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# The Strategic Role of Operations and Supply Chain Management: A Pivotal Discussion and Research Agenda in Face of Tariffs Trade War Turmoil

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#### Abstract

This article aims to present the relevance of the Operations and Supply Chain Management (O&SCM) strategic decision-making amid the current context of tariffs trade war. A viewpoint approach grounded on the literature is used in this article by contextualizing and discussing the current context with the main O&SCM strategic decisions like sourcing, manufacturing, transportation and logistics. Although this article follows a viewpoint approach, it can foster researchers to investigate the O&SCM strategic decision-making in uncertain and turmoil times. Also, this article can support decision-makers involved in the O&SCM area on showing the relevance of the strategic role of the O&SCM decision-making. As we are currently facing this new impactful tariff policy, this article is timely on bringing out the role of the O&SCM strategy to support organizations on overcoming and mitigating the impacts generated by this new trade geopolitical phenomenon.

### **Keywords**

Supply Chain Strategy, Operations Strategy, Decision-Making, Tariffs, Trade War

## 1. Introduction

Operations and Supply Chain Management (O&SCM) strategy has been continually passing by enormous turbulences since the COVID-19 pandemic. The Russia-Ukraine and Israel-Palestine wars, climate disasters, and other geopolitical uncertainties brought challenging times for O&SCM decision-makers to try keeping their operations and businesses continuity. Recently, the new U.S. administration has begun the reciprocal tariffs imposition to several countries, bringing again a drastic uncertain environment to global operations and supply chains. This moment was marked as the "Liberation Day", when reciprocal tariffs were established to the majority of U.S. trade partners. Tariffs ranging from 10% up to above 100% are causing turbulences for global supply chains and many strategic decisions will be required to be rethought in order to mitigate the impacts generated by this new disturbance phenomenon.

Many rapid decisions have already started to be taken like anticipation of electronics shipments from Asia, factories shutdowns and relocations, operations reshoring, stop of investments, among others. However, the most impactful effects are yet to come and this will require highly strategic ability from O&SCM decision-makers to contain possible disruptions and other negative impacts. Therefore, this article aims to discuss the role and show the relevance the main strategic decisions in O&SCM. It also proposes at the end a research agenda seeking to foster the deployment of relevant research topics that covers this new phenomenon.

The deployment of studies regarding O&SCM strategy is timely and paramount. This decade has been marked by several disruptions. Several marks and events across the history were important to shape the O&SCM theory like scientific administration, advancement of industrialization, lean manufacturing and total quality management, birth of

operations strategy, advancement of information technology, industry 4.0 and sustainability. Now, this decade is going to be a new mark for the O&SCM history, requiring relevant and applicable knowledge to solve issues of this era. A considerable knowledge has already been developed during the COVID-19 times. But concerning specifically operations strategy is still scarce. Moreover, when taking into consideration the phenomenon of tariffs trade war, which is going to bring huge economical and geopolitical impacts, the role of strategic O&SCM decision making is still unknow. However, it is evident that highly strategic decisions in operations and supply chains will be demanded, and we are already seeing some highly level O&SCM decisions being taken in the beginning of this negative effectful new policy.

Therefore, aiming to bring this timely and important approach as afore discussed, this article is structured as follows. First a contextualization, motivation and purpose of this work is presented in the Introduction section. Section 2, presents the strategic role of the main categories of decisions in O&SCM. Also, this section brings the relation of O&SCM decision-making with other strategic issues like digitalization and sustainability. In section 3, evidence regarding the need for more recent studies involving specifically the subject of O&SCM strategy are presented based on a search conducted in a scientific search database. Therefore, in section 4 a research agenda involving O&SCM strategy and its main decision-making categories is proposed. Final remarks and main takeaways are presented in section 5, which is the conclusion of this paper.

