DESCARTES Datamyne



BUSINESS WHITE PAPER

Targeting New Opportunities Amid Shifting Trade Policy

How Identifying & Diversifying Suppliers Can Protect Against Disruption



Trade Policy - An Uncertain Outlook

Today, cross-border trade is more prevalent than ever before. As new technologies optimize and accelerate supply chains, global trade policy has made it more difficult to move and source goods.

Tariffs, sanctions, and continuous (often real-time) domestic and international policy changes have become a hurdle for supply chain managers, who rely on consistency and certainty to plan and execute global trade. Adding even more tension to their supply chains, businesses face high consumer expectations to receive products quickly and will full visibility.

A solution is needed to better pinpoint new opportunities, reduce risk, and speed the movement of freight.

Evolving Sourcing Standards

In an environment of change, many U.S. companies seek to relocate their sourcing or manufacturing away from the highest areas of trade tension. Supplier diversity has long been a sound business practice; but, when companies add to their supplier base, it introduces other variables that can offset the benefits. Mitigating these offsets, and maintaining the benefit that diversification can provide, is a key differentiator among businesses with international supply chains.

Uncertainty and increasing types and severity of risk continue to define the global trade environment. The best-performing companies face these challenges by employing technologies that allow them easier supply chain visibility and increased agility. These technologies provide actionable insight into both an individual company's supply chain as well as international trade trends and potential new suppliers; all while increasing efficiency and compliance.

Today's trade policy landscape requires leading technology that can help identify opportunities for growth, boost productivity, and minimize risk.



Rapidly Changing Trade Policy:

The New Normal

With tariffs soundly in the spotlight and dominating headlines, market leaders know the repercussions that tariff changes can have on a business. It can, however, be difficult to monitor changes that affect the top and bottom line. Tariff fluctuations can not only influence strategic decision-making, but the analysis, review and practical application of changes can tax resources at the operational level.

Officially beginning in February of 2018, U.S. trade policy began to shift dramatically. Most notably, U.S.-China trade tensions have nearly escalated to an all-out trade war. To date, the United States has imposed tariffs on \$250 billion worth of Chinese products - and threatened tariffs on \$325 billion more. China has retaliated by setting retaliatory tariffs on \$110 billion worth of U.S. goods. These protectionist policies have led to a general attitude of trade uncertainty, as companies face higher landed costs and consumers higher prices on the shelves.

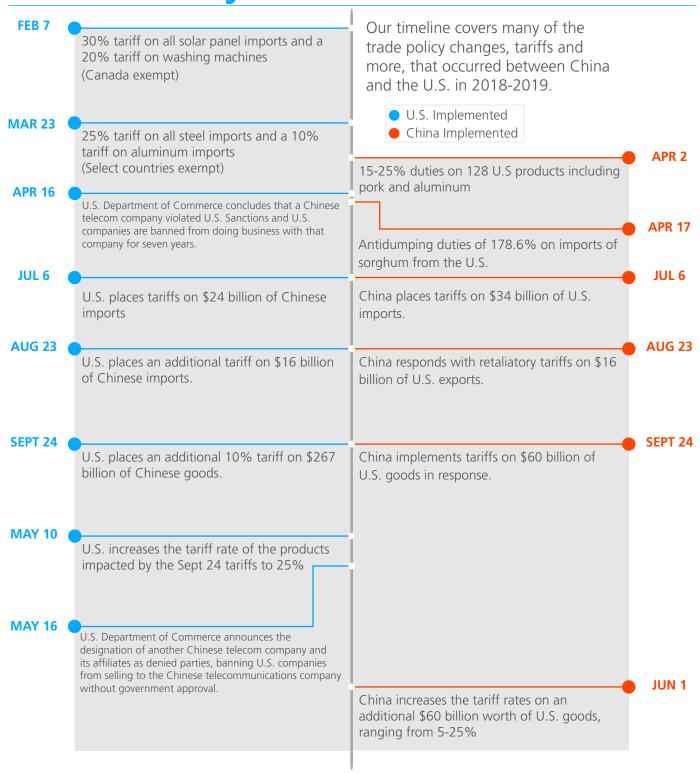
The scope of policy changes affects a wide range of sectors and represent a significant challenge for companies to either absorb or mitigate. To gauge the potential impact on business, Companies require intelligent trade data solutions. Market leaders need methods to demonstrate reasonable care, discover what tariff adjustments affect which products, under what circumstances, if exceptions apply and when. Beyond this, it is critical to stream accurate, fully vetted trade data into existing Enterprise Resource Planning (ERP) platforms and other systems.

