

The New Supply Chain World Order



Are you ready?

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ASCM-MM-NH-NNE Professional Dvpt Meeting

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Summary

The New Supply Chain World order is here - Are we ready?

Tectonic shifts are taking place in the global supply chain and the new world order is emerging at a furious pace. The foundations of this shift were laid by the previous administration with the Tariff wars followed by the Virus war and the pandemic. Now huge supply chain risks are showing up from the global sanctions on Russia. The World was facing potential conflicts from Russia-Ukraine and China trying to control Taiwan and its global monopoly on Semi-conductor manufacturing.

Although all voices are shouting near-shoring and re-shoring of the US supply chain, supply chains are global, and they face complex demand-supply realities and alignments. In the presentation, I will discuss the realities facing the supply chains and what US manufacturers need to do to address risks - rising costs in China, surge in transportation costs, commodity price inflation and the new Oil shock.

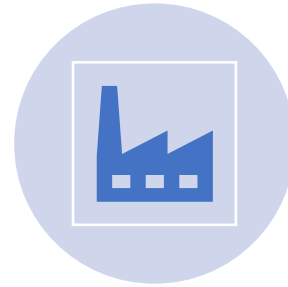
The World we know

Own the IP – Outsource the sweat –
Enjoy the Profits

The Global Comfort Zone – Circa 2000



Specialize in innovation
and create IP



Outsource Production to
the East



Orchestrate an efficient
supply chain to distribute
products



Enjoy Super profits

Challenges started to emerge...

