Reshoring Initiative®
IH 2022 Data Report

Multiple Supply Chain Risks Accelerate Reshoring

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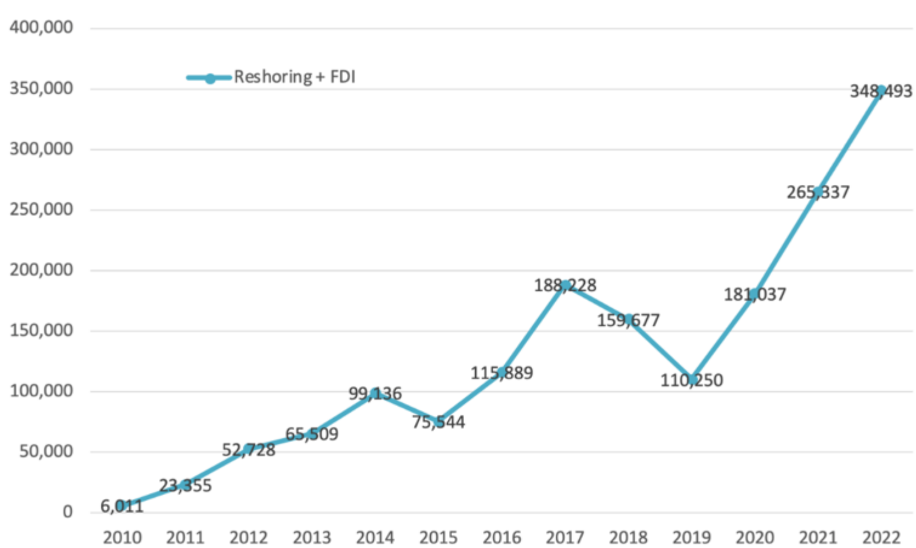
Shifting Forces Continue to Drive Reshoring Higher

Executive Summary

In 2021 the private and federal push for domestic supply of essential goods propelled reshoring and foreign direct investment (FDI) job announcements to a record high. Reshoring Initiative 1H 2022 data shows reshoring and FDI continuing these gains. The current 2022 projection of jobs announced is around **350,000** - another record, up from 260,000 in 2021. If the projection is achieved, 2022 will bring the total **jobs announced since 2010** to **over 1.6 million.** Supply chain gaps and the need for greater self-sufficiency continue as major factors driving reshoring. The possibility of a Taiwan-China conflict and the threat of China decoupling are focusing those concerns. Destabilizing geopolitical and climate forces have brought to light our vulnerabilities and the need to address them. Subsequently, great opportunities have arisen for a continued meaningful rebound of U.S. manufacturing. Continuing the current trajectory will reduce the deficit, add jobs, and make the U.S. safer, more self-reliant and resilient.

Exhibit 1a | **Job Announcements per Year, Reshoring + FDI, 2010 thru 2022-projected**



Data Index

This Report contains data[1] and analysis on trends in U.S. reshoring announcements by U.S. headquartered companies and FDI by foreign companies that are shifting production or sourcing from offshore to the U.S.

1. Manufacturing Job Announcements by Year
2. Shifts in Factor Trends
3. Industry
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7. 2H 2022 and On, Trends and Projections