Trade volatility and disruption affect every company and every industry. Instability in global trade policy can drive up costs in many ways; increasing the costs of raw materials, manufacturing, transportation, duties and tariffs while, ultimately, increasing the final price paid by consumers.

It is critical for businesses with international supply chains to be aware of trade policy shifts impacting global trade. Top companies understand how to react to these developments while insolating themselves from any further changes in the future. To do this, these businesses employ up-to-date global trade content to identify changes and technology to ensure their supply chains remain efficient and compliant.



A Trade Policy Timeline



With rapid-fire trade policy announcements, it can be challenging to gauge when changes will come or how they might affect business.

With these shifts reshaping supply chains and global commerce, it's critical to incorporate a solution that can monitor change.



China - Tariff Impact & Trade Report

What You Need to Know:

For decades, China has dominated many supply chains, with most manufacturers following a "China Plus One" strategy for sourcing – diversify their operations by adding another location in Asia.

Many recent reports, however, suggest that China's growth (and potential dominance) has weakened because of the trade volatility between them and the United States, with China's production numbers dropping and factory activity slowing.

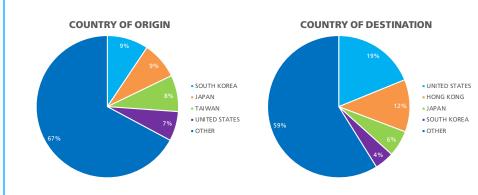
Overview & Digest

Overall, according to trade data from Decartes Datamyne[™], both imports and exports globally increased significantly in 2018 compared to 2017.

Exports, predominantly to the United States, increased 6.74% to a total CIF value of \$2.49 trillion USD. This may be is due to a rush on imports after tariffs were announced but prior to their implementation as businesses sought to avoid the higher duty rates by "front-loading" imports.

Imports into China increased a far more dramatic 14.17% to a total CIF value of \$2.11 trillion USD.

\$240.00 \$220.00 \$220.00 \$160.00 \$1100.00 Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar



Imports

Product HS (6)	Records	CIF Value (US\$)
270900 - PETROLEUM OILS AND OILS FROM BITUMINOUS MINERALS, CRUDE	1218	\$ 240,808,629,305.00
854231 - PROCESSORS AND CONTROLLERS, ELECTRONIC INTEGRATED CIRCUITS	19198	\$ 127,569,082,050.00
854232 - MEMORIES, ELECTRONIC INTEGRATED CIRCUITS	8500	\$ 118,352,522,093.00
260111 - IRON ORE CONCENTRATES (OTHER THAN ROASTED IRON PYRITES) AND	2546	\$ 73,946,754,275.00
710812 - GOLD, NONMONETARY, UNWROUGHT OTHERS (OTHER THAN POWDER)	670	\$ 54,982,020,702.00
854239 - ELECTRONIC INTEGRATED CIRCUITS, OTHERS	16904	\$ 51,317,209,838.00
851770 - PARTS OF TELEPHONE SETS AND OTHER APPARATUS FOR THE TRANSMIS	17209	\$ 39,144,240,380.00
120190 - SOYBEANS, OTHER THAN SEED	576	\$ 37,143,567,706.00
870323 - PASSENGER MOTOR VEHICLES WITH SPARK-IGNITION INTERNAL COMBUS	2106	\$ 34,345,281,806.00
260300 - COPPER ORES AND CONCENTRATES	1568	\$ 32,662,043,586.00

