

60 Challenges faced by apparel and textile entrepreneurs seeking US production and sourcing – a study of Startup survey data

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Abstract

In the midst of global reshaping of the fashion industry, the United States is experiencing a growth in consumer demand for 'Made in USA' textile and apparel products. Data shows this industry ranks third in reshoring activity and foreign direct investment in the United States. The presence of entrepreneurial small businesses has contributed significantly to this growth. Manufacturing firms with fewer than 20 employees account for 82% of the industry.

The purpose of this study is to first present a profile of the identity of these entrepreneurs, and then investigate the potential challenges that entrepreneurs face as they balance production issues with other values. The study uses five years of secondary survey data responses (n=1,319), obtained from an organization that provides sourcing and educational support for the US textile and apparel industry.

An analysis of the data suggests that casual apparel is the most popular product category (25%), followed by performance sportswear (16.8%). Based on results of the study, 62% of respondents indicate their commitment to 100% US sourcing and production. However, among those who were committed to 100% domestic sourcing and production, 90.4% needed support for their production operations and 69.8% were unable to find a source for their materials procurement. The results suggest that

participants are more challenged in the areas of production and sourcing, compared to marketing and branding. The US is encouraging entrepreneurship and small business job creation (U.S. Small Business Administration, 2017). However, the outcome of this study suggests a gap between the meta-goals and values of these entrepreneurs, who embrace bringing industry 'home', and the daily logistical issues that they face in making these goals a reality. Conclusions and recommendations of the paper highlight potential ways of reducing this gap and suggest managerial strategies.

Introduction

Consumer interest has seen a recent growth in demand for 'Made in USA' products (Consumer Reports, 2015). A recent report by Reshoring Initiative (2018) suggests that the apparel and textile industry ranks third in reshoring and foreign direct investment in the United States. From 2010 to 2017, the reshoring of apparel and textile manufacturing has created more than 48,000 jobs. Moreover, reshoring of apparel and textile production can be used as a strategy to reduce carbon emissions caused by long distance transportation. As the global population is expected to increase in the following decades (Roster & Ortiz-Ospina, 2017), the need for apparel and textile products will grow consequently. On the other hand, the production, maintenance, and eventual disposal of textile and apparel products have devastating impacts on the environment (Chen & Burns, 2006: 258). As a result, multiple initiatives and organizations have been created to advocate for environmentally sustainable and ethically made apparel and textiles (Mead, 2018; Sustainable Apparel Coalition, n.d.).

Recent studies show that consumers are increasingly attracted to artisanal products that are ethically produced on a smaller scale by entrepreneurs and have higher perceived quality than fast fashion apparel (Pookulangara & Shephard, 2013). The presence of entrepreneurs and small business owners has become very significant in this industry. According to the Census Bureau (2018), small textile and apparel manufacturing firms (less than 20 employees) account for 82% of the total manufacturing firms in the industry (U.S. Census Bureau, 2017). However, many

entrepreneurs are limited in terms of the available resources and capital. Therefore, the purpose of this study is to first present a profile of the identity of a sample of apparel and textile entrepreneurs, and then investigate the potential barriers that these entrepreneurs face as they balance production issues with other values.

The results of this study will be beneficial for identifying the areas of support most needed by entrepreneurs and small businesses, thus facilitating governmental, private and, public entities in study and policy generation for this sector of US entrepreneurship.

Review of Literature

Textile and Apparel Entrepreneurship

The Cambridge online dictionary defines entrepreneur as a 'person who attempts to make a profit by starting a company or by operating alone in the business world, esp. when it involves taking risks.' (Cambridge Academic Content Dictionary, n.d.).

Stevenson views entrepreneurship as a management approach, and defines it as 'the pursuit of opportunity without regard to resources currently controlled.' (Stevenson, 1983: 3). A textile and apparel entrepreneur has been defined as a person who creates a new fashion firm or sets up a new fashion brand (Burke, 2013). Fashion entrepreneurship includes two different dimensions; fashion or the creative part in which new products are developed in response to current trends, and the entrepreneurship dimension that includes the process of searching, evaluating, and exploiting new opportunities in the business (Vecchi & Buckley, 2016: 113-114).