1. Job Announcements by Year, Reshoring and FDI

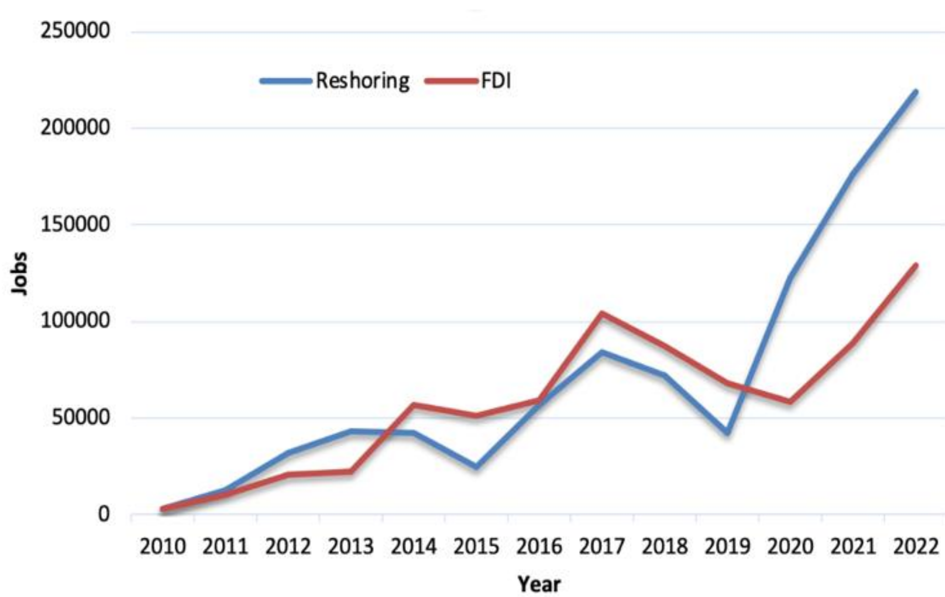
What started as a trickle in 2010 has become a torrent today. The strength of the trends in recent years is based on a combination of factors. Large announcements in 2021 were driven by government support for U.S. production of essential products. This support was driven by import shortages observed during the pandemic and by the dramatic increases in freight cost and delivery time. Other important forces included increased recognition of the total cost of offshoring and rising concern over U.S. dependency on China.

[1] The data for all reports comes from the Reshoring Initiative's Reshoring Library of over 8,000 published articles, privately submitted Reshoring Case Studies, and some other privately documented cases. Reshoring and FDI are both motivated by the same logic: the financial advantages the company achieves by producing near the customer.
Cases must refer to a specific company, product and location to be included. Job numbers are assigned to the year in which the numbers are first announced and can include current hiring, recent prior years 'hiring and future hiring. We estimate that actual hiring lags, on average, 12 to 24 months behind the announcements, i.e. occurs one to two calendar years later.
We include work brought to an OEM's assembly plant and work newly outsourced to the domestic supply chain. The supply chain often receives more jobs than the assembly plant.
Job and company numbers are first tabulated and then adjusted for under-reporting, especially in the domestic supply chain. More information on our calculation process is available on request. Total job and company count varies from chart to chart since we do not have data for all chart topics from all cases.

For the third year in a row, reshoring outpaced foreign direct investment (FDI). FDI did set an all-time record in 2022 as a result of large companies making huge investments in EV batteries. There are many cases of joint ventures between domestic and foreign companies. In such cases, jobs are distributed 50/50 between reshoring and FDI. The high rate of reshoring vs. FDI also indicates that U.S. headquartered companies are starting to understand the same benefit to localized production that many foreign companies have understood over the last decade.

Exhibit 1b | **Job Announcements, Projection for 2022, Based on 1H 2022**				
	Projected Jobs	**Projected Com-panies**	**Jobs %**	**2021 Jobs %**
Reshoring	219,283	1,156	63%	67%
FDI	129,210	552	37%	33%
R + FDI	348,493	1,708	100%	100%

