2013 TEXTILE INDUSTRY SURVEY

Final Report of Survey Results

Prepared By:
Christa Baade
CEI
December 2013

The survey was conducted in collaboration with the Manufacturers Association of Maine, Maine Department of Economic and Community Development, Goodwill Industries of Northern New England, Maine Department of Labor, Lincoln County Regional Planning Commission, and Midcoast Economic Development District. The survey was sponsored through a grant awarded to CEI by the U.S. Department of Health and Human Services, Office of Community Services.

CEI

Capital *for* Opportunity *and* Change

Acknowledgements

I would like to thank the following individuals for their expertise and time in preparing for and/or conducting this survey. Their cooperation and assistance was invaluable. We are equally grateful for all of the textile companies who took the time from their very busy days to complete the survey.

- Lisa Martin, Abbie Teachout - Manufacturers Association of Maine
- Kristine Schuman, Jaimie Logan, Brian Doyle, Brian Mulligan - Maine Department of Economic and Community Development
- Elaine Palmitessa, Kim Moore, Paul Argereow - Goodwill Industries of Northern New England
- Kathe Bolster, Douglas Hudson - Maine Department of Labor, Skowhegan Career Center
- Mary Lafontaine, Patricia Gray, Linda Roberts, John Wagner - Maine Department of Labor, Lewiston Career Center
- Scott Benson - Midcoast Economic Development District
- Emily Reinholt, Mary Ellen Barnes – Lincoln County Regional Planning Commission
- Paul Scalzone, Tim Manson and Carla Dickstein – CEI
- Connor Stroble - CEI Intern

The publication of these survey results is based on work supported by the U.S. Department of Health and Human Services, Office of Community Services. Any opinions, findings and conclusions expressed in the material are those of the author and do not necessarily reflect the views the Department.

BACKGROUND

Maine's textile industry has a strong legacy of providing high-quality "Made in Maine" products to a global marketplace. However, over the past several decades, the manufacture of more and more products once traditionally made in Maine has moved out of state and often outside of the United States entirely. While mass production of textile products is no longer a central component of Maine's economy, an explosion in innovative design, development work, and new manufacturing processes has the potential to contribute majorly to Maine's economic growth. High-tech advanced materials ranging from flame-retardant fabrics for use in protective gear manufacturing to advanced felts, and fabrics for fiberglass and composite material are now produced in Maine. Additionally, there is a plethora of small-scale, textile cottage-industry enterprises flourishing in Maine, and an upsurge in high-end apparel production, adding to the State's textile production workforce.

In March 2010, at the request of leaders from Maine's high performance textile sector, the Manufacturers Association of Maine (MAMe) convened a group of companies involved in various types of textile manufacturing to discuss their needs and desires for an organized industry cluster. Most participants were small and medium-sized manufacturers who viewed expansion, Research & Development (R & D) and logistics opportunities as significant parts of their current and future business plans. They confirmed that the textile industry offers access to large global markets, the likelihood of ongoing work, and support of long-term contracts. It also provides many opportunities for the kind of manufacturing that helps small and medium-sized companies diversify from commodity production to high-performance manufacturing.

MAMe took the lead in this endeavor on behalf of Maine's high-performance, textile-related companies and, in October 2011, received a Feasibility Study Award from the Maine Technology Institute (MTI). The study's goal was to complete the feasibility research on Maine businesses engaged in high-performance textile-related sales, service, manufacturing, and research & development and to create a collaborative strategic implementation plan for industry growth. Following the industry survey, MAMe hosted a Manufacturing Summit in 2012 at which the textile study was presented to the textile sector breakout group. Additionally, MAMe hosted a Textile Roundtable in July 2012 to reveal the survey results and to begin creating a strategic plan.

