

Reshoring of U.S. Apparel Manufacturing: Lesson from an Innovative North Carolina based Manufacturing Company

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ABSTRACT

Governments and Industries alike have desired reshoring of U.S. apparel manufacturing for several years now, but the labor-intensive manufacturing processes of apparel have made reshoring financially infeasible. While industry efforts focus on technological innovation to find a cost-efficient manufacturing process, the innovation of the business model has remained behind. This paper demonstrates a case study on a North Carolina based leather products manufacturing company that has adopted an innovative business model. This case explains how U.S. apparel manufacturing could potentially learn from this company to support U.S. apparel reshoring initiatives.

Keywords: Reshoring, U.S. apparel, innovation of business model, North Carolina based leather products

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Introduction

The ever-increasing retail competition, the increased global production cost, and the disrupting e-commerce business have driven the discussion of bringing manufacturing back in the U.S. (often referred as “reshoring”). Government is also putting strong policy support for reshoring to create new U.S. manufacturing jobs (Moser & Kelley 2018, Raice 2018). Moreover, the recent trade war is adding tremendous pressure on U.S. business especially those who import from China. The new tariff on \$250 billion worth Chinese imports could ultimately increase the product price at retail stores (Boark 2018, Lawder & Blanchard 2018). Hence,

importers are in quest of new manufacturing sites.

In the last few years, several companies such as Apple, Caterpillar, Ford and General Electronics, took initiatives to bring manufacturing back home (Simchi-Levi 2012). This has resulted in the creation of a record number of U.S. jobs since 2010 (Reshoring initiative 2017). While the automotive, power, and technology companies are pioneering the reshoring initiatives, research suggests that reshoring is not economically feasible for labor-intensive manufacturing such as apparel (Lu 2015). Though several companies have brought back their apparel manufacturing to the U.S. (e.g. Brooks Brother), it is much lower compared to the number of the company still

sourcing offshore. The massive sustainability risk in low-cost countries, increased wages in Asian countries, longer lead times, counterfeits, quality issues, intellectual property risks, and the lack of flexibility are pushing companies to consider reshoring even at the limited extent to stay competitive. That is why currently U.S. apparel companies are focused on manufacturing innovations to make the U.S. apparel manufacturing an economically feasible option.

This paper introduces a North Carolina based U.S. manufacturing company which is built upon an innovative supply chain network and business model to make their labor-intensive manufacturing process feasible inside the U.S. and achieve a significant business success. U.S. apparel manufacturing could take an important lesson from this innovative local company.

R. Riveter – a North Carolina Company

R. Riveter is a North Carolina based leather products manufacturer and distributor who manufactures canvas and leather handbags that are constructed by military spouses. The company was born on a unique social mission of employing an under-employed military spouse's community (called "Remote Riveters") all over the U.S.

to made leather products primarily from U.S. military upcycle materials. The idea behind the company was to provide portable income for military spouses. It was inspired by the role of women on the home front and named after World War II icon Rosie the Riveter. R. Riveter's manufacturing facility is in the town of West End, within Moore County, North Carolina. This location is near the largest military base in the world, Fort Bragg, North Carolina.

Purpose Driven Business

The co-founders of R. Riveter have addressed a critical social challenge, the underemployment of military spouses (Lim and Schulker, 2010). Due to regular military job shifting from one base to another, military spouse unemployment (20%) is approximately four times higher than the general unemployment rate and many spouses fill the position that they are overqualified for (Mehta, 2016). As a military spouse, the founders know first-hand the challenges of maintaining a career despite relocation. R. Riveter's vision is to provide a high quality, sustainable, and handmade product while providing a portable income to military spouses. (Ross 2018).

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Figure 1: Remote Riveter Locations in U.S. (photo taken during R. Riveter NC facility visits)

Along with a strong social purpose, R. Riveter also envisioned to reduce the environmental impact. Since the beginning of their manufacturing operation, they have repurposed discarded military materials such as retired military uniforms, canvas tents, tent liners, and wool blankets. The company also repurposes Gore-Tex scrap fabric leftover from the manufacture of waders at Simms Fishing Products.

R. Riveters major raw materials (ex. leather, fabric etc.) are purchased through auction from the Military. In addition, several raw materials such as virgin leather and

accessories are purchased from external suppliers. To sustain the rapid growth, the company has extended their product offerings beyond recycled materials. They have procured a new “military-inspired” canvas and locally sourced denim to fill the gaps when they are unable to find sufficient recycled military materials. These fabrics are used to produce the company’s “Signature Collection”. Bags made from small batches of repurposed military materials are now offered as a “Limited Edition” collection (Ross 2018).