Exports

Product HS (6)	Records	FOB Value (US\$)
851712 - TELEPHONES FOR CELLULAR NETWORKS OR FOR OTHER WIRELESS NETWO	14461	\$ 136,136,697,694.00
847130 - PORTABLE DIGTL AUTOMATIC DATA PROCESSING MACHINES, WEIGHT NO	13418	\$ 97,282,121,394.00
851770 - PARTS OF TELEPHONE SETS AND OTHER APPARATUS FOR THE TRANSMIS	42888	\$ 50,017,300,951.00
854232 - MEMORIES, ELECTRONIC INTEGRATED CIRCUITS	5112	\$ 46,862,435,377.00
851762 - MACHINES FOR THE RECEPTION, CONVERSION AND TRANSMISSION OR R	69541	\$ 44,015,588,766.00
847330 - PARTS AND ACCESSORIES FOR AUTOMATIC DATA PROCESSING MACHINES	21636	\$ 42,199,187,044.00
854231 - PROCESSORS AND CONTROLLERS, ELECTRONIC INTEGRATED CIRCUITS	9914	\$ 30,204,635,826.00
271019 - PETROLEUM OILS, OILS FROM BITUMINOUS MINERALS (OTHER THAN CR	9147	\$ 28,653,179,499.00
950300 - TRICYCLES, SCOOTERS, PEDAL CARS AND SIMILAR WHEELED TOYS; DO	89119	\$ 26,131,841,929.00
901380 - OPTICAL DEVICES, APPLIANCES AND INSTRUMENTS, OTHERS	21574	\$ 23,009,023,581.00

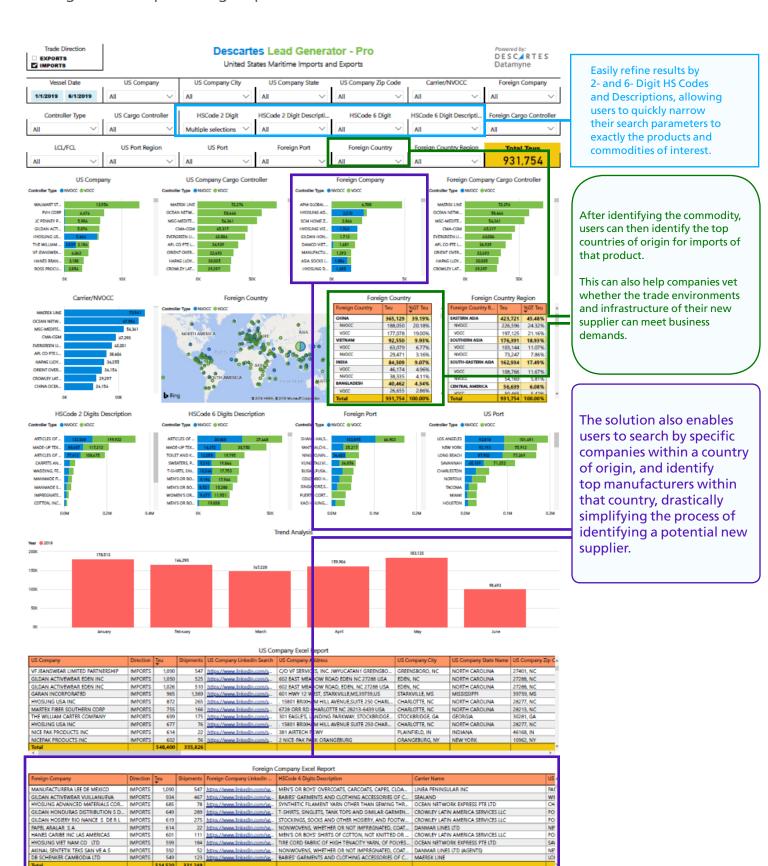


Identifying Potential New Suppliers

Clothing & Textiles:

Clothing and textiles, Section XI of the harmonized tariff schedule, is a key industry in U.S.-China trade and faces significant pressure from the ongoing trade policy shifts.

Solutions that can simplify the process of identifying potential new suppliers outside of China can help pinpoint opportunities. For example, Vietnam is the next largest country of origin for this product group.



