It's Not *Offshoring* or *Reshoring* but *Right-Shoring* That Matters

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ABSTRACT

Global economic ecosystem going through rapid developments that change the way of doing businesses. From human rights awareness to improved average household earning, low-cost countries are no longer remain low. In cost competitive global apparel industry, it changes the strategic planning of US apparel brands. This article highlighted those global changes by first providing the historical overview of the decline of US manufacturing. Then discusses the current status of US apparel industry and the need of bringing back manufacturing to US followed by predictive future trends of reshoring jobs in US manufacturing industry in general and US Textile industry in particular. Finally, the article proposes some steps that manufacturer and the government need to take to initialize sustainable manufacturing practices in the US by concluding that it's not offshoring or reshoring but right shoring that matters depending on the strategic positioning of apparel brands.

Keywords: US manufacturing, apparel industry, offshoring, reshoring, right shoring

1. INTRODUCTION

In 2012, Tim Cook's, CEO of Apple Inc., and Foxconn, the largest manufacturer of apple's iPhone, announced to manufacture one of their product lines exclusively in the US (Simchi-Levi, 2012). This news acted as a catalyst in the business world as the major chunk of researchers and practitioners started to focus on this area. Apple was not the only one who decided to push manufacturing back to home. Other prominent players followed the queue including Ford, Caterpillar, and General Electric to name a few (Simchi-Levi,

2012). In the last couple of years, the trend of discussion on bringing manufacturing back to the US is on the rise. This happened due to decline in US manufacturing job loss and the disruptive changes in the global economies. Many consulting firms and researchers used terminologies such as reshoring, back-shoring, and on-shoring to discuss this phenomenon (Fratocchi, 2013).

If you holistically read the history of US manufacturing, you will come to know about some interesting facts. From 1960 to 2000, there was a decline in employment and GDP share in US manufacturing sector from

26 to 14 percent and 27 to 16 percent respectively (Bernard, 2006). But during the same period productivity increased ominously. This employment decline occurred because of the two reasons: first is the relocation of business activities and the second is the emergence of information technology that bypass the need of more employees and enhanced the productivity (Simchi-Levi, 2012).

2. RISE OF RESHORING AND APPAREL INDUSTRY

From losing 140,000 per year in last decade to gaining 10,000 manufacturing jobs per year, US manufacturing seems to be on the rights track. There is a huge increase in manufacturing jobs across all industries both from reshoring and foreign direct investment in the US from 1997 to 2015 as shown in Figure 1.
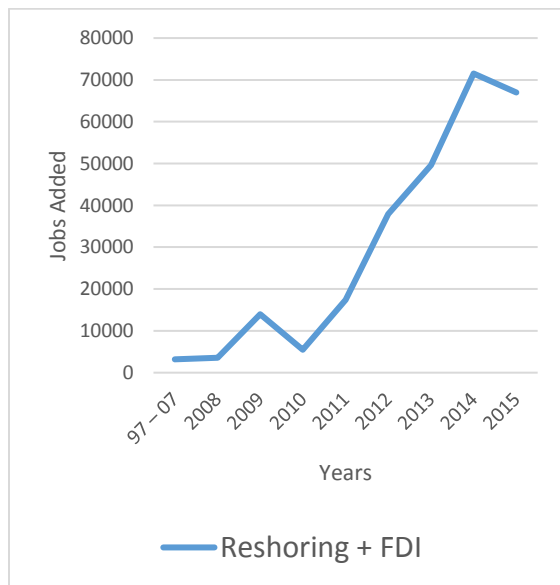

Figure 1. Reshoring trend in US manufacturing (**ReshoringInitiative**)

Reshoring trend also affects the US Apparel industry as it creates 2154 jobs from 46 companies (ReshoringInitiative). There are numerous apparel and textiles brands started manufacturing in the US. Last year Walmart announced to buy in US product by spending an additional $ 250 billion by 2023

to encourage manufacturing and increasing jobs in USA (Walmart, 2015). Hanes Brand announced to expand manufacturing facility in Clarksville which will create 120 additional jobs (Hunt, 2015). Peds Legwear announced to invest $ 16 million for a new plant which will help create 205 new manufacturing jobs (Souza, 2015). China is currently leading the chart with the most number of jobs reshored to USA as shown in figure 2.

The bottom line is manufacturing companies are considering or at least willing to invest in bringing manufacturing back to the US but there are lots of factors that those manufacturer needs to consider especially the global manufacturer because transitioning from offshoring to reshoring is not an easy strategic decision in a cost competing ecosystem.
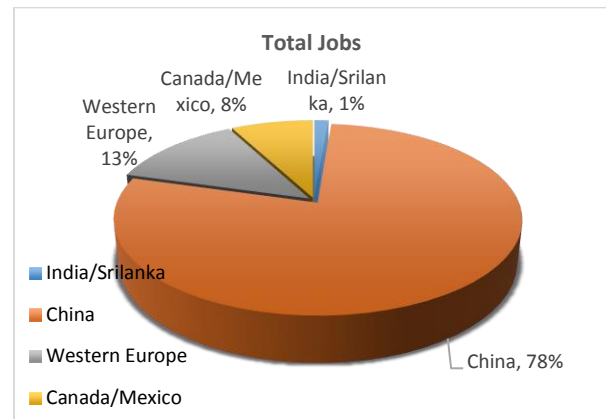

