Logistic Network Optimization

Introduction

It's increasingly evident that companies are seeking to design supply chains and operating models that are flexible, resilient and can improve tax efficiency. Indeed, Logistics Network Optimisation is a process that reviews physical supply chains to reduce complexity whilst simultaneously improving service levels.

This article defines Logistics Network Optimisation and explores some of the macro drivers stimulating renewed focus in this area, in addition to explaining how companies undertaking such changes in their supply chains can only achieve commercial objectives by recognizing the need to balance indirect tax outcomes (e.g., global trade and customs duties) with direct taxes (i.e., transfer pricing).

What Are the Benefits of Logistics Network Optimisation?

Logistics Network Optimisation helps a company improve its service offerings, reduce working capital requirements and streamline operations by addressing the various levers and variables that make up a physical supply chain. These levers of Logistics Network Optimisation can include commercial and operations strategies, supply chain costs and structures and both direct and indirect taxes. Collectively, these levers of a physical supply chain will enable the go-to-market strategy by finding the right trade-offs of each.

Logistics Network Optimisation is often used to rationalize supply chains (i.e., warehouse usage) post-merger or acquisition, taking out costs associated with merged supply chains and bringing out synergies between the two, for example. Given the key focus of Logistics Network Optimisation is on the physical supply chain, it is important to ensure tax implications—specifically, ensuring indirect tax implications such as customs duties are considered.

Commonly asked questions often addressed by Logistics Network Optimisation projects include:

What is the optimal number of logistics facilities, their location, type and capacity considering total logistics costs, tax aspects and service levels?

What investments must be made in manufacturing and warehousing capacity to support entry into new markets, as well as new channels or products?

How should the network be modified for new global trade policies which are becoming increasingly relevant given the introduction of the Regional Comprehensive Economic Partnership ("RCEP") and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership ("CPTPP") in the region.

There are several challenges in the market that drive companies to look at Logistics Network Optimisation. These challenges, or factors, are summarized as follows:

Cost Pressure – There are significant costs and capital associated with the physical supply chain—sourcing, manufacturing, warehousing, inventory and transportation. This is increasingly evident in today's relatively high interest rate environment. Companies must reduce supply chain costs while continuing to meet and improve target customer service levels;

Globalization – Cross-border trading particularly in the Asia-Pacific ("APAC") region is highly complex and requires a good understanding of supply chain, legal, customs and risk factors. At the same time, there is an increasing trend of nationalism where countries are raising tariffs and duties as a way to protect local industry participants at the expense of others.

Market Volatility – Besides global inflation, there has also been unprecedented volatility in commodity prices, oil prices, labour and real estate prices which are affecting decision makers on location suitability when it comes to physical supply chain footprints.

Supply Chain Resilience – Supply chain networks must be agile and adapt to changing business conditions, particularly in light of supply chain shocks like global epidemics or warzones.

Customer expectations – Evolving customer demand for next-day and same-day delivery (one to four hours becoming the new normal express service offer) has led to moving inventory closer to consumer densities, creating new tiers to be considered in the consumer products network including dark stores, hub stores and store-based fulfillment (deliver to door or click-and-collect).

With this brief background as to what Logistics Network Optimisation is and what is influencing these types of projects, it is now possible to highlight how Logistics Network Optimisation works in practice.

The Balancing Act of Logistics Network Optimisation

As outlined, a Logistics Network Optimisation project incorporates and trades off multiple variables to find the preferred solution for a given service proposition. While key variables can include future volume and demand and supply locations or products and product characteristics, the interplay between indirect tax and direct tax is critical to the success of these projects. Effectively, each tax cannot be analysed in isolation and can be thought of as key levers to the decision-making process respectively.

There is a clear dichotomy between physical network flows which are the focus of indirect tax compared to direct tax where financial flows are often of importance. For indirect tax (i.e., customs duties, good and services tax (GST) and value-added tax (VAT)) it is the physical network flows which drive key outcomes. The physical flow of goods from point of manufacture to destination point will have a direct impact on potential customs duty payable and duty mitigation strategies that may arise from Free Trade Agreement or Free Trade Zone (and other customs-controlled zones) application.

For example, the APAC region is characterised by a series of bilateral (e.g., Australia-China, New Zealand-China etc.), regional (e.g., RCEP and CPTPP) and trading bloc (e.g., ASEAN, ASEAN+1) Free Trade Agreements.

Indeed, these Free Trade Agreements facilitate trade in the region by mitigating or reducing to zero customs duties. Each Agreement will have its own rules regarding product origin, direct consignment and third country invoicing—all which need to be considered as part of any duty mitigation strategy.