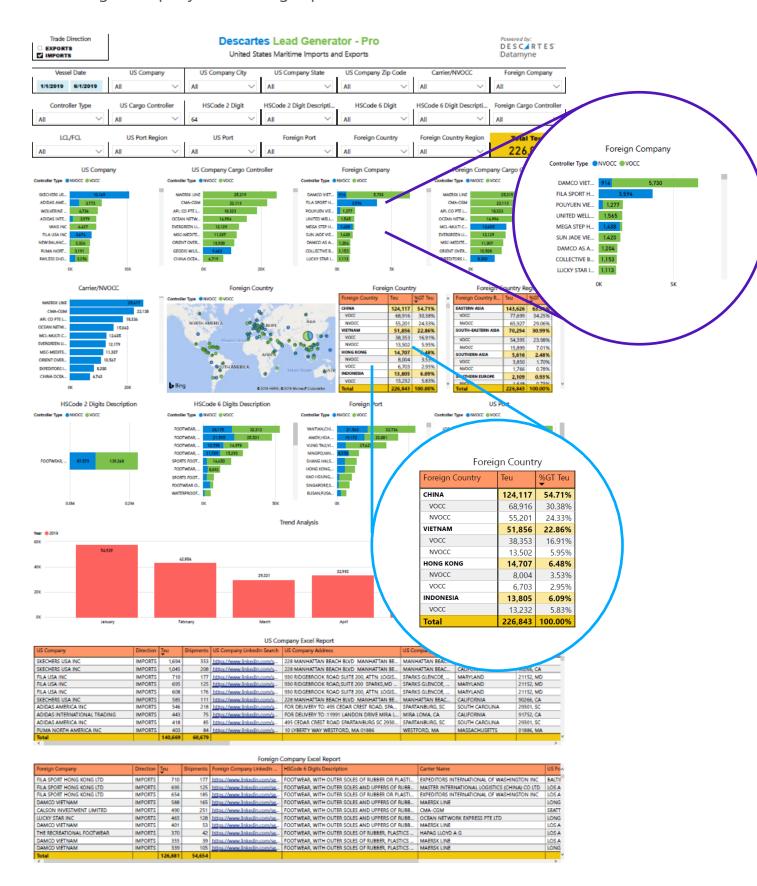


Identifying Potential New Suppliers

Footwear:

Footwear, Chapter 64 of the Harmonized Tariff Schedule, is another industry which relies heavily upon trade between the United States and China. So far in 2019, imports from China represent 54.71% of total TEUs entering into the U.S.

Again Vietnam is identified as a top secondary producer, with 22.86% of the total TEUs and a single company dominating exports to the United States.





The Challenge of Diversifying Supply Chains

Increasing supplier diversity can be a sound strategy to combat the uncertainty of shifting trade policy; however, diversifying is not without its challenges.

At the most basic level, diversifying sourcing has the same challenges as finding any international supplier. Proper planning and execution must be backed by up-to-date insight and information. New suppliers must be properly identified by examining both their production capabilities as well as the infrastructure in place to ensure they can meet business demands. These new suppliers must then be properly vetted against denied- and restricted-party lists to maintain compliance.

As another part of this initial examination, companies should consider the political and trade environments of the countries these new suppliers are located in. It would be far from productive to shift away from an uncertain trade relationship with China to an unstable one with Venezuela, for example.

In addition, another key area that supply chain managers need to pay attention to is rising international labor costs. Many countries that act as popular alternatives to China – Mexico, Vietnam, and India – all have rising labor costs that must be taken under consideration.

Still another facet to consider is whether moving production out of China will actually avoid the potential tariffs. If certain components of a finished product, or a significant enough percentage of that product's raw materials ultimate originate from China, without undergoing a significant enough change in the Harmonized Tariff Schedule, companies will still face the full

cost of the tariffs in addition to the costs of establishing operations from their new supplier. To combat this, companies can employ what is known as tariff engineering, which involves examining a product's Bill of Materials (BOM) and cross-checking that against tariff and trade policy specifications.

All of the above challenges can be met through proper due diligence and employing robust trade solutions and compliance software.

Accurate Trade Data can minimize the impact of shifting trade policy and is vital to the identification of potential new suppliers.