# 2. The Strategic Role of O&SCM Decision-Making

Unlike it may appear, decisions related to O&SCM are much more strategic than operational. Since Skinner (1969) has claimed for the strategic role of operations management, in that time still focused on manufacturing, and later reinforced by (Wheelwright and Hayes 1985), regarding its potential of competitive advantage generation, O&SCM decision-making has been proven to be one of the main areas capable to effectively position businesses ahead into the competitive market. Also, in challenging moments like this that we are currently facing, O&SCM areas are the most required with the aim to bring mitigation solutions and then keeping business and operations continuity. The following section presents the main strategic decisions that are mostly going to be required in these times of disturbance due to tariffs trade wars.

## 2.1 The Main Strategic O&SCM decisions

The following decisions to be discussed are relevant in order improve the Operations and Supply Chain (O&SC) performance objectives, especially those related to the supply chain response like flexibility and velocity (Slack and Lewis 2020). The way which the O&SC configuration is established in terms of strategic decisions like sourcing, manufacturing, transportation and logistics facilities may lead to a more or less responsiveness to supply chains (Chopra and Meindl, 2014). The supply chain strategy development itself is one of the key factors to get more responsiveness (Singh 2015). Depending on the type of products which supply chains aims to produce and deliver, more responsiveness may be required in a supply chain strategy, especially in an environment of demand uncertainty (Fisher, 1997). Managers should be able to identify the specificities of each supply chain based on the marked and environment when seeking for more responsiveness (Richey et al. 2022). Other elements implemented over the afore mentioned decisions like strategic alliances, effective knowledge and information management and continuous improvement are also key to allow more responsiveness in O&SCM (Gunasekaran et al. 2007).

Figure 1 presents the rationale of the O&SC strategic redesign in face of new reality of global trade war, what is also the motivation of this article.

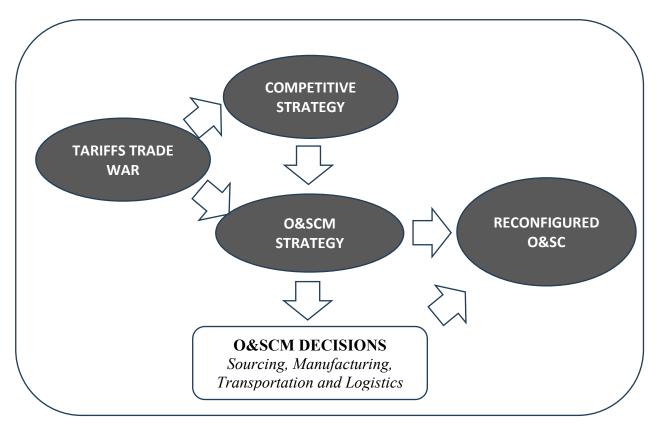


Figure 1. The Strategic Decision-Making Redesign of Operations and Supply Chain Amid Tariffs Trade War

As can be noticed in Figure 1, this global trade war that started with tariffs imposition by the new U.S administration in the commence of 2025 will put pressure to the competitive strategy of organizations, and then to the operations and supply chain management strategy. Several redesigns will be required involving the main O&SCM decisions in order create a redesigned operations and supply chain (O&SC) seeking to mitigate potential disruptions as well as minimize and overcome other effects from the turbulence generated by the imposition of tariffs.

One of the most relevant strategic decision-making is related to sourcing. Sourcing strategy is crucial to help on the mitigation of disturbance impacts. The strategic sourcing is relevant to enhance responsiveness in supply chains (Khan and Pillania 2008), especially in times of a significant disruption as occurred during Covid-19 pandemic (Frederico et al. 2021). Also, resilience-driven process in the strategic sourcing may lead to a more resilient supply chains during disruptions (Frederico 2023). Decisions like contract renegotiation with suppliers, jointly contingency plans, suppliers' base footprint redesign are some examples of decisions that might be required from decision-makers to avoid rupture in the downstream supply chain flows.

