A Tariff Avoidance Strategy for US Manufacturers

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Abstract

This white paper outlines a tariff avoidance strategy for U.S. manufacturers facing rising import duties on Chinese and other finished goods, highlighting how traditional outsourcing of finished products is no longer viable. Instead, it proposes sourcing low-cost components from countries such as Vietnam, Indonesia, and Mexico, while performing final assembly and customization within the U.S., or other in-market plants abroad, to reduce tariff exposure and strengthen competitiveness.

This white paper discusses how, by leveraging intelligent-agent based platforms such as SmartOps24x7 and WIPtracker, manufacturers can coordinate multi-plant global operations, optimize supply chains, and route production dynamically to minimize costs and risks. Beyond tariff relief, these in-market manufacturing strategies provide added benefits, including supply chain resilience, faster time-to-market, regulatory compliance, and stronger local market acceptance.

This white paper emphasizes that, with modern AI-driven coordination tools, strategies that were infeasible during the Great Depression are now practical, allowing manufacturers to remain profitable and resilient in an era of geopolitical and trade uncertainty.

Problem

It used to be simple. You outsourced the making of your products to a Chinese manufacturer, who shipped your products in freight containers to the USA, where, at most, you had to relabel and repackage your products for the US market. And, in many cases, the Chinese manufacturer would do this for you.

Then, along came tariffs on Chinese manufactured goods, which are currently 30% for the most part (although this could change before I finish writing this white paper.) For many goods, this made the strategy of importing finished goods from China uneconomical, especially with the end of tax-free imports of de minimis packages under $800 value.

Solution

For most goods sold in the USA, it is not economically feasible to move all the manufacturing steps to the USA, with shop-floor labor rates exceeding $25/hour, versus $2/hour for Mexico and less than a dollar an hour for places like Vietnam or Indonesia.

What does make sense is to import low-cost components from these low wage countries and then do final assembly or production here in the USA.

A simple example to think about is something like high end sneakers, which probably cost about $10 a pair to make in Indonesia and so carry low dollar cost tariffs at point of import into the USA, even with 50% tariffs. But add a trademark logo, which is made in the USA, and put them in a fancy box and you have an item that can sell at retail for $200 in the USA, with minimal impact of tariffs on the overall cost.

Another example might be a smart electronic controller for furnaces. The components, such as circuit boards can be sourced inexpensively from Vietnam and the metal cases and other such components from Mexico. Again, the cost of outsourced components is low, as are the tariffs paid. But add a US made microcontroller chip to the board and add some US designed software and you can sell this controller for hundreds of dollars in the USA.

Even better, you can license your own software from your Irish or Isle of Mann subsidiary, which holds your intellectual property, and, as a result, reduce your US tax burden by increasing your cost of goods sold in the USA while transferring cash to a low cost tax haven.

But what about products made for export? These are often subject to reciprocal tariffs when exported into foreign markets. In most cases, it is more economical for US Manufacturers to make products for export markets overseas, thus avoiding both US import tariffs on components and reciprocal tariffs on finished products altogether, as well as being able to use lower cost final assembly labor. Which is why, we are increasingly seeing more US manufacturers adopt an in-market manufacturing strategy.

In such a strategy, a US manufacturer would have, for example, a US plant co-located with a headquarters staff in the USA plus a plant in Mexico, for the South American market, and a plant in eastern Europe for the EU market. Each plant would be producing essentially the same set of products, with probably the same supply chains, while minimizing the tariff burdens, both from the USA and other countries.

Technology

In such an arrangement, US Manufacturers could allow each plant to run independently with its own front-office staff but this is very expensive and makes tariff avoidance coordination very difficult.

I would like to suggest that it is much more efficient to:

1. Use an operations tracking and control system like WIPtracker to remotely monitor and control the flow of jobs in each plant by the HQ staff
2. To use an intelligent-agent system like SmartOps24x7 to convert an incoming flow of customer orders to work orders and ship orders, which are then routed automatically to the most appropriate plant, to minimize tariff and other costs.
3. To centralize supply chain management, again using something like SmartOps24x7, with shipments from suppliers routed to each of the in-market plants, again to minimize tariffs and other costs but retain volume purchase discounts.

Managing all of this is very complex but is feasible at modest cost with intelligent-agent based software, such as SmartOps24x7, to do much of the "intelligent grunt work" required.

Analyses show that such a strategy can result in substantial cost savings, which can result in much higher profits, at lower risk, than even the old pre-tariff "just buy it from China" strategy.