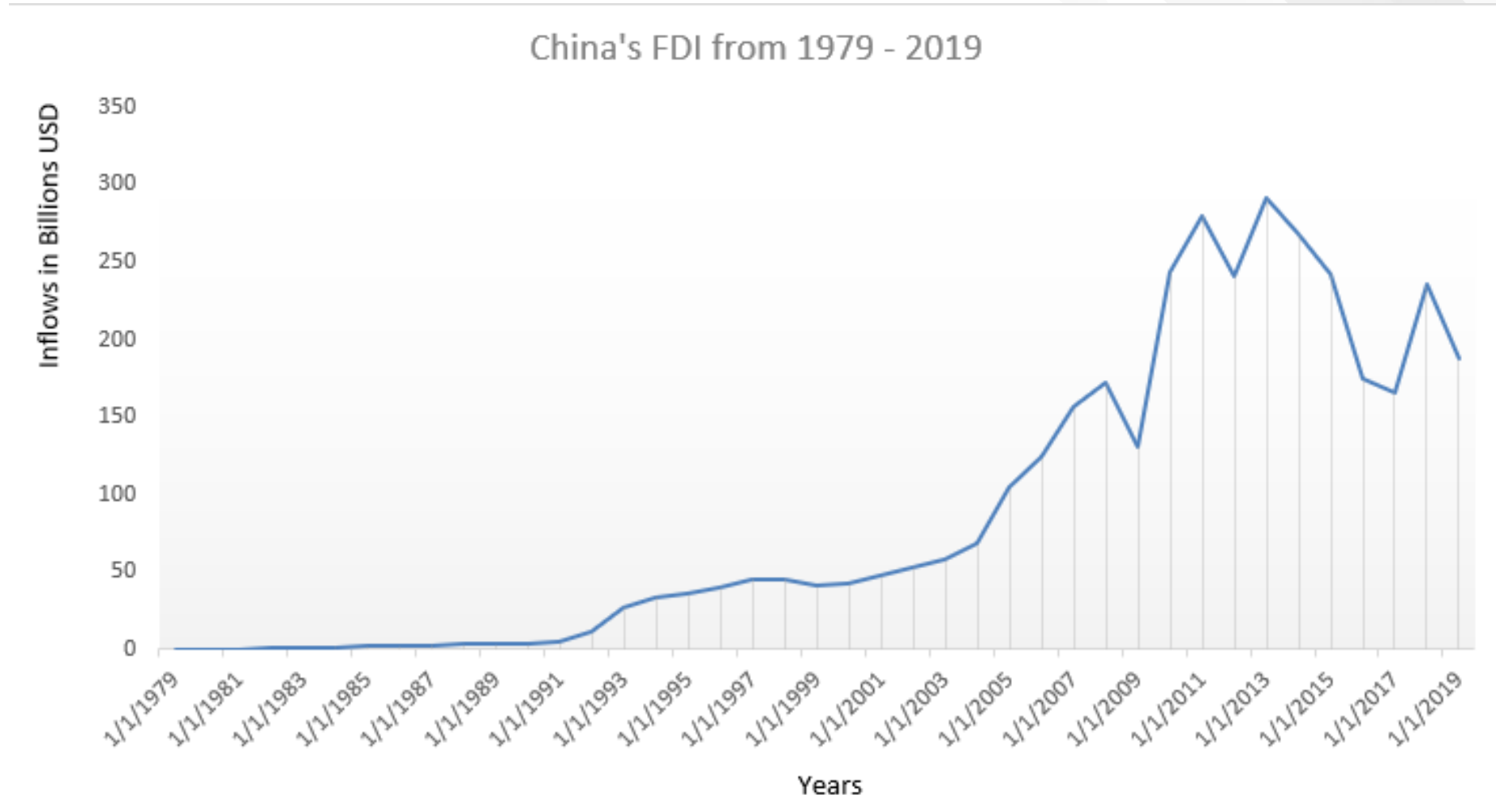
Offsetting cost factors

- Higher Inventory costs due to longer lead times
- Transportation and Logistics Costs
- Obsolescence