The textile industry is one of Maine's oldest manufacturing industries, with its roots dating back more than 175 years. It now accounts for 8% percent of manufacturing sector employment in Maine. Industry employment is concentrated in Cumberland, York, and Androscoggin Counties. The latter two counties were the primary historical textile hubs in Maine, specifically Biddeford and Lewiston, where textile manufacturing thrived for decades. Biddeford was the center for shoe and textile manufacturing into the 1950s. Lewiston prospered as a textile mill town during the Civil War, and its ten river-powered mills became the nation's third largest producers of textiles and footwear. In fact, textiles were the primary economic base for Lewiston and the surrounding rural region from 1890 through the early 1960s. Beyond those centers, there are much smaller, yet significant, pockets of textile employment located in Penobscot and Piscataquis Counties.

Currently, an estimated 4,143 people (as determined by Maine DOL/CWIR data, 2012) are employed in the textile sector in Maine. The manufacture of high-performance textile materials and products and the yarn/spinning/weaving areas account for a significant portion of the employment in this sector. However, there is a negative public perception that the textile industry in Maine is vanishing, which often discourages individuals from considering employment in the textile field. Some companies report ongoing difficulty filling specialized positions, particularly stitchers and equipment/machine operators. The challenge of finding a suitably skilled workforce can likely be attributed to the many textile workers laid off in the 1990s, who have either retired, are self-employed, or changed professions and are reluctant to rejoin the industry. Training new entrants in skills needed by the textile sector is essential if the industry is to flourish. Increasingly driven by technology and innovation, textile manufacturing now requires more highly skilled, knowledgeable, and computer-literate individuals. Yet there is little or no public sector training or educational infrastructure in place for this industry to upgrade the skills of existing workers and train new workers in some of the more traditional aspects of cutting and sewing, weaving, and machine operation and maintenance.

Another substantial concern is that the supply chain of raw materials has moved off-shore. As quality, lead-time, and cost are driving up product pricing, finding local, regional, or U.S. raw material products is difficult. Additionally, the industry must continually restructure and reinvent itself to sustain and take advantage of export opportunities and to compete effectively with stiff import competition.

SURVEY OBJECTIVE

The objective of the textile survey was to provide important data to better understand the state of Maine's textile industry. Specifically, the survey sought to:

- gain information about the growth of the textile sector in Maine and the nature of any business expansion plans;
- understand the scope of the textile workforce, including projected employment and immediate and anticipated training needs;
- understand the challenges and opportunities in the textile supply chain;
- provide economic development and education/training partners with essential information that will help support the development of the Maine textile industry and strengthen the foundation on which to grow Maine's textile sector to its former glory; and
- Work with the industry collaborative to develop recommendations.

Secondarily, but no less importantly, the survey will provide a foundation on which to explore and develop a textile Industry Partnership Sector model of workforce development. The textile industry, with its common occupations and skill requirements, lends itself to the development of a sustainable consortium. This sector partnership model will lead to a greater understanding of workers and employers in the field and guide the development of targeted programming. Sector initiatives involving partnerships with employers, community-based and state organizations, educational institutions, and policymakers are critical to obtaining important input and involvement, mobilizing resources, and leveraging financial support. This approach certainly has the potential to help Maine textile businesses grow and compete globally.

SURVEY METHODOLOGY

CEI conducted the survey in partnership with the Manufacturers Association of Maine (MAMe), Maine Department of Economic and Community Development, Eastern Maine Development Corporation, Lincoln County Regional Planning Commission, Midcoast Economic Development District, Goodwill Industries of NNE, and several Maine Career Centers. In late summer of 2013, 90 textile companies were identified to survey across the full spectrum of the industry—in sales, service, manufacturing, and research & development. Respondents worked in an array of manufacturing processes including textile fiber, yarn, cordage, apparel, leather & footwear, and high-performance textile manufactured products.

Several of the companies had multiple facilities located in separate counties. In those cases, where employment was significant, the different facilities were treated as separate entities. While some companies did not respond to multiple attempts to contact them, others thought that they were too small and didn't feel their input would contribute to the value of the survey. The largest textile employer in the state, employing nearly 1,000 individuals, did not participate, nor did the second largest, employing 300, citing company policy. Among the companies that did participate, their employees accounted for approximately 51% of employment in Maine's textile industry. Manufacturers in the textile sector fell within seven broad categories: high performance/high tech materials and products (15 companies); yarn/weaving/spinning/dying (12 companies); apparel production and cut & sew contractors (7); canvas (5); sail making/sail products (3); leather accessories/footwear (3); and one company represented the cordage & twine sector.