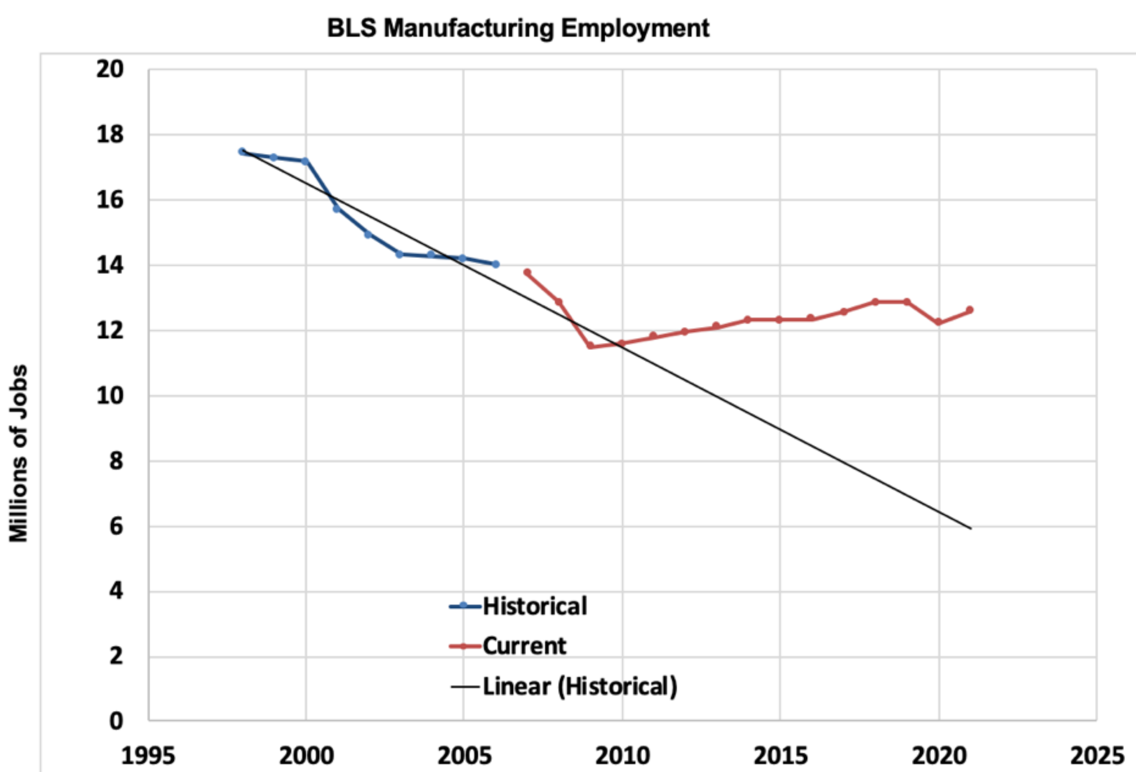
Exhibit 1b | **Job Announcements per Year, Reshoring vs. FDI, 2010 thru 2022-projected**



The second quarter was a little slower than the first, but still at a rate higher than anything we've seen prior to 2022.

The historically strong surge in manufacturing employment for the last decade reflects the impact of a slowing rate of offshoring and a rapidly growing rate of reshoring and FDI. December 31, 2021, employment is about 6 million higher than would have been forecast in 2006 before the Great Recession (Exhibit 1c).

Exhibit 1c | Historical Projection if Offshoring Trend Had Continued



Reshoring is exceeding FDI in job creation for the third year in a row.


2. Factors

This data demonstrates which factors are influencing reshoring decisions now. The top 3 factors from 2010 to 2022 are still in the top 4, joined by Supply Chain Risks. The factors that are currently down were some of the top factors before the pandemic. Previously, presently and in the long run they are still important factors, but are understandably overshadowed by the most pressing issues of the day: supply chain problems and risks.

Exhibit 2	Shifts in Top Factor Trends from 2021 to 2022				
Factors trending up	**% up**	**Factors trending down**	**% down**	**Top factors, all maintaining high ranking over both years**	**Overall ranking**
Social/ethical concerns	700%	Tariffs	-82%	Government Incentives	1
Walmart	700%	Total cost	-81%	Skilled workforce availability/training	2
Inventory	300%	Lead time/Time to market	-70%	Supply chain interruption risk/Natural disaster risk/Political instability	3
U.S. price of natural gas/chemicals/electricity	300%	Impact on domestic economy	-56%	Proximity to customers/market	3
Freight cost	129%	Under-utilized capacity	-54%	Eco-system synergies	5
Automation	107%	Quality/rework/warranty	-22%	Infrastructure	6
Manufacturing/engineering joint innovation (R&D)	59%				
Green considerations	32%				

Notes on Factors trending up:

- **Social/ethical concerns** - Primarily due to human rights and labor violations in China and the focus on ESG.
- **Walmart** - Up as a result of their new $350 Billion Made in America Initiative.
- **Inventory** – This one is probably being cited most often in reference to a "lack of" inventory due to backups in the supply chain. Earlier it meant "too much" inventory due to long deliveries.
- **Freight costs** – Rising exponentially due to fuel prices, pandemic shutdowns and labor shortage.
- **Automation** – Best corporate tool to balance higher U.S. labor costs.
- **Manufacturing/engineering joint innovation (R&D)** – Often highlighted because of the focus on high tech and a greater awareness of not losing IP to offshore production.
- **Green considerations** – Obviously related to the climate crisis, and a growing proclivity towards sustainability. Again, ESG.