In the textile and apparel industry, entrepreneurship is highly associated with innovation (Unay & Zehir, 2012) and entrepreneurs are often believed to be ambitious, innovative, disciplined, with positive attitude, and willingness to take risks (Vallone, 2008: 106).

Apparel and textile entrepreneurship can be social or commercial. Social entrepreneurship is the innovative and value-creating practices that take place within or across the business, nonprofit, or government sectors (Austin, Stevenson, & Wei-Skillern, 2006: 3). The primary goal of social entrepreneurs is to generate social value for the public benefit. On the other hand, the fundamental purpose of commercial

entrepreneurs is to create profitable products and services that results in private monetary gain (Austin et al., 2006:3).

State of Textile and Apparel Industry within the US

As of 2017, the textile and apparel industry employed 550,500 workers in the United States (National Council of Textile Organizations, 2018). The total value of apparel product (NAICS 315) shipments from USA exceeded \$10 billion (United States Census Bureau, 2017). During the past decade, three intertwined trends of reshoring, innovation, and entrepreneurship have emerged within textile and apparel industries in the United States (Hodges, 2017: 157). Innovation and employment of new technology can potentially influence competitive advantage among textile and apparel entrepreneurs and small firms. Such innovation can contribute to the growth of reshoring trends and rebuilding the manufacturing infrastructure within the United States (Hodges, 2017: 159). For fast fashion products, or when a company receives an urgent order with smaller quantities, using in-house facilities when available or outsourcing to domestic suppliers can help apparel and textile companies achieve customer satisfaction through reduced production lead time (Sardar & Lee, 2013). Therefore, reduced lead time is a competitive advantage for domestic sourcing and production.

The other push towards small business support comes from federal organizations such as SelectUSA, BusinessUSA, Reshoring Initiative, and Assess Costs Everywhere (ACE). ACE provide analytic framework and resources to encourage manufacturers to invest in manufacturing or sourcing in the United States. The United States Department of Commerce suggests a 10-factor framework to assist U.S. companies in estimating the total costs and risks associated with offshore production. This framework includes factors such as inventory and shipping costs, product quality assurance, intellectual property, and regulatory compliance cost that might offset lower labor costs in other countries (U.S. Department of Commerce, n.d.). Reshoring Initiative (Reshoring Initiative, 2018) identifies automation, additive manufacturing, image of made-in-USA, reduction in lead time, proximity to consumers and tariffs, as factors that contribute to the increase of the reshoring trend.

Consumer awareness is also putting pressure on enterprises to be more mindful of the impact of their sourcing decisions on society (Reshoring Initiative, 2018). For example, Walmart is committed to purchasing \$250 billion worth of USA-made products by 2023. They pledge to accomplish this goal by increasing their current purchase of U.S. manufactured products, finding new domestic sources, and reshoring the manufacturing of the products they currently buy (Walmart Inc., n.d.).

Barriers to Domestic Sourcing and Production

Research has shown that apparel and textile entrepreneurs face multiple challenges that are particular to this industry. Entrepreneurs and small businesses may experience production challenges due to quantity limitations, and therefore cannot create high margins and leverage capacity because of low product volume (Van Den Berg & Almanza, 2016). In the early stages of company growth, it might be possible for entrepreneurs to develop and make products in-house, but at some point, it may be necessary to outsource production which means higher cost, uncertainty about the contractor, less control over the production, and possibly a higher risk (Kurz, 2010: 17).