Considering decisions related to facilities, another area that may significantly be impacted is manufacturing. Although the manufacturing process itself is relevant for responsiveness (Madson and McFarlane 1999), highly strategic decisions like plants shutdown and relocation, operations reshoring, installed capacity review, inventory management and stop or reduction of technology investments are potentially going to be required from O&SCM decision-makers in these times of imminent global supply chains disruption. Facility location in supply chains is one of the most decision-making elements that aims to improve supply chain response (Melo et al. 2009). Decision-making involving reshoring and relocation will be highly required in these times of disruptions (Barbieri et al. 2020, Samson 2020). Furthermore, specifically about reshoring decision-making, it can be driven on the aim to seek more responsiveness in supply chains (Li et al. 2025). Similarly, occurs with decisions regarding logistics facilities like warehouses and distribution centers. Reviews concerning operating capacity, inventories, technology investments and assets demobilization and relocation are certainly going to be required during this new turbulence for organizations across

the World. These decisions linked to manufacturing and logistics facilities may be paramount to allow businesses and operations continuity and cost increase mitigation amid the turmoil generated by the tariffs imposition policy.

Transportation which is responsible for interconnecting the O&SC facilities in a global and regional network, with raw materials and final products supply, may also be affected by the effects of new policy of tariffs imposition. Strategic supply chain decision related to transportation, especially those related to modal decision in a network, is the core for the supply chain strategy and it can increase responsiveness in global supply chains (Ke et al. 2015). Strategic decisions like renegotiation of transportation services contracts and transportation network redesign will be probably requested to try overcoming the diverse impacts from this powerful trade geopolitical conflict. Due to this urgent situation, transportation services prices may be impacted, causing significant rises globally.

### 2.2 Digitalization, Sustainability and Other Issues

Despite all afore strategic decisions already discussed, one of the effective and successful strategic direction applicable for all O&SC elements (i.e. sourcing, manufacturing, logistics and transportation), is related to the digital transformation, also called by Supply Chain 4.0. The adoption Industry 4.0 technologies, including those virtual (e.g. Big Data Analytics, Artificial Intelligence, Cloud Computing), Physical (e.g. Robotics, Additive Manufacturing) and Internet of Things which is responsible to link the both categories, has a great potential to enhance the response capacity of supply chains (Frederico et al. 2020, Garay-Rondero et al. 2020, Ghadge et al. 2020). This was evident during the pandemic, when organizations more technologically embedded, have better performed in terms of responsiveness amid impactful ripple effects generated by shutdowns and other uncertainties across the supply chains in that moment. Also, digitalization strategy is not only able to bring more responsiveness but also costs reduction, going beyond the traditional tradeoffs decision-making approach in supply chains. Also, it is relevant to understand what impacts this new phenomenon is going to bring for sustainable O&SC.

Sustainability in O&SC has been one of the most considered topics by practitioners and researchers, and it is still not clear how this global trade deconfiguration from tariffs increase can impact sustainable initiatives in diverse supply chains in the World. Also, it is critical to understand the impacts to be generated to diverse types of supply chains, once they can be different depending on the type of industry and business sector.

#### 3. Evidencing the Need for More Studies on O&SCM Strategy

Seeking to demonstrate the need for more studies concerning the role of operations and supply chain strategy in disruption times, a search in the Web of Science database was conducted. For this aim the following Boolean formula combining the related words has been used:

((Supply Chain\* AND Strateg\* AND (Disruption OR Disturbance OR Crisis)) OR (Operation\* AND Strateg\* AND (Disruption OR Disturbance OR Crisis)))

As a criterion for the search, only articles in the last five years (2020-2025) were considered. This is because the major disruption events like COVID-19, wars and now tariffs, initiated from 2020. As the result based on data extracted from Web of Science database, 136 articles were found, which is relatively low when compared with other themes in operations and supply chain management as sustainability and Industry 4.0. An amount of 60 articles, which represents 44% of total, were published in 20 journals, mostly from the O&SCM area, as demonstrated in Table 1. The rest of articles (76) were published each one in different sparse outlets. These articles represented 56% of total. According to Table 1, journals which stand out in terms of number of publications having at least 4 publications each one are Sustainability, International Journal of Production Economics, Computers and Industrial Engineering and International Journal of Logistics and Applications.