Notes on Factors trending down:

- **Tariffs**, **Total cost** and **Quality** - These are in our list of "negative" offshore factors. Reshoring from China has gone down, which would partly explain the decrease in these factors.
- **Lead time/time to market** - This is still a huge factor, but we think it is being reported more often as, "Supply chain" problems.
- **Underutilized capacity** – There was a strong trend of reclaiming underutilized capacity over the past few years, so naturally over time there is less of it to reclaim.

Notes on top Factors maintaining high rank:

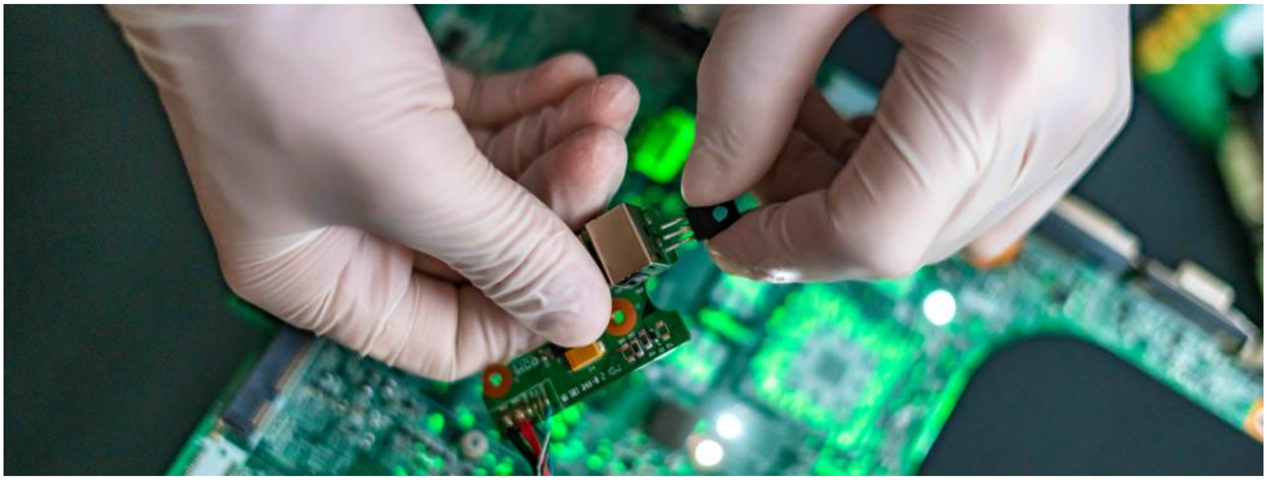
These factors highlight and summarize the core issues:

- **Government Incentives** - Helps cost feasibility, but also highlights the underlying problem of lack of competitiveness. With proper industrial policy, companies should not need subsidies, but for the moment they are beneficial to revive the industrial base.

- **Skilled workforce/availability** - Number one barrier and also enabler to successful reshoring. See more here and here.

1. **Supply chain interruption risk, Proximity to customers/market** and **Eco-system synergies-** All of these encompass the cost benefits of local sourcing.

- **Infrastructure** - Traditionally perceived as a benefit of U.S. production and has recently garnered extra attention from the new infrastructure bill.



3. Reshoring + FDI by Industry[2]

Historically, the most active reshoring is by those industries that left because of companies not doing the math correctly, including machinery, transportation equipment and appliances. More recently, activity has shifted to include more essential products which the U.S. government should have recognized as too essential to rely so heavily on imports, including electric batteries, semiconductors, PPE, pharmaceuticals and rare earths.