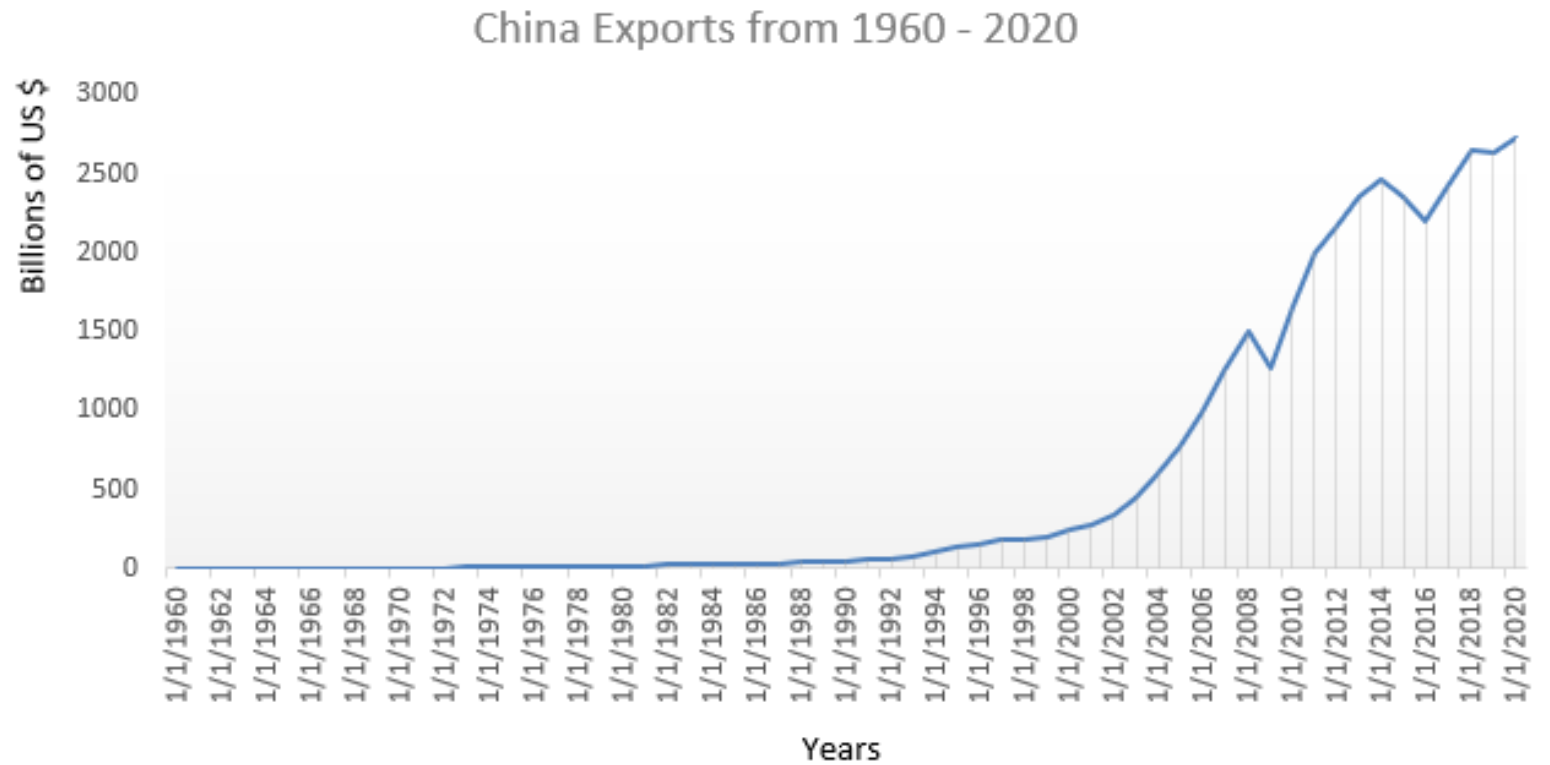
Competitive landscape

- China/Vietnam/India started to monopolize in specialized manufacturing – IP in manufacturing
- Access to Rare Materials and Minerals
- Rising Costs