Similarly, the physical location where goods title is transferred within the supply chain may impact the roles and responsibilities of exporter/importer of record and therefore which party is liable for any applicable customs duties related to the importation of goods into destination markets. That is, deferring title transfer of goods to a point within a destination market may limit the risk of local distribution entities but creates a situation where a non-resident supplier (manufacturer or other principal entity) is required to import potentially leading to indirect tax leakage to the non-resident title holder.

In contrast, direct taxes such as transfer pricing focus on ensuring financial flows match local economic substance. Often these flows seek to determine an effective remuneration based on functions and risks for entities within the supply chain. Evidently, the income tax impact of a transfer pricing and commercial substance analysis may shape discussions on operating model options and subsequently locations of assets which then draws a nexus back to physical flows (given the decision making on physical location). Here lies one example of the interplay between indirect and direct taxes highlighting that each tax cannot be analysed in isolation.

Reciprocity of Indirect Tax and Transfer Pricing

Indirect tax outcomes, such as global trade and customs duties, have a particularly close link with transfer pricing policies albeit with occasionally opposing objectives. For example, in any given destination market, high transfer prices at import will potentially lower income tax for local distributors but will simultaneously increase the risk of higher customs duties being payable. Conversely, lower transfer prices at import will lead to a lower customs value and therefore lower customs duties (yet may lead to higher income tax if goods are subsequently sold in the destination market by the local distribution entity at a premium price). This example also illustrates how local tax authorities tend to focus on higher intercompany pricing decisions as a means of a lower income tax outcome while local customs authorities focus on how lower customs values set between related parties lead to lower customs duties payable.

Interestingly, in May 2022, the first ever pilot scheme in China was introduced seeking alignment between Shenzhen customs and tax administrations on related party importations. This collaborative approach sought to provide institutional standards of transfer pricing to the customs authority and is the first formal cooperation in China between customs and tax authorities in relation to transfer pricing.

Since the pilot scheme was introduced, however, the number of applications (of its use) have been limited with one of the key reasons being the facilitation of foreign exchange payments for transfer pricing adjustments. It still provides insight into how tax and customs authorities are attempting the ‘bridge the inherent gap’ between customs duties and transfer pricing.

It is worth observing that while there is some natural dichotomy between optimized transfer pricing and customs value outcomes, transfer prices tend to focus on net profit outcomes, whereas customs values are dictated by the cost of goods and the outcomes at the gross profit level. The different profit metrics ensure there is some flexibility in achieving an optimized transfer pricing outcome without completely foregoing an optimized customs value (and vice versa). Companies instead need to ensure they are proactively getting advice on how to manage both aspects to ensure a holistic optimized supply chain.

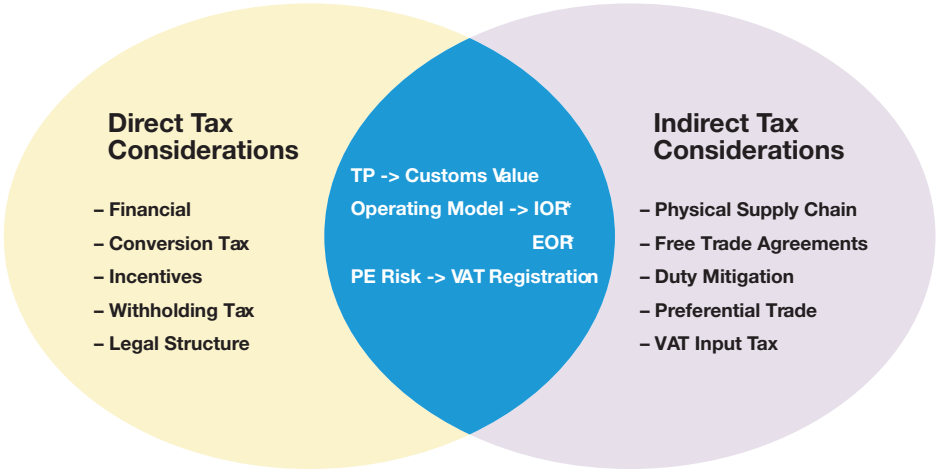
The reciprocity within Logistics Network Optimisation can be further explained using recent case study examples.

A&M previously assisted an apparel company seeking to change its network design from third-party distributors to a central trading and distribution set up. During this project, transfer pricing played an integral role in setting prices between principal and local distribution entities of the company. As a result of insourcing sales and distribution functions, efficiencies were realised and the company's transfer pricing resulted in lower prices in the destination markets across APAC, including China, Japan, Thailand and Australia compared to when third-party distributors were relied on. Additionally, the company created a new indirect tax profile by establishing itself as the importer of record in destination markets, a role previously undertaken by third-party distributors.

As expected, lower intercompany prices lead to an improved operating margin for the company overall. However, it was also important to manage local customs authorities' expectations given that the lower prices (at import) also meant lower customs values and therefore duties paid. While there was valid commercial reasoning for the change in operating model, without appropriate engagement, further scrutiny by customs authorities may have arisen. Furthermore, as the company was now importing into local destination markets directly (via a local distribution entity), it was responsible for importation activities rather than a third-party distributor that would have previously dealt with customs authorities.