The Benefits of Diversification & Multiple Sourcing Strategies

Regardless of what happens in international trade policy, sourcing diversification is not only a safe but also a smart policy that and allows businesses to turn the uncertainty of the current trade environment into an opportunity which can strengthen their supply chain.

Consolidation and reliance upon a single sourcing strategy is a common trend among companies looking to reduce costs; however, depending on a single supplier poses a significant risk to a supply chain, ranging from manufacturing disruptions with the supplier themselves to increased costs due to updated trade policies. One solution to mitigate the risks of single sourcing is to establish and maintain relationships with multiple suppliers.

Multiple sourcing strategies allows for business opportunities that supplier consolidation does not:

- Risk Mitigation
- Segmented & Regionalized Supply Chains
- Scalability and Increased Capacity
- Faster Lead Times
- Increased Competition Among Suppliers leading to cost flexibility

In an environment where global trade policy is rapidly becoming a cause of supply chain disruption, and tariffs, sanctions, and non-tariff measures quickly emerge as routine elements of negotiations, international supply chain managers must now contend with an unprecedented amount of uncertainty and risk. With this uncertainty mounting, and due to the probable impact on global sourcing, there is an urgent need for these logistics and supply chain professionals to have a more comprehensive understanding of current and potential developments in international trade.

Sourcing diversification is an intelligent and proactive approach for businesses looking to escape this "new normal" and achieve a more consistent supply chain performance. While diversification may increase the sum of transaction costs, the reduced exposure to disruptions, both natural and man-made, far outweigh the short-term increases.

Utilizing global trade content — solutions providing the latest import and export data down to the bill of lading parties, to databases for international trade regulations, rulings and duties — can help businesses gain more visibility and confidence in their trade operations while also remaining vital for identifying potential new suppliers.



The Right Solution

As businesses are looking at changing tariffs and weighing the cost and benefits of diversifying their suppliers, using Descartes Datamyne™, powered by the worlds largest searchable trade database of over 230 markets across 5 continents, to get an accurate baseline of trade and identify these new sourcing options is one way for organizations to work smarter.

Datamyne offers access to global trade data including:

- U.S. Bill of Lading Import and Export Data Available from U.S. Customs and Border Protection's (CPB) Automated Commercial Environment. This waterborne shipment data is available shortly after shipment.
- International Import & Export Databases Available for 57 countries outside of the U.S. including Latin America, the European Union, and China.

Descartes Datamyne is also now offering our import and export data in a new, summarized format. Descartes Lead Generator™ is accessed through Microsoft Power BI™ and allows users to rapidly drill down into the trade data and gain actionable insight without combing through detailed bill of lading records.

Descartes Global Trade Content Solutions unite systems and people with the trade information they need to help power international supply chains. **Request a demo** to get started.

About Descartes Datamyne

With a comprehensive database of accurate, up-to-date import-export information, Descartes Datamyne delivers actionable intelligence for market research, sales insight, supply chain management, enhanced security and competitive strategy. The solution is powered by the world's largest searchable trade database, covering the global commerce of 230 markets across 5 continents.

Manufacturers, shippers wholesalers, transport and logistics service providers, management consultants, legal practitioners, industry analysts and more use our exceptionally accurate and granular data to initiate growth strategies, explore new markets, benchmark performance, monitor commodity volumes and values, simplify trade data research, discover buyer seller relationships and refine sourcing strategies.

Discover more at www.Datamyne.com.

About Descartes

Descartes (Nasdaq:DSGX) (TSX:DSG) is the global leader in providing on-demand, software-as-a-service solutions focused on improving the productivity, performance and security of logistics-intensive businesses.

Customers use our modular, software-as-a-service solutions to route, schedule, track and measure delivery resources; plan, allocate and execute shipments; rate, audit and pay transportation invoices; access global trade data; file customs and security documents for imports and exports; and complete numerous other logistics processes by participating in the world's largest, collaborative multimodal logistics community.

Our headquarters are in Waterloo, Ontario, Canada and we have offices and partners around the world.

Learn more at www.Descartes.com, and connect with us on LinkedIn and Twitter.

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