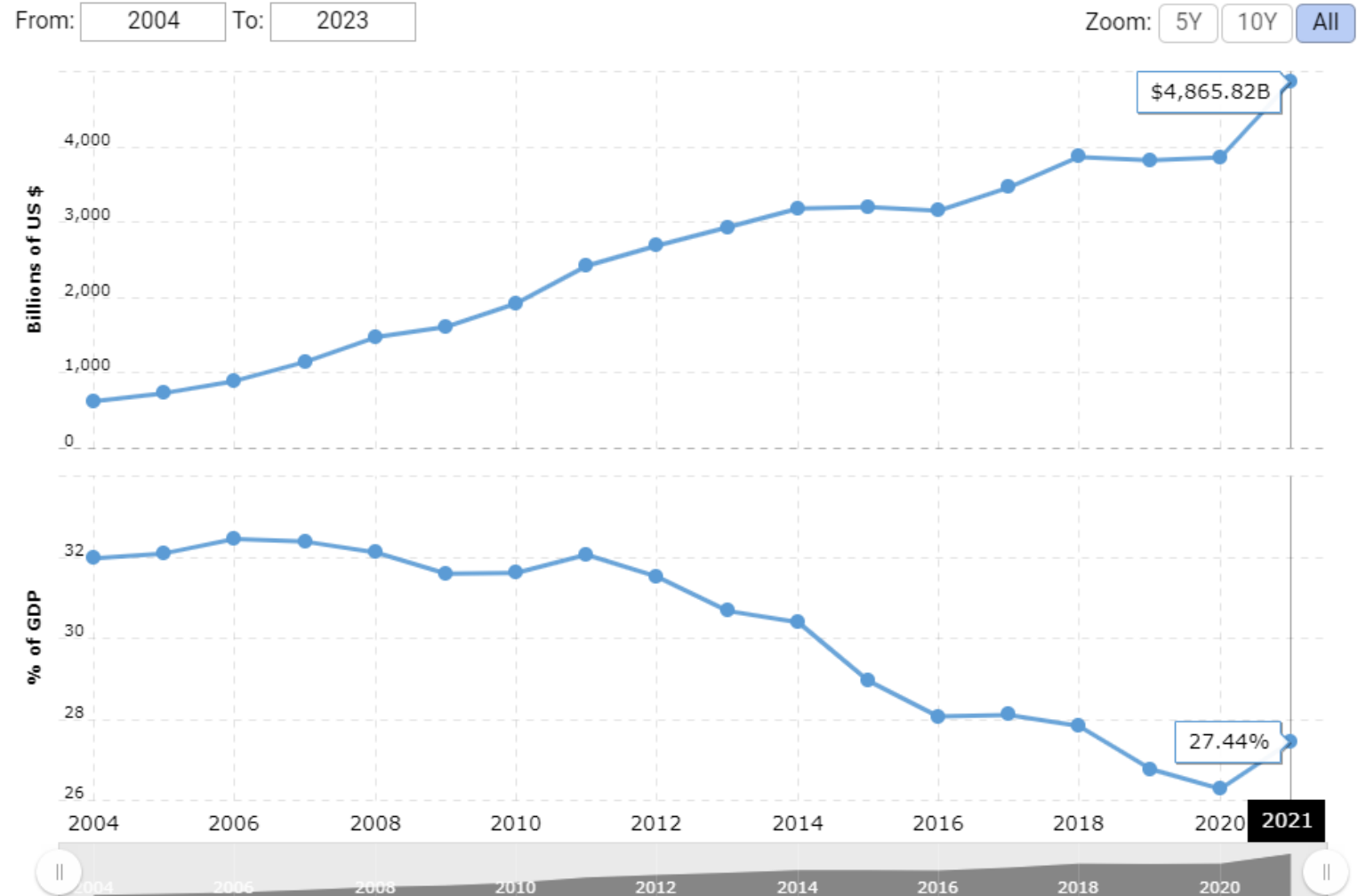
China FDI Inflow from 1979 to 2019



China Exports since the 1960s



China Manufacturing Output 2004 to 2021



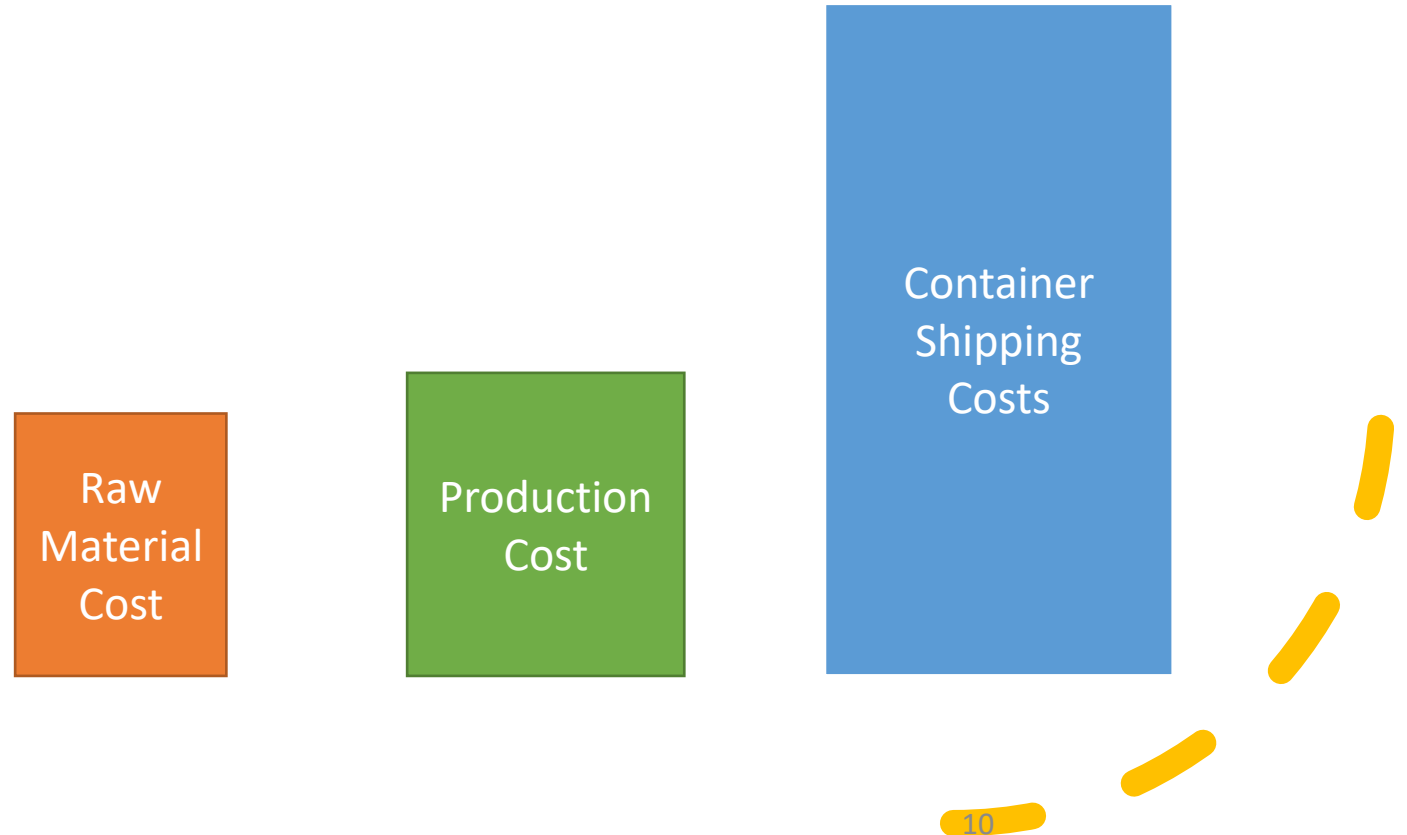
An abstract, glowing, irregular shape with a dark blue center and a bright magenta/pink outer ring, resembling a nebula or a stylized planet, set against a black background.