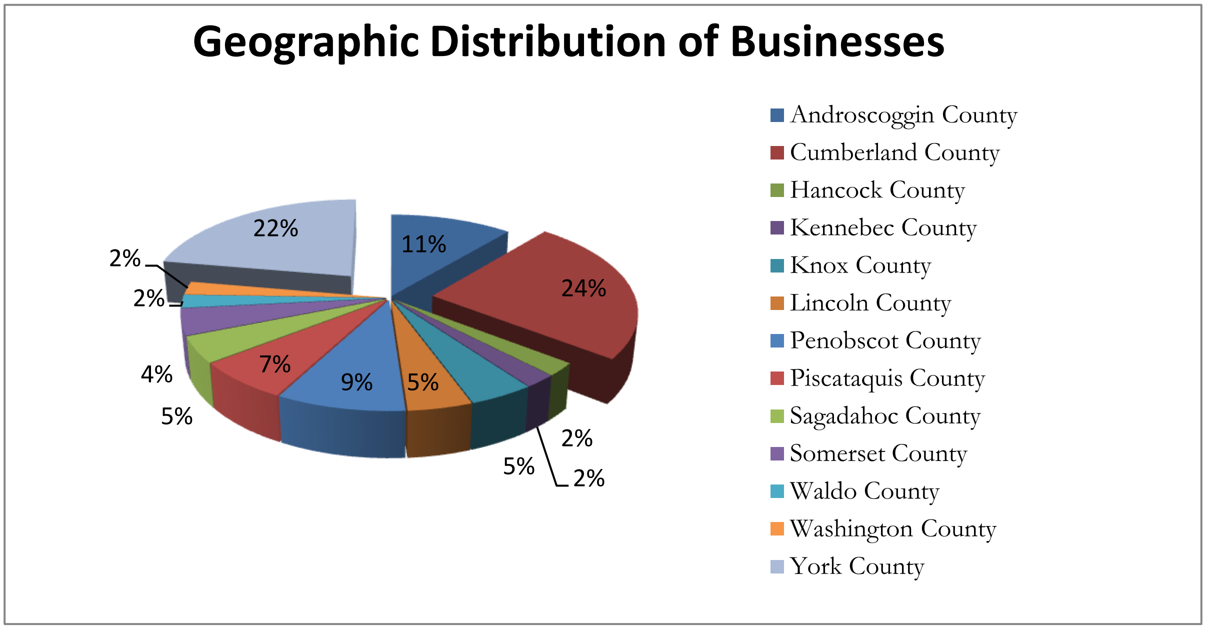
Letters and copies of the survey were sent to the 90 companies to recruit them to participate in the survey (five of those companies had gone out of business). In some cases, volunteer surveying partners contacted businesses to conduct in-person interviews, while most other businesses completed and returned the surveys by mail. The process was completed by early December 2013. A complete list of survey data items is included in the Final Report.