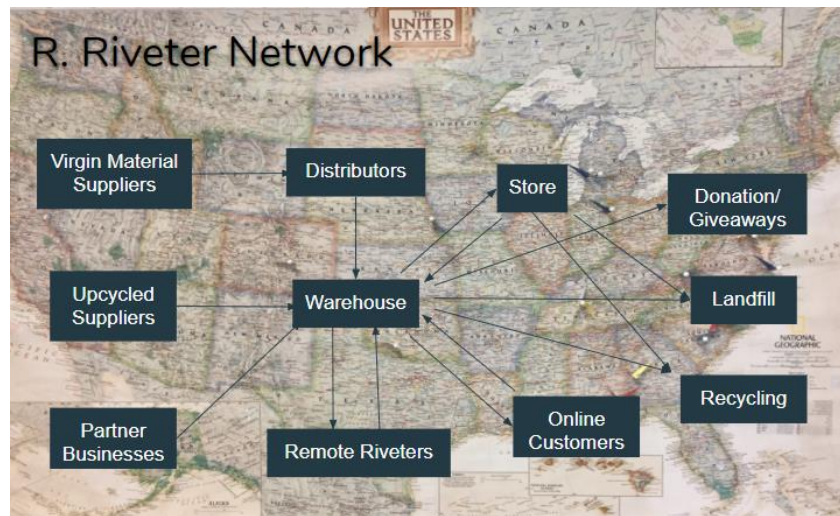


Figure 2: R. Riveter Business & Supply Chain Network

R. Riveter- Business Model and Supply Chain Model

To employ military spouses, R. Riveter operates through a unique business and supply chain model. The company has a network of “Remote Riveters” located throughout the United States (from the east coast to Michigan to Idaho to California as shown Fig 1) who cut and sew components of the handbags from their homes and send them to R. Riveter’s headquarters in North Carolina, where they are assembled and made ready for sale. R. Riveter supplies the raw materials and the Remote Riveters supply their own sewing machines and equipment. One riveter might sew bag linings while another hand-dyes the leather labels. The

riveters assemble their pieces and return them, via the U.S. Postal Service, to the warehouse for final assembly (Fig 2). As military spouses, the riveters can continue to work from any location where their husbands get transferred for duty (Ross 2018).

R. Riveter- Growth

The company started in 2011 in the founder’s garage with \$4,000 cash. In 2014, the company started a Kickstarter campaign and raised \$40,000 to expand operations. The following year, after an appearance on the popular television series, Shark Tank, R. Riveter won a deal of \$100,000 for 10% equity with famous investor Mark Cuban (Ross 2018). Since the show has aired, the R.

Riveter has grown 600%, according to the founder (Bonior 2017). Today, R. Riveter is a \$2.3 million company with 1,273% growth in last 3-years (Inc. 5000)

R. Riveter not only becomes the symbol of entrepreneurship success and women leadership in business, but it also becomes a great model for Made in America while still accommodating a strong social and environmental mission. “Mark Cuban said one of the pieces that were most interesting to him about R. Riveter was that it is a really complicated business model,” said co-founder Bradley. “To have manufacturing being done across the country, he really appreciated the fact that we had a really unique and new business idea and the fact that we were kind of redefining what American manufacturing can be. We are kind of battling a couple of things on the home front which is military spouses’ unemployment and also not sending jobs overseas and keeping them here in America.” (Bonior 2017)

What U.S. Apparel Industry Can Learn from R. Riveter?

The innovation to bring U.S. apparel manufacturing back home is predominantly focused on technology and manufacturing

system design. Walmart’s U.S. manufacturing innovation fund to reduce the cost of manufacturing in U.S., Under Armour Baltimore innovation center, Amazon’s recent U.S. patent for on-demand apparel manufacturing, the creation of Advanced Functional Fabrics of America (AFFOA) near MIT, the rise of 3D manufacturing, sewbots, and automation, are a few examples of innovation efforts for reshoring the U.S. apparel manufacturing sector (Moser & Montalbano 2018).

While all these technological innovations have their own merit, R. Riveter demonstrates a very different type of innovation. The company shows how the innovation in supply chain networking and business model can make U.S. manufacturing feasible and profitable. In other words, the founders showed why labor-intensive manufacturing in the U.S. need not wait for technological breakthroughs. Through establishing a \$2.3 million company with more than 1,200% growth in last 3-years, they send a strong message that Made in America is strong & alive; the right entrepreneurship mindset and innovative business model can play a vital role in reviving the U.S. manufacturing.