Tectonic shifts

The New emerging World Order

Enter the Corona Virus

- Global Shortage of People (to work) and Products (to purchase)
- Spike in Demand from economies juiced up by “free money”
- Acute shortage of Semi-conductors
- Total landed cost of the extended global chain spiked up



Russia-Ukraine Earthquake

The Ukrain-Russia conflict of 2022 has emerged as an even bigger threat to the globalized supply Chain

Sanctions on Russia starting to strain supply chains – Shortage and price spikes in commodities, oil and Natural Gas

Russia is tiny

- GDP 1.5T
- Population 147 Million

The Emerging World Order

- ❖ Is this the new Axis of “Just say No” Leaders?
 - ❖ China now pretty much has a premier for life – an Emperor of Sorts
 - ❖ Russia has been more or less a dictatorship
 - ❖ India is not Much different – the current PM may be for life
 - ❖ India, the largest democracy, had decided to be non-aligned
 - ❖ Freely imports Russian Oil and Gas and re-exports refined oil to Europe!!
 - ❖ Saudi is joining this new Axis with its crown Prince aligning with China
- ❖ Together these economies have 3B people and half of the working population – under regimes which are not stellar examples of democracy
- ❖ China has secret ambitions to unseat the US Dollar as the reserve currency
- ❖ Sanctions to freeze all sovereign deposits of Russia – is a new policy move that will strain international trade and economics for many years to come

Can we In-shore manufacturing to the
US?