Entrepreneurs can also find it challenging to source suitable manufacturing sites, machinery, and suppliers while taking into account the production and transportation of raw material and the final products (Plieth, Bullinger, & Hansen, 2012: 5-6). A study of apparel and textile entrepreneurs identified local sourcing of material, manufacturing, networking with professionals in the industry, and lack of local incubators as challenges for the entrepreneurs (Annett-Hitchcock, 2016: 12-13). The offshoring of apparel production to other countries that started in the 1980s has resulted in the shortage of the available workforce with proper skills and experience in cut and sew operations. The trained labor that worked in apparel manufacturing in the 1970s and 1980s are retired, and the younger generation is interested in skilled manufacturing or engineering jobs or would prefer to work in office environments (Hall, 2014). This has resulted in U.S.-based apparel manufacturers turning down orders due to shortage in skilled cut and sew labor (Hall, 2014). In summary, the literature shows a growing interest in the 'Made in USA'

products caused by consumer demand and entrepreneurs' personal values and preferences. However, the apparel and textile entrepreneurs face external barriers that makes the domestic sourcing and production challenging. An investigation into the entrepreneurs' needs can help create policies and identify resources that could better help entrepreneurs in overcoming these challenges.

Methodology

In order to provide a profile of Apparel and Textile Entrepreneurs in the US, this study used qualitative and quantitative research methods. Secondary survey data provided by the Carolina Textile District (CTD) were analyzed. Established in 2013 in North Carolina, USA, the Carolina Textile District's (CTD) mission is to help both textile and apparel entrepreneurs and existing companies within their supply chain by connecting them to a network of textile manufacturers and other related resources. For each client, the initial requirement for working with CTD is to submit an online application in the form of a survey. This study investigated those intake surveys obtained from March 2013 through April 2018. Responses from participants who identified themselves as 'Startup' or 'Existing or Established' companies that have been in business for less than five years were used. The establishments with more experience, knowledge, and resources were excluded from data analysis, in order to provide comparable units of analysis. Responses from companies originating outside the United States were also eliminated. Using secondary data from CTD was a convenience sampling method. However, CTD's popularity among textile and apparel firms in the United States due to the services they provide in the areas of product development and domestic production support and materials sourcing, make the District an appropriate data source for addressing the purpose of this study.

The authors believe that surveys allow for appropriate data collection for this research. Surveys are a valuable tool in providing a quantitative and qualitative description of the status, attitudes, and opinions of the sample. Using a survey, researchers can generalize the characteristics, behaviors, and attitudes of the sample to a population (Creswell, 2013: 145-146). This survey includes demographic data, plus responses to

closed-ended questions. The responses to these questions were analyzed using JMP Statistical Analysis Software. The researcher also used Tableau Public 2018 for data visualization.

The demographic items used for data analysis to provide a profile of the companies included: location (state), product category, and stage of the company. In order to understand the potential barriers faced by the companies, responses to two closed ended questions were used:

- A. What is your commitment to domestic sourcing and production throughout your supply chain?
- B. What type of support do you need? Please check all that apply for this project.

Results and Conclusion

Results

The purpose of this study is to first present a profile of the identity of a sample of apparel and textile entrepreneurs, and then investigate the potential challenges that entrepreneurs face as they balance production issues with other values. After refining the data, the sample consisted of 1,319 textile and apparel entrepreneurs and small sized companies. Using descriptive statistics such as percentages and frequencies of the demographic variables including State, Product Category, and Stage of Company, a profile of the textile and apparel entrepreneurs was developed. The designations for demographic variables are established by CTD and the company self-selects into one of the categories. It is necessary to mention here that since the demographic question related to Product Category, and Question B (What type of support do you need? Please check all that apply for this project) are multiple choice questions, the total percentage of these responses may exceed 100%.

The results show that CTD clients are distributed across 49 states of the United States and the District of Columbia. The majority of respondents were located in North Carolina (35.7%), followed by New York (6.6%), and Georgia (6%) (see Figure 1). The higher number of clients in North Carolina could be explained by the geographic location of

CTD relative to the clients in North Carolina. The product category most often cited by respondents was 'casual apparel' (25%), followed by performance and sportswear (16.8%), 'other' (16.5%), 'fashion apparel' (12.8%), and 'home-décor and bedding' (12%) (Table 1). The stage of company (defined by the researcher as startups and existing companies that have been in business for less than five years) were divided as follow: 76% of the sample identified themselves as 'start-up' and 24.3% acknowledge their company as 'existing or established' (Table 2).