Figure 2. Manufacturing jobs re-shored from - by country

3. FUTURE TRENDS OF RESHORING FOR MANUFACTURING JOBS (ReshoringInitiative)

To predict the future trends of reshoring for US Manufacturing jobs in general and Textile manufacturing jobs, in particular, time series ARIMA forecasting is being done. Time series forecasting is a vital area of forecasting in which past records of the same variable are composed and examined to develop a model unfolding the underlying relationship. The model is then

used to infer the time series into the future. This approach is mostly useful when little information is available on the underlying data making process or when there is no reasonable descriptive model that narrates the prediction to other descriptive variables (Zhang, 2003).

Autoregressive integrated moving average (ARIMA) model is one of the most widely used times series models. The acceptance of the ARIMA model is due to its statistical properties as well as the renowned Box–Jenkins methodology (Jenkins, 1970) in the model building process. Moreover, numerous exponential smoothing models can be employed by ARIMA models (McKenzie, 1984). ARIMA models are quite supple in that they can represent several types of time series, i.e., pure autoregressive (AR), pure moving average (MA) and combined AR and MA (ARMA) series (Zhang, 2003).

The data used in this time series model is being provided by Reshoring Initiative. It is the biggest platform that contains information for all activities related to reshoring and foreign direct investment in US manufacturing industry. The data for US manufacturing (including all industry) includes jobs that brought back to the US in the form of either reshoring or foreign direct investment from 1996 to 2015. Based on the provided data, time series model is being built. Future trends of manufacturing jobs will be steady in a little decline but it is still on the positive end (see Figure 3). Part of the explanation for this is the number of companies involved in reshoring activities is on a lower side but the numbers are still growing because of the awareness that companies are getting. It will enhance the reshoring trend further in near future.

Another time series model is being built on the US Textile manufacturing industry only which includes apparel and footwear industry as well. The data includes all the reshored textile industry jobs from 2004 to 2015. The results here is also steady similar to general US manufacturing trends (see Figure 4).
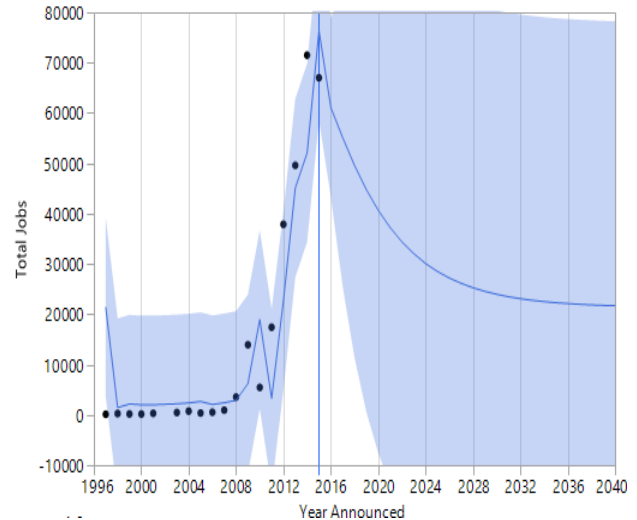

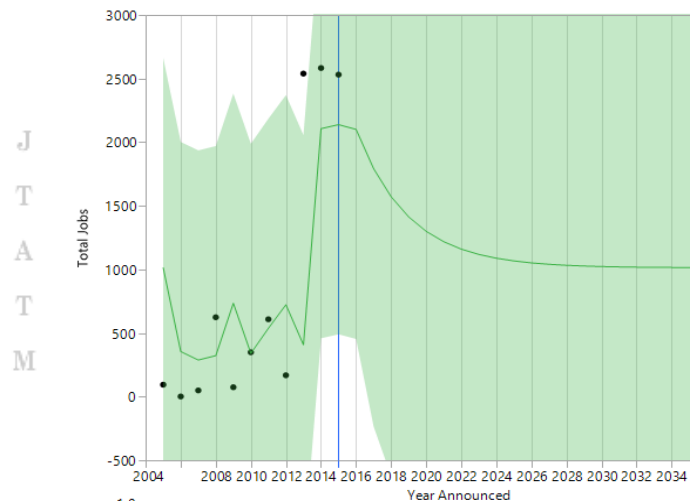**Figure 3. Forecasting of US manufacturing jobs reshoring**

Figure 4. Forecasting of US textile manufacturing jobs reshoring

Involvement of various apparel brands in the reshoring activities combined with the positive predictive future trends for reshoring manufacturing jobs provides a solid evidence for the manufacturer to invest in bringing manufacturing back to the US. But part of a problem is how to sustain current business model or modified their existing supply chain without compromising their profit margin. To address this, some approaches for building sustainable supply chain and manufacturing is being suggested in the next section that can help companies to refine their business activities by treating reshoring as one of the viable options.