Electric vehicle batteries are the most active product to be reshored/FDI'd in 2022. Since they were categorized with the NAICS code of Electrical Equipment, that category has usurped the number one ranking from Transportation equipment, even though it still applies to the transportation industry. Transportation equipment (mainly cars) was previously driven by FDI and has slowed with FDI since the pandemic and chip shortages. The investment in batteries is booming, in the attempt to obtain needed supply and not be dependent on Asian, especially Chinese, imports. Electrical equipment's share of jobs announced went from 3% in 2019 to 37% in 2022.

The second largest industry in 2020 is chemicals, driven by both pharmaceuticals, specifically the need for vaccines and COVID-19 treatments, and by renewable fuels like Hydrogen.

[2] The table is sorted by industry, as defined by three-digit NAICs code. We also break out several active industries at the four and five-digit levels. To get complete data at the three-digit level, add these industries into the relevant three-digit category.

Transportation equipment is in third place. In fourth place, Computer and Electronic Products continues to grow, pushed in recent years by solar panels, robotics, drones and most recently, semiconductors. Semiconductors, in particular, are going to require guaranteed buying contracts in order to succeed over the long run.

Exhibit 3 | Jobs by Top 10 Industries by Year												
2022					2021					2019 (pre-pandemic)		
Rank by 2022 jobs	Industry	Jobs	Companies	% of jobs	Rank by 2021 jobs	Industry	Jobs	Companies	% of jobs	Jobs	Companies	% of jobs
1	Electrical Equipment, Appliances & Components	124,319	224	37%	1	Electrical Equipment, Appliances & Components	55,309	213	21%	3,630	56	3%
2	Chemicals	47,242	324	14%	2	Computer & Electronic Products	43,194	223	17%	15,161	124	14%
3	Transportation Equipment	47,077	212	14%	3	Chemicals	35,534	326	14%	11,313	121	11%
4	Computer & Electronic Products	30,196	182	9%	4	Transportation Equipment	30,372	187	12%	37,898	165	36%
5	Medical Equipment & Supplies	22,962	93	7%	5	Medical Equipment & Supplies	29,510	185	11%	3,975	17	4%
6	Fabricated Metal Products	13,788	52	4%	6	Machinery	24,235	71	9%	2,916	42	3%
7	Hobbies (subset of Miscellaneous)	9,823	22	3%	7	Food & Beverage	10,034	59	4%	1,689	23	2%
8	Castings/Foundries - Subset of Primary Metal Products	7,242	36	2%	8	Fabricated Metal Products	7,948	86	3%	5,534	71	5%
9	Primary Metal Products	6,271	58	2%	9	Primary Metal Products	5,936	71	2%	5,024	48	5%
10	Plastic & Rubber Products	6,112	88	2%	10	Furniture and Related Products	4,451	40	2%	3,531	40	3%

4. Reshoring + FDI by Technology Level[3]

It is generally agreed that manufacturing High-Tech products is more desirable than Low-Tech: more investment, more R&D, higher pay, less risk of loss to low wage countries, etc.

Currently, reshoring and FDI are continuing to add more High-Tech jobs than Low-Tech, again driven by the essential products push. This trend is important since the U.S. has a trade deficit in High-Tech products. Reshoring is stronger in High-Tech than is FDI which is stronger in Medium-High due to the high % of transportation equipment in FDI. The higher tech companies average more employees/company than do the lower tech companies.

We encourage the U.S. to become competitive on all tech levels to balance the trade deficit, be self-sufficient and employ a broader range of workers. High-Tech products represent too

[3] Tech level ratings are based on classifications derived from: https://www.oecd.org/sti/ind/48350231.pdf, and https://read.oecd-ilibrary.org/science-and-technology/revision-of-the-high-technology-sector-and-product-classification_134337307632#page1

small a percentage of our consumption to allow the U.S. or any country to produce only High-Tech. The challenge is to upskill our workforce so that more of them can work competitively on more highly automated production of lower tech products. The significant increase in High and Medium-High from 2010-2022 cumulative to 2021/2022 is due to the huge surge in EV batteries and semiconductors.