In another case, A&M assisted a cosmetics brand in selecting a manufacturing location in Asia in order to diversify their existing North American production. Post COVID-19, the company wanted to bring supply closer to their fastest growing market, a common occurrence over the past two years. While Singapore was chosen given its regional Free Trade Agreement connectivity, this required consideration of job roles and locations, remuneration requirements and financial accounting treatments. Arriving at this decision required a feasibility on strawman models mapping physical and financial flows for a range of manufacturing locations selling directly to customers in the ASEAN and North Asia region.

To finalise the illustration of global trade and transfer pricing trade-offs, A&M was also involved in helping a food and beverage enterprise set up a regional procurement function in APAC. From a transfer pricing perspective, remuneration of the procurement hub entity via a service fee was preferred. From a customs perspective, however, this required critical analysis on whether the service fee was buying agency commission and therefore not part of the customs value (or dutiable) of imported products throughout APAC. While it was achievable to set a service fee that was not part of the customs value, this required underlying agreements, function and risk analysis and substance to support such an outcome.



*IOR – Importer of Record
*EOR – Exporter of Record
*TP – Transfer Pricing
*PE – Permanent Establishment
*VAT – Value Added Tax

Evidently, each of the case studies above achieved the commercial objectives underpinning the change in supply chain while managing the interplay between indirect and direct taxes. However, this is also due to the approach taken by Logistics Network Optimisation participants to take a holistic approach to project preparation.

Logistics Network Decision Making Encompasses the Entire Supply Chain

Evidently, the above focuses on the distribution, or downstream, events of a supply chain. Implications of Logistics Network Optimisation, however, run from sourcing (upstream) to distribution and sales. For example, decision makers designing operating models need to consider the location of key suppliers, criticality and availability of key inputs and raw materials when establishing a manufacturing footprint.

Therefore, in seeking to establish new manufacturing facilities or expand on those existing, sourcing capabilities and associated costs will impact decision making (and by extension, tax outcomes).

To this extent, recent decisions on sourcing and manufacturing locations appear to benefit markets such as Vietnam as entities look to mitigate the effect of punitive tariffs placed on Chinese originating goods imported into the United States. The consequence, however, has been the elongation of supply chains where China still remains the source of raw materials and inputs whether for criticality or availability reasons. Raw materials and inputs are then beneficiated in Vietnam before being exported (to markets including the US).

Not only does this put a strain on logistics costs and potentially duties as raw materials now need to be imported into the manufacturing market, the US Customs and Border Patrol ("US CBP") often investigate whether supply chains have been designed for the sole purpose of avoiding US punitive tariff assessments. Indeed, the recent Pitts Enterprises vs US CBP case found that marine chassis manufactured in Vietnam and imported into the US were actually primarily manufactured in China before being shipped to Vietnam for final assembly (Journal of Commerce, 2024).

The CBP view held that substantial transformation (establishing the origin of the goods), occurred in China and not Vietnam (as originally declared). Duties therefore should have been paid and Pitts Enterprises ceased importing marine chassis into US from late 2021 (LinkedIn, 2024). This illustrates how upstream design parameters can have unintended tax consequences downstream.

Similarly, China's export controls on rare earths have limited the ability of electronic vehicle manufacturers and related industries to fully de-couple or de-risk supply chains from China. By banning the export of technology to make rare earth magnets (required for electronic vehicle manufacture) as well as the ban already in place on the export of technology to extract and separate critical materials, China has effectively imbedded itself in the supply chain of electronic vehicles and associated industries (Reuters, 2023).[3]

Therefore, and despite geopolitical circumstances, Logistics Network Optimisation may still result in the maintenance of status quo supply chains and operating models if raw materials and key inputs to production remain an impediment for change.

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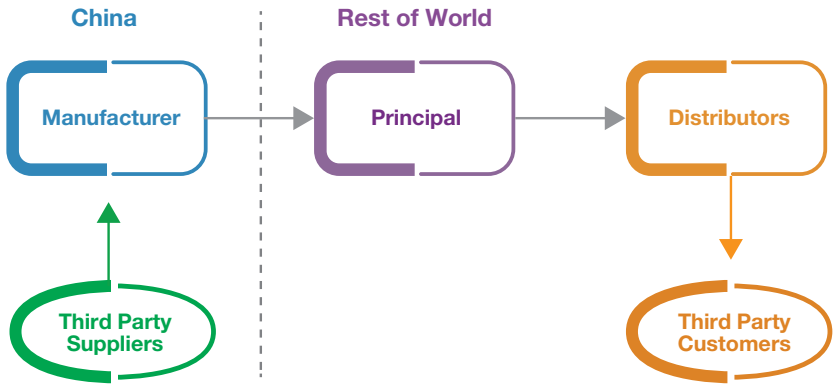
[1] Aishe, A. 2024, US Commerce Department Rejects Pitts Appeal in Marine Chassis Case, Available at: US Commerce Department rejects Pitts appeal in marine chassis case | Journal of Commerce (joc.com), Accessed: 15 March 2024