KEY FINDINGS

WORKFORCE

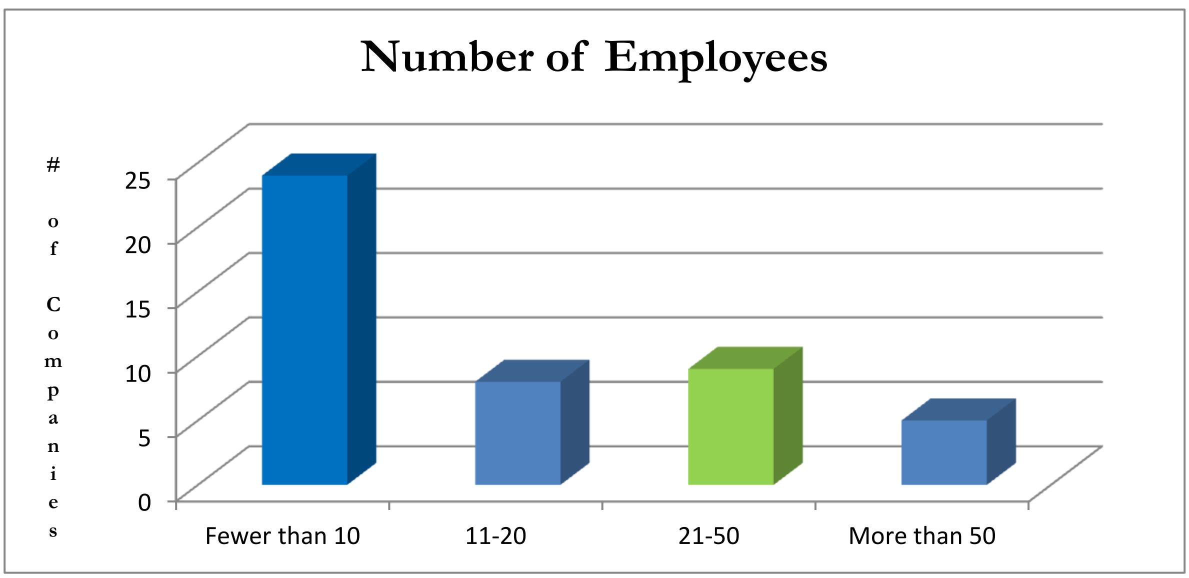
In all, 46 textile companies, 51% (54% when excluding the closed businesses) participated in the survey, representing 13 of Maine's 16 counties. About a quarter of the respondents, 24%, are located in Cumberland County, followed by 22% in York County and 11% in Androscoggin County (table 1).

TABLE 1



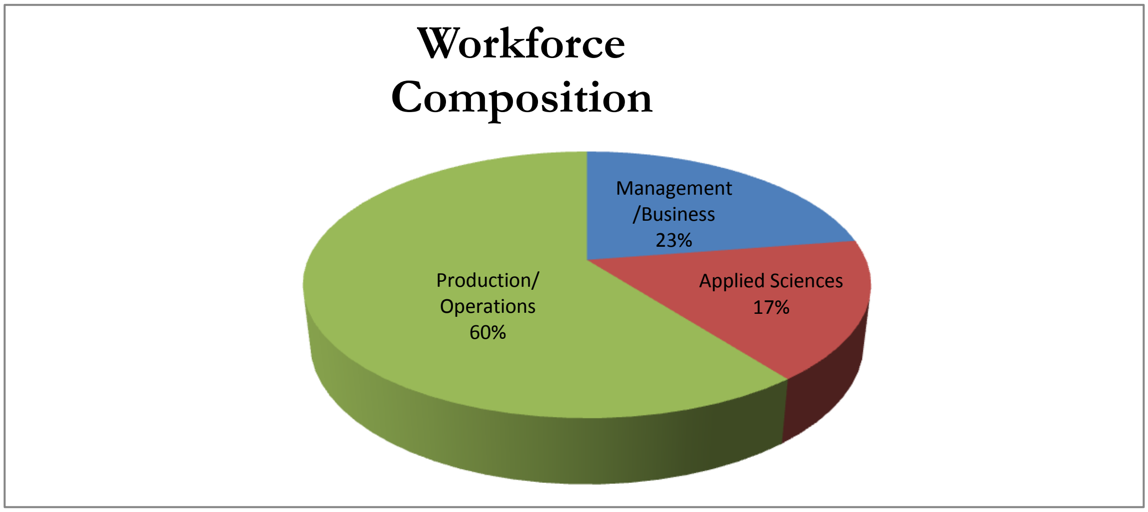
The companies surveyed currently employ 1,405 individuals. The size of the companies and the distribution of their employees varied. Employer size ranged from 3 to 258 employees. The lion's share, more than 52% of the companies, employ fewer than 10 workers. Eleven percent (11%) of the companies employ more than 50 employees (table 2).

TABLE 2



Of the 1,405 individuals employed in the participating companies, employees can be classified into three occupational clusters: Management/Business, which includes management, supervision, sales, and business development; Applied Sciences,which includes research and development, engineers, and technicians; and Production/Operations,which includes mechanics, machine operators, and production workers. Eight hundred and fifty (850) individuals, 60% of the workforce employed in the these textile companies, are involved in production, 238 (17%) are employed in applied science occupations, while the remaining 317 (23%) are classified as business management and administration (table 3).