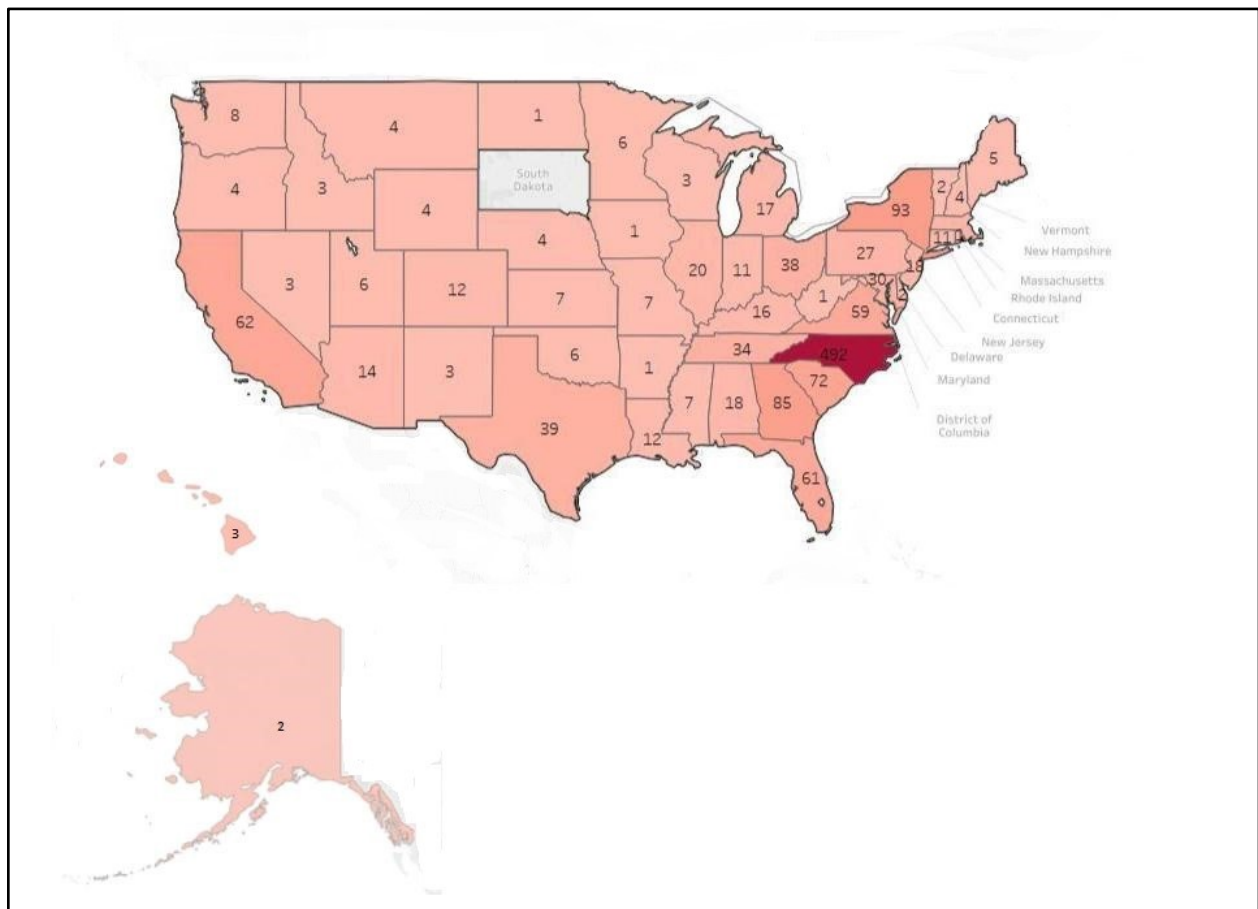


Figure 1. Heat map of the respondent's location by state, created by the authors

Note. Heatmap is a geographical representation of data, in which the density of occurrence in locations are presented through color intensity.