In-shoring vs Near-Shoring vs Re-shoring

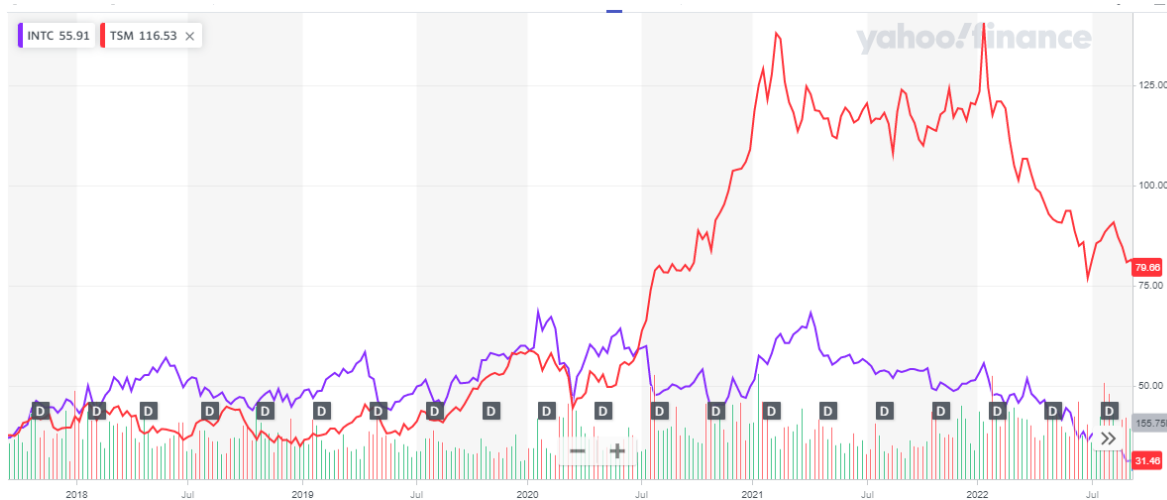
Re-shoring and In-shoring

- Although we hate to say it, we should be prepared to be self-dependent. If US Dollar is not needed for reserves, there may be no interest in selling cheap goods to the United States
 - Growing tomatoes in my garden may be cheaper than Market Basket
 - We may have to make our own gadgets, cars and essentials – resulting in escalating COGS and higher inflation
 - Robotics-aided manufacturing
- In the near-term, we need to consider re-shoring and near-shoring
 - Countries with manufacturing capabilities and infrastructure
 - Logistically possible and economically feasible

United States by the Numbers

Manufacturing Output (2019)	\$6 Trillion
Amount US companies invested in China	\$260 B
Intel – the lone US Chip Foundry	Taiwan Semi outperforms Intel in every aspect

Country	Nominal GDP (in trillions)
United States	\$23.0
China	\$17.7
Japan	\$4.9
Germany	\$4.2
United Kingdom	\$3.2
India	\$3.2



Vietnam, Thailand and India Re-shoring



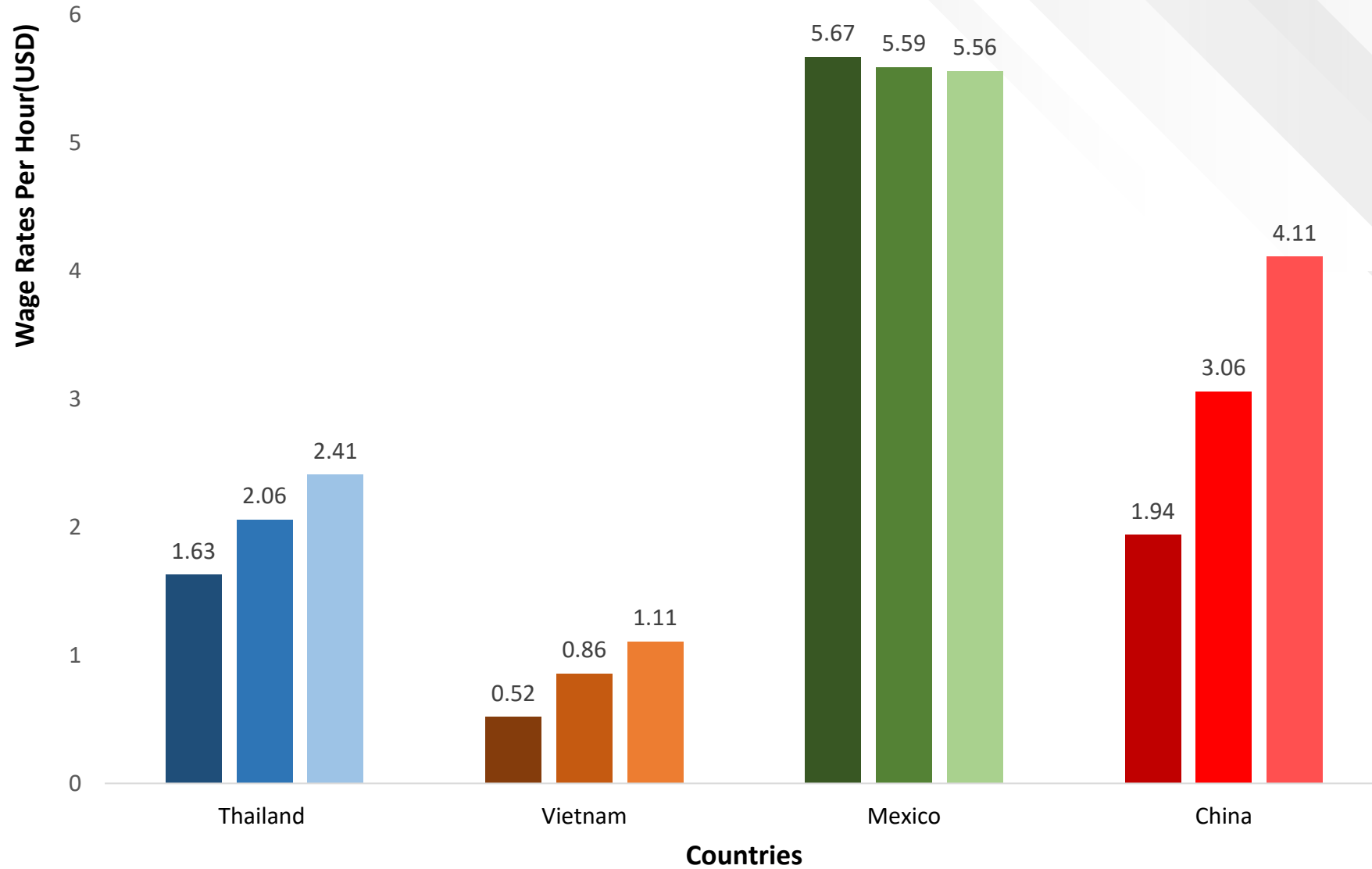
Labor costs in India and Thailand are a fraction of those in China