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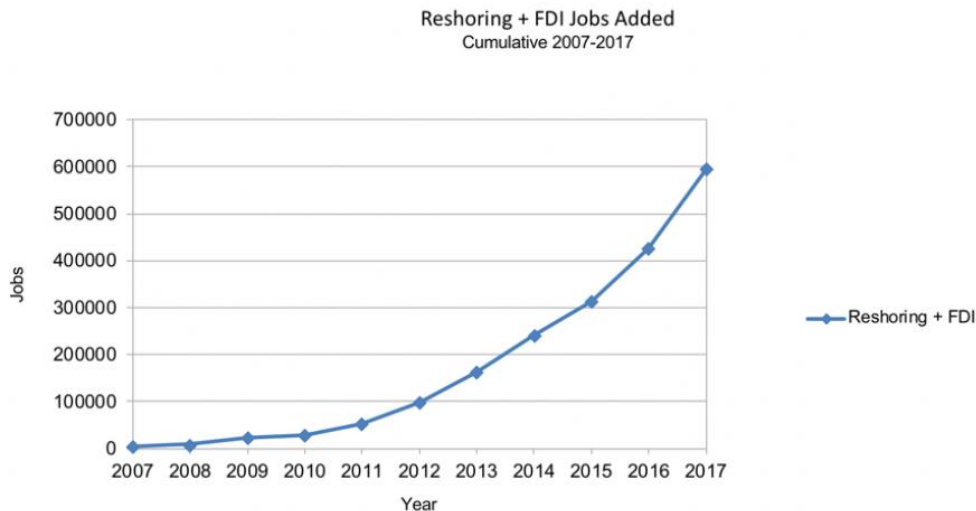


Figure 3: U.S. Job Creation from Reshoring and Foreign Direct Investment (FDI) (Reshoring Initiative, 2017)

The manufacturing operation of R. Riveter leather products is fragmented and multi-staged. It includes different machines and human labor, which is similar to apparel manufacturing. Hence, apparel manufacturing in the U.S. could be inspired by R. Riveter's manufacturing and supply chain model. While large-scale manufacturing is challenging in the R. Riveter model, this could be specifically useful for small and medium size apparel manufacturing companies. High end and seasonal fashion apparel could be the most suitable product range for such a company. R. Riveter is selling their leather bags in the price range of \$45-\$320, which is higher than the comparable imported products, but consumer accepted the price point because of their reliability on quality and their pride of Made in America. Also, recent research

shows, consumers are increasingly interested in Made in America and willing to pay an additional 10% for the product (Moser & Montalbano 2018). As a result, even high-end fashion products have an increased price point; consumers are expected to accept that. Today only 3% of the total U.S. apparel consumption are domestically sourced (Moser & Montalbano 2018). There is an enormous opportunity for apparel manufacturing if conceived in the right manner. While reshoring of U.S. apparel manufacturing has created 17,166 jobs since 2010 (Spiegel 2018), it also has the potential to reduce 25% of total US trade deficit and create 1 million U.S. manufacturing jobs (Fig 4) (Moser & Montalbano 2018). It is important to note that the U.S. has lost 800,000 jobs to foreign clothing factories since 1990 (Davidson 2013).

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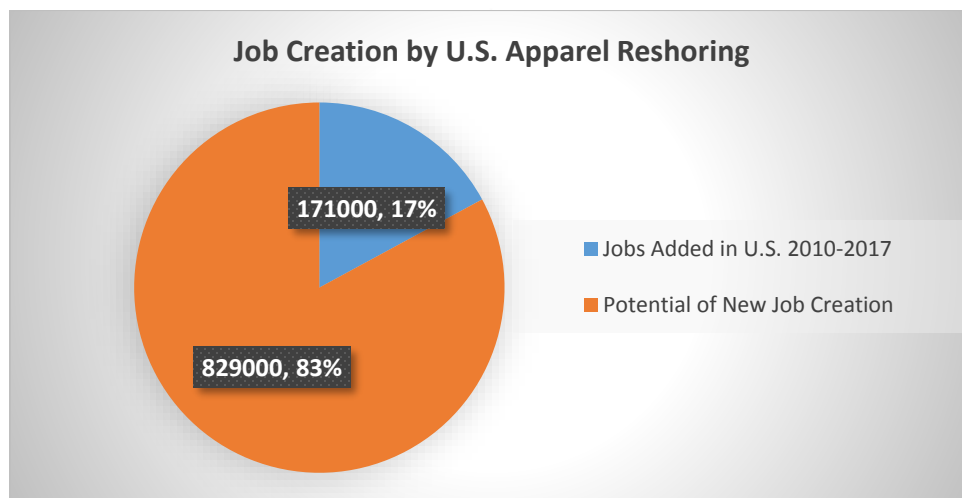


Figure 4: U.S. Apparel Manufacturing Job Creation Prospect

Inspired by R. Riveter, it is expected that more American women will get involved in business entrepreneurship and leadership through innovative thinking. The entrepreneur should learn that purpose-driven business has a strong future in this era of conscious consumerism. Especially when 85% of total American clothing is disposed of in landfills (EPA 2018). Defining a business around recycling or upcycling should have a strong future.

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