Table 1

Product Category distribution (product category names established by CTD)

Variable	Frequency	Percentage %
Casual Apparel	330	25.0
Performance and Sportswear	222	16.8
Other	218	16.5
Fashion Apparel	169	12.8
Home Décor and Bedding	159	12.0
Accessories	155	11.7
Bags and Suitcases	151	11.4
Children's Apparel	136	1.3
Under Garments/Swimwear	93	0.7
Hosiery	54	0.4
Outdoor Gear	33	0.2
Maternity Apparel	16	0.1
Pet Product	8	0.1
Total Responses	1318	

Table 2

Stage of Company distribution (stage of the company names established by CTD)

Variable	Frequency	Percentage %
Start-up	990	76.0
Existing or Established	312	24.0
Total	1302	100

To investigate the textile and apparel entrepreneurs' commitment to working with domestic sourcing and production, Survey Question A (What is your commitment to domestic sourcing and production throughout your supply chain?) was used. Based on the results (shown in Figure 2), 62% of the respondents indicated their commitment to 100% US sourcing and production, while 25.3% considered final cost as their highest priority and determinant factor for their sourcing and production location. Finally, 12.7% expressed their plan to source their material overseas but produce their final product within the US. Among the 62% (n=729) of respondents who indicated their commitment to 100% domestic production and sourcing, 90.4% needed help for production, 69.8% were in search for material sourcing, and 62.7% needed assistance for sample development. A breakdown of these responses is presented in Table 3 and Figure 3.

In order to identify the limitations and barriers of textile and apparel entrepreneurship in the US, the researchers used the responses to Survey Question B (What type of support do you need? Please check all that apply for this project.). The results show that the majority of the textile and apparel entrepreneurs need CTD assistance in finding resources for Production (89.8%), followed by Material Sourcing (68.6%) and Sample Development (61.0%). The outcomes of data analysis reveals that fewer respondents needed help for the Marketing (9.5%), Business Development (8.5%), and Branding (8.3%).