Table 1. Publications in Journals

Journals	Record Count	% of 136	Cumulative
SUSTAINABILITY	10	7%	7%
INTERNATIONAL JOURNAL OF PRODUCTION ECONOMICS	6	4%	12%
COMPUTERS INDUSTRIAL ENGINEERING	4	3%	15%
INTERNATIONAL JOURNAL OF LOGISTICS RESEARCH AND APPLICATIONS	4	3%	18%
DISCRETE DYNAMICS IN NATURE AND SOCIETY	3	2%	20%
INTERNATIONAL JOURNAL OF LOGISTICS MANAGEMENT	3	2%	22%
INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH	3	2%	24%
JOURNAL OF CLEANER PRODUCTION	3	2%	26%
ASIA PACIFIC JOURNAL OF MARKETING AND LOGISTICS	2	1%	28%
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH	2	1%	29%
JOURNAL OF BUSINESS RESEARCH	2	1%	31%
JOURNAL OF GLOBAL OPERATIONS AND STRATEGIC SOURCING	2	1%	32%
JOURNAL OF TRANSPORT AND SUPPLY CHAIN MANAGEMENT	2	1%	34%
KYBERNETES	2	1%	35%
LOGISTICS BASEL	2	1%	37%
MATHEMATICAL PROBLEMS IN ENGINEERING	2	1%	38%
OPERATIONS MANAGEMENT RESEARCH	2	1%	40%
RAIRO OPERATIONS RESEARCH	2	1%	41%
SUPPLY CHAIN MANAGEMENT AN INTERNATIONAL JOURNAL	2	1%	43%
TRANSPORTATION RESEARCH PART E LOGISTICS AND TRANSPORTATION REVIEW	2	1%	44%
OTHER JOURNALS	76	56%	100%

From the data extracted from Web of Science database, an analysis has been performed using the VOSviewer software in order to understand the words' occurrences and formed clusters. As can be realized through Figure 2, two main clusters were formed with data processed in the software (red and green colors).

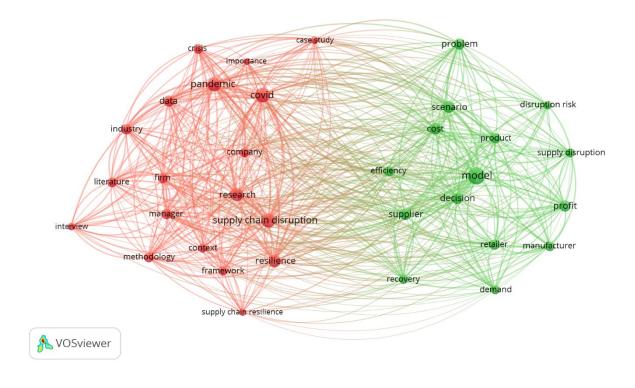


Figure 2. Network visualization of words extracted from VOSviewer software

Also, a density visualization was extracted from the software as shown in Figure 3, presenting the words that have the most occurrence in the sample of 136 articles considered.

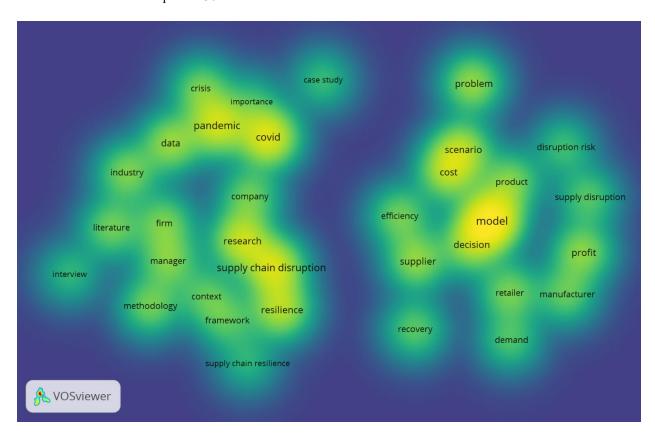


Figure 3. Network visualization of words extracted from VOSviewer software

By analyzing the data from VOSviewer it is possible to notice that although the articles extracted from Web of Science database were performed by combining the word strategy with operations, supply chain, disruption, disturbance and crisis, it is not possible to verify the word strategy or its derivatives in the both figures, 2 and 3.