Exhibit 4 |	2022 Projected vs 2021, and Cumulative Product Technology Level %						
		Reshoring		FDI		Reshoring + FDI	
		Jobs	Companies	Jobs	Companies	Jobs	Companies
2022 Projected	**H+MH**	73%	60%	85%	64%	78%	62%
	ML+L	27%	40%	15%	36%	22%	38%
2021	**H+MH**	76%	59%	71%	59%	74%	59%
	ML+L	24%	41%	29%	41%	26%	41%
2010-2022 Cumulative	**H+MH**	68%	43%	69%	61%	68%	52%
	ML+L	32%	57%	31%	39%	32%	48%

5. Countries From: Reshoring and FDI

Korea had the most jobs announced due to a number of companies making large FDI investments in EV battery production.

China is the source of 44% of reshoring, cumulative 2010 to 2021. The rate of reshoring from China has been dropping over recent years. There are a number of possible reasons for this trend. One explanation is that the many jobs which have already reshored can't be reshored again. While it is true that the rate and percentage of jobs from China is going down, we suspect the overall actual number returning from China is actually much greater that what is reported. Cumulatively, only about 30% of reshoring cases report Country From. We see three main factors driving this reporting trend: 1.) historically, companies haven't wanted to report/advertise leaving China for fear of retaliation. 2.) rather than stating the country from, many cases simply refer to "Asia" or "returned from offshore." 3.) the U.S. factory is taking market share from imports from unspecified countries by other companies. Batteries, chips, PPE and rare earth minerals would typically fall under the latter category.

Exhibit 5 | 2022 Country From, Projected Jobs and Companies Reshoring + FDI, Top 10

Rank	Country	Jobs	Companies	% of total jobs
1	Korea	35,403	34	26%
2	Vietnam	22,500	2	17%
3	Japan	14,349	46	11%
4	Canada	13,671	40	10%
5	Germany	9,855	60	7%
6	China	8,985	46	7%
7	Netherlands	4,659	16	3%
8	India	4,620	10	3%
9	France	4,551	22	3%
10	Taiwan	4,500	8	3%

6. Reshoring + FDI Cases by State

Kentucky, North Carolina and Georgia take the top 3 spots, all having large EV battery investments. Texas has dropped from #1 in 2021 to #13. California has fallen out of the top 20.

Exhibit 6	Projected 2022 Jobs and Companies by State, Top 20		
Rank	State	Projected Jobs	Projected Cases
1	KY	45,900	44
2	NC	43,881	106
3	GA	32,885	51
4	OH	23,904	76
5	AL	17,178	53
6	MD	15,540	25
7	VA	14,942	53
8	WI	13,020	41
9	TN	12,884	67
10	MI	12,470	127
11	NY	12,313	58
12	SC	11,507	85
13	TX	10,643	87
14	IN	10,480	83
15	WV	10,065	34
16	AZ	8,283	62
17	KS	7,020	28
18	NM	6,900	14
19	AR	5,805	30
20	IL	5,070	17

7. 2022 and on, Trends and Projections

Newest developments

Uyghur Forced Labor Prevention Act
Previous law required companies to take reasonable care to avoid products produced with forced labor. The Act requires companies to prove that products from Xinjiang province were not produced with forced labor.

More attention to near-shoring, right-shoring, friend-shoring, allied-shoring
Reshoring should always be the country's first choice if the U.S. is sufficiently competitive. For some products, the components and skills are not available here or labor costs are not able to be overcome by automation. Near, right, friend and allied shoring are all better alternatives to work being done far away or by adversaries. To the extent that the government is involved, choice of shores should be based primarily on U.S. self-interest and not be a means of country building or advancing democracy.

Exports from Mexico to the U.S. have 40% U.S. content whereas exports from China have only 5% U.S. content. Transportation equipment and appliances nearshore the most. More companies nearshore to Mexico than to Canada due to greater cost advantage.

Infrastructure Bill

Much of the $550 billion in the Bill is probably needed. However, we believe that investing in our industrial infrastructure, factories, machines, robots, etc. would make a larger impact on U.S. cost competitiveness and thus on reshoring.