4. BUILDING SUSTAINABLE MANUFACTURING AND SUPPLY CHAIN

The Business that protect people, planet and profit considered as viable sustainable business. In reality, business only cares about profit even at the cost of people and planet unless they are reducing the cost to increase profit. So real world perspective of sustainability is the integration of people and planet in a way that helps businesses to increase profit by reducing cost. The majority of the global apparel brands engage in outsourcing with a mindset of earning more profit. This is not the case anymore because of the rapidly changing economies. It's important to understand these changes as it will help the manufacturer to consider reshoring to ensure sustainable manufacturing.

4.1 Changes in Global Economies

According to national Bureau of Economic Research, the US lost up to 2.4 million jobs in competition with China. China is the biggest US apparel exporter but the yearly labor cost increase in china is 20% compared to 3% in the US (Zinser, 2011). The number of labor strikes in China increases significantly in the last couple of years because of the awareness among labor unions as they frequently demand increase wage (BRADSHER, 2015).According to BCG, multinational companies are more likely to devote capabilities in China to meet the Chinese local and Asian market demand in the near future because of the rapidly reducing gap between Chinese and US Labor cost. It's important for the manufacturer to keenly observe these changes as it will help them to reconsider their decisions regarding outsourcing.

4.2 Building In-house Capability

It is suggested for Manufacturer to think about building in-house capability not only to increase the number of new jobs in the US but also to serve the customer in a better capacity. By doing so it will help the manufacturer to reduce time to market by locating manufacturer close to consumers. They would have better control of the manufacturing activities and can quickly adapt to changes in demands and market. Most importantly they can innovate by utilizing the infrastructure that US offer and hence control the quality and IP issues that usually occurs in the case of outsourcing. It can help the manufacturer to reduce cost by skipping hidden supply chain cost and any sort of disruption that hurt the supply flow of the companies.

4.3 Technological Innovation

"When countries lose the ability to manufacture, they also lose the ability to innovate" Gary Pisano and Willy Shih, professors at Harvard Business School, says (Kim, 2013). Technological innovation is the way to disrupt the conventional manufacturing practices to reduce cost. Automation in manufacturing such as cheap sensors and computing reduces the importance of low labor cost as one can compensate the cost with increasing productivity. The only issue here is the importance of balance between automation and manufacturing. Too much automation can reduce cost but will create less employment as it will require less labor force. Structural cost is a huge factor when it comes to building manufacturing capabilities. So it is suggested for the manufacturer to focus on conducting intensive research on innovation that leads to reducing structural cost. It can be done sponsoring research projects, increasing partnerships with new stakeholders and universities as the most critical raw material for manufacturing are engineers. Apple is manufacturing in China, not only because the cost is low but because of the number of engineers it can hire in a week to complete demand. Apart from conducting research, they also need to investigate the viable business opportunities by leveraging the infrastructure that the US offers. For example, companies can focus on apparel recycling as the US has a good infrastructure of collecting waste and offer affordable electricity charges. It will help manufacturers to reduce raw material cost and increase

manufacturing. Last but not the least the importance of keep innovating to remain ahead of competitors. Companies can't rely just on reducing cost by ignoring innovation especially in fast paced fashion industry otherwise they will become obsolete. Under Armour is a wonderful example of this. They are continuously focusing on the innovating new line of products and successfully integrating technology with their products. That's the reason why they are the fastest growing sports brands in the world (Peterson, 2015).

4.4 Policy Making by Government

All efforts from apparel brands to bring manufacturing back to home can have a multiplier effect if the government will bravely support and encourage those initiatives by coming up with a strong clear policy. There are three things that government can do to speed up the process of recovering jobs. First is to come up with a decade long policy of Corporate Tax reduction. It will help big apparel brands to initiate building in house capability without the fear of competitive pressure or additional cost. Second is the R & D incentive to encourage apparel brands to conduct research so that they can come up with a breakthrough innovation. Third is to launch attractive fellowship and scholarship program to attract students towards engineering disciplines in order to ensure the training for required skills. Just giving the fellowship will not solve the cause unless universities and schools reanalyze the content of engineering discipline. The content must be designed in a way that integrates technical and management skills together so that the young guns will come up with the inventions that are viable and can capture the market.

5. CONCLUSION

Relocating manufacturing is not an easy decision for apparel brands to take as it requires to change their existing strategic decisions. It requires long term consistent planning from apparel manufacturer and clear consistent policy from the federal government. For global apparel brands, the approach will have to be gradual as they are facing the consistent pressure of fulfilling demands that lead them to stick with offshoring. So, the best bet for them would be to keep focusing on innovating sustainable manufacturing and make it an alternative to offshoring with the passage of time. For small brands, it's easier to initiate in-house capability as they have less demand pressure but the structural cost is the issue which can be compensated somehow if they receive a consistent support from the government. Apparel brands that already initiated reshoring can be considered as examples to initiate manufacturing in the US. The bottom line is it's not offshoring or reshoring but right shoring that matters depending on the strategic positioning of apparel brands. In order to be on the win-win situation, efforts from both government and manufacturer must need to be integrated with a long-term plan in order to leverage the infrastructure offered by the US.

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