More evidence on that regards can be checked by Table 2, which demonstrates the number of occurrences by each word. Based on Table 2, it is possible to verify that the most cited words in the articles' sample were: model, covid, supply chain disruption, pandemic, research, resilience, cost, scenario, data and problem. This indicates that the most studies were focused on developing models related to resilience and cost problems in the context of COVID-19 context. Although the word strategy was used as part of title, keywords and abstract of the 136 analyzed articles, it seems that this it was a more underlying subject into these studies. Also, according to Table 1, strategy or strategic has not been listed as one of the main occurrences, what clearly evidences the lack of studies focusing on this specific theme. Also, when taking into consideration the current context of tariffs trade war and potential disruptions on operations and supply chains, the figures and tables herein presented, did not showed the word tariff, which evidence that these studies approaching operations and supply chain strategy with disruptions situations in the last five years have not considered this specific subject, even if because the phenomenon is new and brought more concerns from the beginning of 2025. So, it is possible that some studies relating the subjects of O&SCM and tariffs are under still development.

Table 2. Occurrences of words extracted from VOSViewer

Word	cluster	weight <occurrences></occurrences>
model	2	63
covid	1	45
supply chain disruption	1	40
pandemic	1	38
research	1	36
resilience	1	32
cost	2	30
scenario	2	29
data	1	27
problem	2	27
decision	2	26
supplier	2	26
profit	2	25
industry	1	23
product	2	23
manager	1	22
retailer	2	22
crisis	1	21
efficiency	2	21
firm	1	21
literature	1	21
methodology	1	21
company	1	20
manufacturer	2	19
recovery	2	18
supply disruption	2	17
context	1	16
demand	2	16
framework	1	16
disruption risk	2	14
case study	1	13
interview	1	12
importance	1	11
supply chain resilience	1	11

# 4. Establishing a Research Agenda due to the New Impactful Trade War

As already stated in this article, this is phenomenon of tariffs imposition is potentially one of the most impactful events to be added in the O&SCM history. As a new phenomenon, different areas and subjects of O&SCM should be investigated in order to create relevant knowledge for the field. In this sense, academics plays a crucial role on fostering the new research fronts seeking to understand different contexts and impacts due to this new reality. Based on the strategic decisions discussed in the article and the evidence of a lack of more researches focusing on the operations and supply chain management strategy, some potential research topics that can be deployed are proposed. Also, some other relevant categories issues linked to the current context of O&SCM are considered for the new research

deployment, which can be affected by the new phenomenon of global trade war. The following suggested questions in Table 3 are not exhaustive and they can serve as a reflection to deploy different lines of research in the O&SCM field.

Table 3. Research Agenda

Strategic Decision-making Category	Potential Research Topics to be Deployed
Sourcing	<ul> <li>How the strategic sourcing, especially regarding global sourcing is going to be affected within this new reality; what kind of new strategies can be adopted in face of this disturbance phenomenon?</li> </ul>
	<ul> <li>What are the main sourcing strategies to mitigate the effects of tariffs imposition?</li> </ul>
Manufacturing	<ul> <li>How can decisions like relocation and reshoring of manufacturing facilities can be effective to minimize the effects of this trade war and help on keeping business and operations continuity?</li> <li>What are the impacts of the imposition of tariffs to the decisions regarding the capacity of manufacturing facilities?</li> </ul>
Transportation	<ul> <li>How the network transportation and transportation service prices can be impacted by this new trade war?</li> </ul>
and Logistics	<ul> <li>How can decisions like relocation and reshoring of logistics facilities can be effective to minimize the effects of this trade war and help on keeping business and operations continuity?</li> </ul>
Other Issues	<ul> <li>How digitalization on supply chains (Supply Chain 4.0) and its disruptive technologies can effectively support to mitigate the impacts generated by the imposing of tariffs increase?</li> <li>How different decisions required from this new event can positively and negatively impact the added margin value of operations and supply chains?</li> <li>What are the potential impacts of this phenomenon for initiatives linked to sustainable and circular supply chains?</li> </ul>
	<ul> <li>What kind of supply chains are going to be most affected from this phenomenon and what particularities make them more vulnerable?</li> </ul>