Vietnam has manufacturing competencies to rival those in China and better than what India can offer

India as an alternative with the new Make in India initiative.

Transportation and Logistics costs will remain as challenges

Change in Wage Rates Over the Years (2011,2016,2020)



Economics of Near-shoring

American Manufacturing

- Innovation in technology and Design
- Competitive in specific areas of manufacturing
- But lack people and working population – we are getting old!
- Robotics-aided automated manufacturing

Total cost structure will change

- Higher Labor cost but lower Transportation and logistics cost
- Optimized inventories

Mexico and South America

Labor rates in Mexico have stagnated and are almost at par with China

Cheaper energy is available from the US and Canada

Most goods can be trucked into the US within a two day lead time

The Free trade agreement makes it easier to locate and source for US consumption

Maquiladoras allow just in time manufacturing for US assembly

Quo Vadis?

Off-
Shoring

Re-
Shoring

Near-
Shoring

Back in
the USA!

Summary

We have arrived at the fork in the road.

Need to seriously consider Re-shoring, Near-shoring and In-shoring

The New world order demands that we take these challenges very seriously and pro-actively plan for the new century!

Demand Planning LLC

- A boutique firm
- Founded in 2004
- USA, India, Southeast Asia

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ABOUT US

Valtitude based in Boston, MA, is a business process and strategy consultancy that specializes in Sales Forecasting, Sales and Operations Planning and Supply Chain Transformation. We have helped a variety of businesses across several industry verticals to improve their planning process and create value through demand analysis and diagnostics, process re-design, solutions implementation, and customized on-site training.



Strategic Consulting

- ✓ Demand Planning and Sales Forecasting
- ✓ Sales & Operations planning (S&OP)
- ✓ Inventory Optimization
- ✓ Supply and Replenishment Planning
- ✓ Supply Chain Optimization



Technology Implementation

- ✓ Usability Consulting to re-engineer SCM Solutions
- ✓ Implementation of Advanced Planning Solutions
- ✓ Deep Expertise in SCM applications
- ✓ Built Custom Software for SMB Clients to meet their unique needs

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