CHIPS Act

Ideally, industries and companies should not need to be subsidized to reshore. A well-designed, permanent, industrial policy would level the playing field enough that the companies would decide to reshore in their own self-interest. In the short-term it is necessary to select and subsidize specific critical industries such as chips. In the longer-run the subsidized industries will fail if their manufacturing costs are not competitive and they do not find a growing domestic market. In a few years there will be an oversupply of chips since so many foundries have been announced worldwide. The U.S. is at risk of going from being dependent on China and Taiwan for chips to being dependent on China to buy our overpriced chips to assemble into infotainment systems, medical devices and servers to ship to us. The solution is to level the broad industrial playing field, to have a tide that lifts all, or most, U.S. industries.

Shift in Wall Street

Wall Street's focus on short-term profits was a major force driving offshoring for the last 40 years. Major banks, financial institutions and private equity companies are now sensing the rewards of reshoring. The Initiative is working with several to help them identify firms with opportunities for outsize gains by selling or buying smarter.

General Summary

There are many reasons to be optimistic. The virus 'lesson about the country's lack of self-sufficiency will continue to spur growth in local sourcing. Survey results showed a surge in reshoring plans in 2021, subject to the insights and emotions of the pandemic, and have continued in 2022. Training a skilled workforce to fill the new positions will be a challenge and barrier to further growth. To meet this challenge, companies, trade associations and states have been ramping up training programs.

While the upward trend is sustaining momentum now, at some point companies will become more focused on fulfilling the giant commitments already made before announcing more.

Below are some factors that will impact 2022-2023 relative to 2021.

Forces likely to slow reshoring and FDI:

1. **Disrupted supply chains** - Causing lack of availability of components.
2. **Continued workforce shortages –** Companies won't be able to fulfil their job announcements if there is no skilled labor force to hire.

3. **Continued increase in industrial capabilities in SE Asia and Mexico -** Attracting work that would otherwise come back to the U.S.
4. **U.S. inflation rate higher than in other countries** - Further reducing competitiveness.
5. **Higher USD** - Also reducing competitiveness.

Forces likely to help reshoring and FDI:

1. **Government actions to reduce national dependence on imports of key products** - This effort is starting aggressively with medical products, chips, rare earth minerals, EV batteries, etc. to fill in current supply chain gaps. President Biden is highly prioritizing reshoring, applying different methods than President Trump.
2. **Risk of aggressive "decoupling" by China.** As tensions grow over Taiwan and any Chinese support of Russia in Ukraine, the probability of an abrupt termination of shipments of a broad range of products increases.
3. **Russian/Ukrainian war.** Nickel, argon and neon are a few of the materials whose supply is severely disrupted by the war. Equally important, companies can now better appreciate the possible impact of geo-politics.
4. **Continued growth in efforts by MEPs (Manufacturing Extension Partnerships), EDOs (economic development organizations) and states to enable reshoring** - The Reshoring Initiative has key tools for such efforts.
5. **Environmental, Social and Governance (ESG) trend:**
   b. **Corporate responsibility expands** The Business Roundtable's August 2019 Statement on the Purpose of a Corporation expanded the definition of stakeholders from just shareholders to now include employees, suppliers and community. We anticipate companies will recognize that reshoring is the most effective and least expensive way to fulfill their commitments. Companies can strengthen the three new stakeholder constituencies while increasing the return to shareholders if they do the math correctly.
   c. **Climate crisis and increasing environmental consciousness** - Domestic supply chains are more transparent than offshore and less polluting, cutting the world's environmental impact by up to 25%, depending on the product. Sustainability practices will continue to increase as a corporate strategy and will help drive reshoring and FDI.