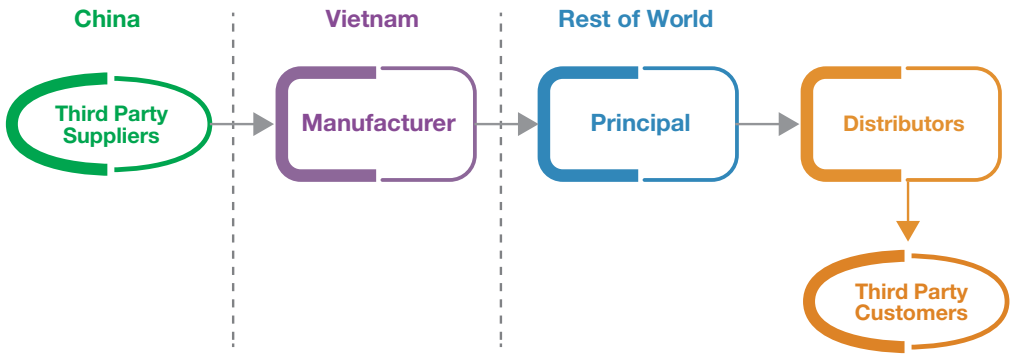
[2] Freightlead, 2024, US Commerce Department Rejects Pitts Appeal in Marine Chassis Case, Available at: US Commerce Department rejects Pitts appeal in marine chassis case (linkedin.com), Accessed: 16 March 2024

[3] Liu, S. 2023, China bans export of rate earths processing technology over national security, Available at: China bans export of rare earths processing tech over national security | Reuters, Accessed: 16 March 2024.

Model A



Model B



Observations on an Effective Way Forward

Logistics Network Optimisation is enabled by finding the trade-offs between traditional supply chain and indirect and direct tax costs. Fundamentally, success of Logistics Network Design is a function of the sum of all parts where each part is complementary and needs to be assessed in conjunction with the other. I have summarized these parts as the overarching commercial and operations strategy, supply chain costs and tax considerations. Based on experience, the following approach facilitates the success of Logistics Network Optimisation projects:

Prepare in advance – Analyse impacts of network design in tandem before the decision-making process is finalised. That is, coordinate workstreams and workshops to address the indirect tax and direct tax impact of the change to any physical supply chain. Red flags (if any) can be identified and managed before investment decisions are made;

Recognise it's not a 'one size fits all' outcome – Across APAC, local tax and customs authorities will have unique and specific points of interest. Not only will areas of interest be varied between markets such as China, Singapore, Malaysia and Australia but tax authorities and customs authorities will also work independently of one another. Therefore, supply chains need to be flexible and tailored market to market;

Define tax-based measures of success – As articulated above, indirect and direct taxes may have conflicting objectives. Yet if tax objectives are set upfront, Logistics Network Optimisation can be utilised effectively. For example, if it is defined that a regional APAC hub is to be established, acknowledge that the insertion of this principal entity may implicate customs duties;

Supply Chain Resilience – Supply chain networks must be agile and adapt to changing business conditions, particularly in light of supply chain shocks like global epidemics or warzones.

Support decisions with documentation – Underpinning any change in supply chain or operating model is a significant amount of documentary support. Such documentation includes: Sale and Purchase Agreements, entity registrations (and tax registrations), Service Agreements, transfer pricing policies and customs defense files to name a few. While it may appear to be business as usual to prepare such documentation, in the event of tax or customs authority scrutiny arising by changing supply chains, it is this documentation that serves as the source of truth.

Above, outlined is the interaction between transfer pricing and global trade outcomes which can also be maintained with documentary support. Not only should master files (transfer pricing policies and customs defense documentation) be consistent with one another, supporting that, for example, service fees or royalties are not part of the customs value of imported goods will require documentation to promote such results. It is therefore imperative to the success of implementing Logistics Network Optimisation that documents and agreements are prepared and reviewed prior to the change in any model.

Physical and financial supply chain changes can have numerous tax implications. Logistics Network Optimisation, however, continues to be an effective mechanism of satisfying commercial objectives while achieving tax efficiency.

Our team of supply chain and operating model tax specialists have experience in assisting clients across various industries on indirect tax, global trade, TP and direct tax implications within the Pan-Asia region and beyond. Our experience in supporting extends from feasibility, design and implementation throughout the operating model value chain. Contact Yvette Chan or Andy Winthrop directly to discuss how we can support your client on navigating changes across Asia.

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