# 5. Conclusion

Operations and supply chains have never been challenged as ever before. Continuously disruption events have been occurred since the pandemic, what is perhaps making this decade the most challenging milestone over the O&SCM history. The strategic direction given by decision-makers involved in the O&SCM areas will be paramount to at least be able to minimize the impacts from this impactful imposition of tariffs increase. This work brings as the main takeaways:

- The new policy of tariffs imposition is going to intensify the environment of uncertainties for operations and supply chains, consolidating this decade as the era of disruptions in O&SCM
- O&SCM strategy will be paramount on the challenging mission to support the mitigation and overcoming of impacts from this event
- Evidence demonstrates that more studies on O&SCM strategy are required in times where high-level decision-making will be required
- A research agenda with potential topics of research to be deployed is proposed

It is time to demonstrate the highly strategic role of O&SCM decisions and create awareness to organizations' main leadership like board members and CEOs about the relevance of this area to support the overcoming of this challenging

and tough reality for global supply chains. This is an era of disruptions for supply chains and the O&SCM decision-makers must be prepared to effectively redesign O&SCM strategies.

Also, academicians should deploy new research directions aiming to investigate the impacts of this new phenomenon in the O&SCM. As the new mark for the O&SCM, although the tariffs imposition may bring challenging times for the operations and supply chains, it may also be a source of new opportunities to enhance knowledge for the O&SCM discipline. This article aimed to pledge this view of a need for further knowledge regarding O&SCM strategic decision-making due the new and current reality as well as the awareness about the relevance of this field to mitigate and overcome the effects from these challenging times.

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## **Biography**

Guilherme Francisco Frederico is a Professor of Operations, Supply Chain and Project Management at Federal University of Paraná – UFPR – School of Management, Curitiba, Brazil. He works by teaching and leading researches in the graduate and undergraduate programs (Business Management) at UFPR. Also, Prof. Frederico has been working in collaboration with the Centre for Supply Chain Improvement at University of Derby – UK as a Visiting Professor. His research interests and expertise on Supply Chain Management field are related to Maturity and Performance Measurement, Project Management, Knowledge Management, Strategic Sourcing and Impacts from Industry 4.0 and Industry 5.0. He has published his research outcomes in international journals such as Supply Chain Management an International Journal, Journal of Cleaner Production, Business Process Management Journal, International Journal of Productivity and Performance Management, Operations Management Research Journal, Benchmarking an International Journal, International Journal of Logistics Management and Knowledge and Process Management Journal. Prof. Frederico is a member of the Editorial Board of the International Journal of Industrial Engineering and Operations Management - Emerald and Associate Editor of Gestão&Produção. He has also been leading some special issues on reputed and highly ranked journals as managing guest editor as well as serving as an expert reviewer. Prof. Frederico has also been contributed to some reputable supply chain magazines (e.g., Supply Chain Management Review, Logistics Management, Celerity Logistics, Performance Magazine and The World Financial Review) publishing articles with relevant practical insights. Also, he has been invited as international guest speaker in universities of different countries such as UK, Sweden, India and UAE. Previously the academic career he worked in strategic positions for more than 10 years on SCM field in Global and Large Companies (e.g., Bunge, Deere & Company) involving different segments of Industry including manufacturing and logistics services operations.