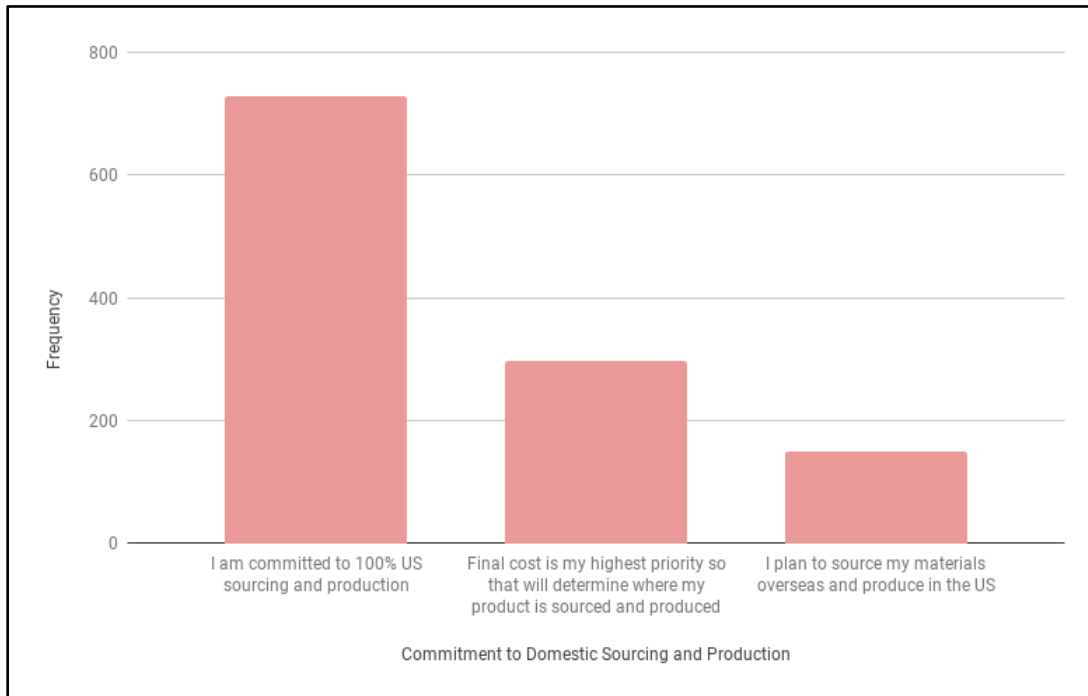


Figure 2. Commitment of Textile and Apparel Entrepreneurs to Domestic Production

Table 3

Areas of Support Needed by Textile and Apparel Entrepreneurs

Area of Support	Frequency	Percentage %
Production	1180	89.8
Material Sourcing	901	68.6
Sample Development	802	61.0
Tagging	711	54.1
Packaging	598	44.5
Sales Samples	564	42.9
Design/Prototype Development	415	31.6
Printing	379	28.8

Fulfillment	356	27.1
Testing	346	26.3
Patterns	252	19.2
Consulting	208	15.8
Marketing	125	9.5
Business Development	112	8.5
Branding	109	8.3
Total Responses	1314	

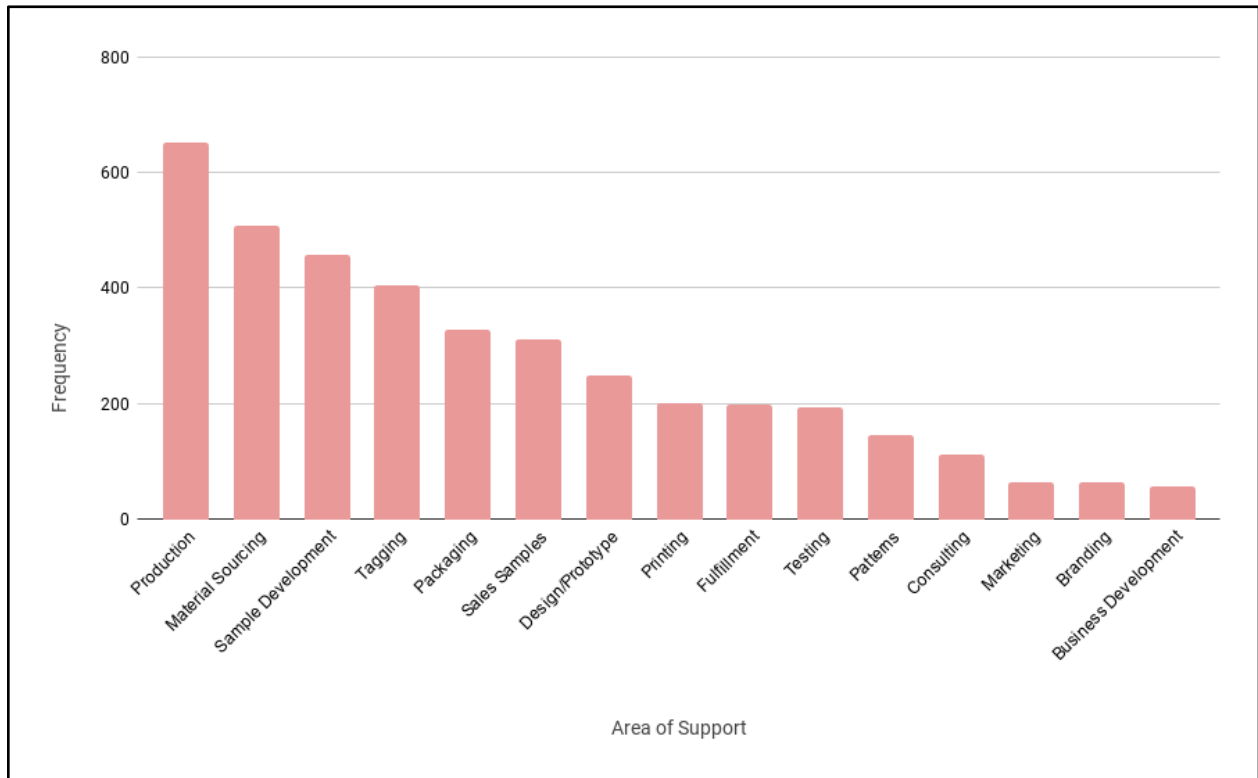


Figure 3. Areas of Support Needed by Textile and Apparel Entrepreneurs that Indicated their Commitment to 100% Sourcing and Production