6. **Continued increases in usage of TCO (Total Cost of Ownership)** instead of price in making sourcing decisions. Universal TCO usage, alone, would reshore about 1.5 million jobs.
7. **Continued improvement in skilled workforce programs** The biggest challenge will be bolstering our skilled workforce, which is not adequate to support a much higher rate of reshoring. There are signs of positive change. Awareness of the problem is growing, Perceptions of manufacturing jobs are improving, more companies and governments are adding programs.
8. **Automation, IoT, Industry 4.0, AI shrinking the unit labor cost gap**

Ambiguous:

1. **Higher interest rates** - Has raised the value of the USD and the financing cost of automation (headwinds) but will surely increase the carrying cost of inventory (tailwind), which is increased by offshoring.
2. **Possible actions on tariffs, trade with China, etc.** - Likely to be long-term favorable but temporarily disruptive.
3. **Oil prices and environmental regulations -** Higher oil prices increase freight costs and tend to make U.S. shale gas more of an advantage for making plastics and for having competitive electricity rates.
4. **Biden administration policy -** Has placed a high priority on reshoring. Tends to apply tourniquets and Band-Aids to high profile problems, rather than systematically attacking the underlying problem: lack of cost/price competitiveness, which could be more directly dealt with by massive skilled workforce investment, 20% lower USD and adding a VAT.

Conclusion

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The rate of reshoring plus FDI job announcements in 1H 2022 was up 31% from 2021 and almost 6000% from the 2010 rate. The resulting cumulative 950,000 incremental hires represent about 7% of U.S. manufacturing employment. The acceleration of jobs coming back combined with the decline in the rate of offshoring has resulted in a 12-year steady uptrend in U.S. manufacturing jobs. The COVID crisis has revealed the U.S.' over-dependence on imports. The Ukraine/Russian war and geo-political tension with China will drive ongoing supply chain shifts, further accelerating reshoring and nearshoring.

This Data Report should motivate companies to further reevaluate their sourcing and siting decisions by considering all of the cost, risk and strategic impacts flowing from those decisions.

Reshoring's success has occurred despite uncompetitive U.S. manufacturing costs. Presently, shifting forces are creating more incentives and opportunities for companies to produce at home. The Reshoring Initiative can help government policy makers project the impact of applying industrial policy to bring millions more jobs back. Continuation of the trend depends on companies reevaluating their offshoring. Acceleration of the trend depends on the government leveling the playing field, making the United States more price competitive. The Reshoring Initiative offers many tools and resources, which are listed below. Please contact us for help driving reshoring for your company, your region and our country.

RESHORING INITIATIVE RESOURCES

Total Cost of Ownership Estimator® - Free online tool that helps companies account for all relevant factors — overhead, balance sheet, risks, corporate strategy, green and other external and internal business considerations — to determine the true total cost of ownership. It can be used by companies to make smarter sourcing decisions and to sell against imports. Analysis of TCO Estimator user data shows that 20 to 30% of imported products can be made here more profitably. Call on the Reshoring Initiative for help using this and other tools.

Import Substitution Program (ISP) - Manufacturers select the products at which they excel. ISP identifies and qualifies the major relevant importers of those products. The manufacturers then use TCO to convince the importers to reshore. Offered directly to manufacturers and thru MEPs, EDOs (economic development organizations), trade associations and equipment sellers.

Supply Chain Gap Program - Identifies U.S. supply chain gaps. Helps U.S. manufacturers fill the gaps. Helps EDOs find foreign firms to fill the gaps.

Competitiveness Toolkit - Designed to quantify and select the optimal national policy changes to bring back a desired number of jobs.

Reshoring Library – You can use Advanced Search to identify companies that have reshored or done FDI in relevant industries or regions. Search for potential customers.

Reshoring Initiative Data Report – Annual reports track the drivers, impact and momentum of the trend.

Data refinement is ongoing

1. Companies, industry associations, states, EDOs and others are encouraged to send us information on reshoring and FDI cases. Send us links to articles and announcements.
2. To see a full list of companies in the database click here.

3. If your company is listed, email us to request your company's data to review, edit and return. Please include your company name and detailed contact info.

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About Us

Reshoring is gaining momentum throughout the country. Many companies have already repatriated some of their manufacturing efforts, and the Reshoring Initiative is continuing to spread the "return-manufacturing-home" message to help other manufacturers realize America is an advantageous place to produce goods.

The Reshoring Initiative, founded in early 2010, takes action by helping manufacturers realize that local production, in some cases, reduces their total cost of ownership of purchased parts and tooling. The Initiative also trains suppliers how to effectively meet the needs of their local customers, giving the suppliers the tools to sell against lower priced offshore competitors.

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