with high tonne-mile demand from Far East into Europe. However, A report published by IMO (2020) concerns about the shipping market. It seems that the trade tensions are easing and pausing. According to Latest news provided by BBC (2020), United States have delayed tariffs imposed on some commodities imported from China and China agreed to boost imported US goods by \$200bn. However, coronavirus pandemic is considered to be a short-term unpredictable global disaster which is less likely to affect the long-term trends of China-US trade flows. China and US are likely to face the challenges of trade flow again when Coronavirus end. Therefore, shipping companies still need to rethink their strategies in order to maintain healthy operation conditions under the condition of uncertainty demands.

Sea-Intelligence chief executive Alan Murphy pointed out after the Financial crisis, people should aware that despite a positive growth in shipping industry, there is no sufficient evidence to provide a great confidence of the container shipping services. (Baker, 2019) Although according to a report published by loydslist (2011), which shows there is inherent potential fragility in the shipping industry, the China-US trade tension is still the major factor affecting the container demands in the market. AP Moller-Maersk has warned the impact of China-US trade conflicts may reduce 0.5% of demand in global container market during 2019 and 2020. (Liang, L.H. 2019). Jonathan Roach, a container shipping analyst at London-based Braemar ACM also believed that the tariffs under the trade conflicts is the biggest negative risk significantly affect earnings of shipping companies. They suffered from losses and exposed to risks due to this trade conflicts. Report shows that Maritime data provider Alphaliner reduced its container volume growth estimate for this year from 3.6% to 2.5%. Chinese and US shipping industry also suffered great losses in trans-Pacific

trade. Chinese shipping executives believed the box capacity has to be cut under tariff conflicts. According to Cosco, a China Ocean Shipping Company, which is the world's third biggest box-ship operator, has cut out 10% of its box carrying capacity after last tariffs imposed. Shipping companies in United states also faced the challenge of shrinking demand. For instance, Bimco, an America shipping industry group, fell 18% of their exports from a year ago. (Liang, L.H. 2019)

Because of the uncertainties of the international trade flows in shipping markets, Lun and Browne (2009) believed that managers of shipping companies should carefully re-plan their strategies to enhance adaptability to the global political and economic environment. In other words, strategies should be improved to support managers dealing with issues due to volatile demand volumes. Unexpected decrease in demand may incur losses in shipping services, unexpected exponential demand growth also put company under risks. Many researchers have built models to support managers to match supply and demand in operating activities. For example, Ryan, Sarah M. (2004) formulated a model of capital extension model for exponential demand growth. Nickell (1977) provided a model with changes in shipping demand with uncertain timings.

In conclusion, international trade plays a key role in shipping markets. Changes in tariffs under China-US trade conflict affect international trade flow resulting in uncertain demands in container shipping services. Although this situation is now easing due to unpredictable factors such as coronavirus pandemic, shipping companies should still be aware and take actions of risks exposed on volatile demands on the early stages. Above discussion aims to aware container shipping companies how important it is to manage risks under China-US trade conflicts. However, the existing literatures have limited effect on providing a framework for managers to enhance strategies on operation and investment of their business to reduce risk exposure under China-US trade conflict. Most researches focused mainly on shipping demands in ordinary period, some of them analyzed uncertain demand under the ongoing China-US trade conflicts. Few researches give quantitative measures on the impact of trade protectionism and trade conflicts. In this situation, this paper intends to give financial, economic and statistical analysis for managers of container shipping industries to improve strategy decision making via building a supportive data set to reduce risks exposure in volatile demands under the impact of China-US trade war.

References (excluded from word count)

Provide a complete list of works cited in this document in Harvard format.

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Project Plan (excluded from word count)

Using a Gantt Chart provide an illustration of the envisaged schedule for all principal activities to be undertaken.