Please see www.SmartOpsMgt.com for details of the WIPtracker and SmartOps24x7 technologies.

Other Benefits

While in-market manufacturing with multiple plants, located in different markets, is more complex, there are many other benefits to in-market manufacturing, besides avoiding the impact of tariffs, including:

1. Supply Chain Resilience

- Shorter logistics chains: Less dependence on long ocean or air freight routes that can be disrupted.
- Reduced risk: Fewer problems from port congestion, trade wars, sanctions, or geopolitical shocks.
- Faster recovery: Easier to ramp production back up after disruptions (pandemics, natural disasters).

2. Speed and Responsiveness

- Faster time-to-market: Goods reach customers more quickly.
- Just-in-time capability: Closer plants allow smaller inventories, quicker replenishment.
- Customization: Easier to adapt products for local tastes, regulations, and standards.

3. Market Access and Local Acceptance

- Made here advantage: Boosts local goodwill and national brand strength.
- Regulatory alignment: Easier compliance with safety, labeling, and sourcing laws.

- Government incentives: Many countries (including the U.S., Canada, EU) give tax credits, grants, or subsidies to local producers.

Is this more complex? Yes. But it can also result in much more robust supply chains, with alternate suppliers for critical parts, and even alternate production facilities, if needed, rather than relying on a single source from an increasingly belligerent China.

Postscript

In the great depression, the US went from a 3.3% unemployment rate in 1929 to a 25% unemployment rate by 1933, primarily as a result of the imposition of draconian tariffs of up to 59% on some goods, with an average rate of 20% (as some goods were exempt). As a result, primarily from the effect of counter-tariffs, US exports dropped about 61% between 1929 and 1933. This was catastrophic as 25% of the US work force was employed in manufacturing in 1929 and over 60% of manufacturing output was for export.

Because we did not have the Internet back then, or AI based software, using a coordinated in-market manufacturing strategy was not feasible back then. As a result, many manufacturing plants simply closed, with many people becoming structurally unemployed until the onset of WWII.

Today, such coordinated in-market manufacturing strategies are employed by large, multi-national organizations. But, with available technology, coordination between groups of locally owned plants has become feasible, sharing and controlling the making of customer orders in the most advantageous locale.

One interesting factoid: employment in manufacturing in the USA in 1929 was about 12 million people, the same as today. But the total pool of workers was just 51 million back then as opposed to 170 million today. So, the effect of a drop in manufacturing employment is less much catastrophic today than it was back then. What has not changed, however, is the fact that the loss of every manufacturing job results in about 3.4 other jobs being lost due to plant closures and the loss of needed support services for those plants and their employees.

Also: the US Bureau of Labor Statistics (BLS) reports several unemployment numbers. U3 which is just those people drawing unemployment compensation and U6 which includes workers who have exhausted their employment insurance, which typically lasts a year, but are still seeking jobs. Neither include Gig workers who have given up looking for a job and now do whatever short-term work is available, with no job security.

Currently, in August 2024 the BLS U3 number for the USA was 4.3% and the U6 number was 8%. The U3 number is what politicians always tote at the headline unemployment rate. But people only stay in the U3 count for a year and so it can remain fairly low, in the face of ongoing, rising unemployment, such as we saw in the period from 1931 to 1934, when there was no unemployment insurance. Also, if we add in Gig workers, the number of unemployed and underemployed people went to about 24.7% of the total available working population in the USA, in 2024, according to ShadowStats.com. So, we do not have low unemployment, even now, despite protestations to the contrary by our political class.

Author

This white paper was written by Dr. Peter Green, who serves as the Technical Director of a number of software companies. Dr. Green also consults to manufacturing companies on the application of real-time intelligent-agent systems to improve their manufacturing and supply chain operations.

Dr. Green obtained his BSC (Hons) in Electrical Engineering and his Ph.D. Degrees in Electronics and Computer Science from Leeds University in England. Subsequently Dr. Green was a senior member of technical staff at Massachusetts Institute of Technology and a Professor of Computer Engineering at Worcester Polytechnic Institute.

Dr Green is a Systems Architect who is an expert in using real-time artificial intelligence methods to implementing real-time operations tracking and management systems for industrial organizations. He has led the implementation of over 100 such systems over the past decade. Dr Green also led the team which developed the SmartOps24x7 real-time intelligent-agent software platform and the BellHawk operations tracking software.

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