Conclusion

Based on the results of this study, it can be concluded that the majority of apparel and textile entrepreneurs in this study are interested in and committed to full or partial domestic sourcing and production. This is in agreement with the current positive reshoring trend occurring in the textile and apparel industry (Reshoring Initiative, 2018), and can be explained from different perspectives. First is the rise of interest in 'Made in USA' products by consumers (Moser & Montalbano, 2018), due to the impact of country of origin on perceived quality (Chao, 1998; Kalicharan, 2014). Consequently, companies are pushed to turn to domestic production to answer current consumer preferences and needs. Second is apparel and textile entrepreneurs' interest for domestic production that can also be caused by the personal satisfaction they gain through supporting local enterprises and the feel of contributing to the society and their community by creating jobs. The final factor can be the proximity of the new technology and emergence of local on-demand manufacturing (Moser & Montalbano, 2018). This will make US production competitive for entrepreneurs since it enables them to produce in smaller batches in shorter periods of time.

The outcome of this study also suggests a significant barrier that the textile and apparel entrepreneurs face. As mentioned before, among the 1176 surveyed companies, 62% expressed their commitment to 100% domestic sourcing and manufacturing, and 12% indicated their interest in domestic production. However, among those who were 100% committed to domestic sourcing and operations, 90.4% needed support for their production and 69.8% required assistance in finding material sources. This suggests that textile and apparel entrepreneurs are challenged in finding production and sourcing operations, especially if they are committed or interested in domestic operations. One explanation could be the decline of available workforce with proper technical training and experience due to offshoring of textile and apparel production in recent decades. In addition, many entrepreneurs value domestic production and are interested in having their own business, but they don't have the appropriate skills for technical tasks, and they need to find experienced individuals to help them with their operations.

The United States is encouraging entrepreneurship and small business job creation

(U.S. Small Business Administration, 2017). However, the outcome of this study reveals a gap between the meta-goals and values of these entrepreneurs, who embrace bringing industry 'home', and the daily logistical issues that they face in making these goals a reality. Few textile and apparel entrepreneurs needed an expert for their marketing, business development, and branding aspect of their enterprise, but they are significantly in need for assistance in manufacturing and material sourcing. Moreover, as of 2015, Georgia, the Carolinas, and California account for more than 50% of all textile jobs (Ranald, 2016: 19). This means that the available resources and experience in the field is focused in very specific geographical areas. This knowledge could assist in targeting the growth of training programs that could result in more skilled labor in the textile and apparel industry across these regions. Investment in this industry can promote employment growth since a single textile job can support three additional jobs within and outside the textile and apparel industry e.g. chemical, shipping, warehousing etc (NCTO, n.d.). Another suggestion would be providing incentives and encouraging the creation of entrepreneur spaces or incubators in order to facilitate entrepreneurship and help new enterprises find the technical support and networks they need, especially for small run production. As the issue of sustainability in material sourcing arises, a transparent domestic supply chain that could connect entrepreneurs, farmers, and manufacturers would further narrow that current gap, resulting in local economic growth and carbon footprint reduction.

Limitations and Recommendations for Future Studies

Data for this study was provided by a single organization, limiting the sampling methodology to a convenience sample. Also, due to the location of CTD, the majority of respondents were located in Eastern and Southeastern states in the US. Another limitation of this study was the use of 'production' as a general term, as it was originally used by CTD. Future studies could look into specific needs of entrepreneurs in the areas of production and sourcing. For example, future research could be conducted on entities similar to CTD such as Brooklyn Fashion + Design Accelerator, Opportunity Threads, Nashville Fashion Alliance, and Studio 317 in Portland, Oregon, to see how entrepreneurs' needs are being addressed across the United States.

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