TABLE 3



Over the next three years, many of the companies surveyed anticipate job growth in key occupations. Inclusive of both expansion and replacement jobs, nearly 500 full-time positions will need to be filled. An additional 166 part-time jobs are also expected to be created over the next three years (table 4). The range of jobs is anticipated to be broad, but the greatest need will be in areas of Production followed by Management (table 5).

TABLE 4

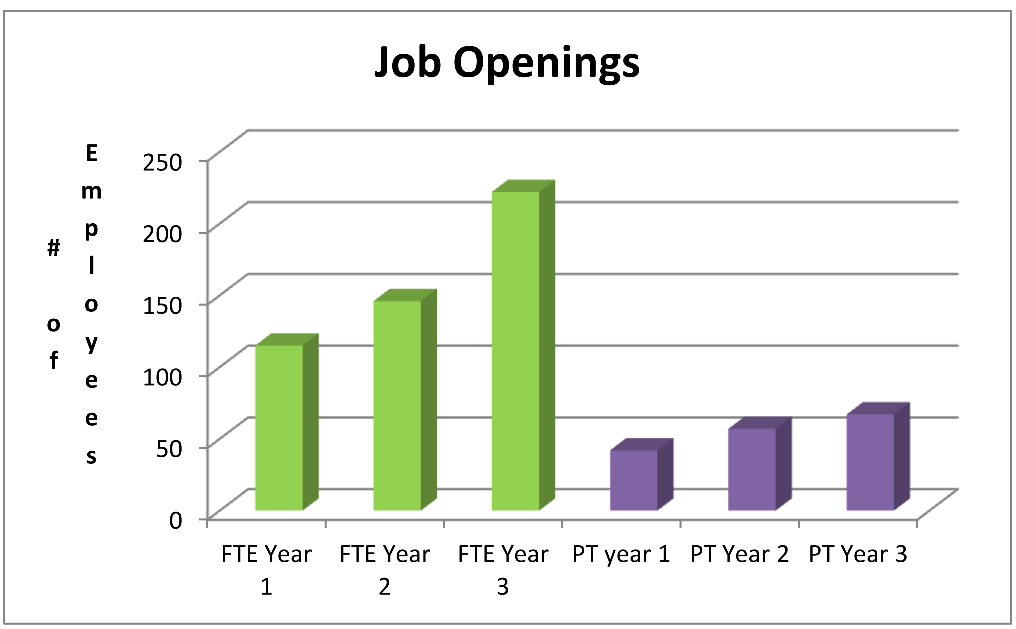


TABLE 5

Areas of Expected Job Growth		
Management	**Applied Sciences**	**Production**
Office/CSR	Manufacturing Engineer	Production Machine Operators
Quality Control	Technicians, Engineers	Weavers
Sales, Website Management, Office	Dye Master, Dyeing Support Positions	Production Workers
Business Development	Engineer	Production- Weavers, Burlers, Pounders, Finishers, Shippers
Product Manager	Designers	Cutters, Stitchers, Installers
Quality Manager	Designers	Packers, Operational support
Management, Executive Staff		Skilled Spinners, Floor Help (to be trained in-house)
Sales/Marketing		Machinist
Office Support		Production Workers
Production Manager		Shipping
Sewing Supervisors		Production, mostly Stitchers
E-commerce Manager		Production- Cutting Position
Sales Associates		Production- Sewing Machine Operators
IT, Customer Service, Planning		Sailmaker
Director of Sales, Production Manager, Designer		Weaver, Hemmer, Dresser
		Stitchers
		Studio Production Work
		Production
		Sewers
		Production
		Operators
		Shipping, Manufacturing
		Sewers, Shippers
		Marine Canvas Stitchers (Sewing)
		Quality/Testing/Production
		Production Workers
		Machine Operators
		Production-Metal and Fabric
		Production
		Production
		Machine Operator

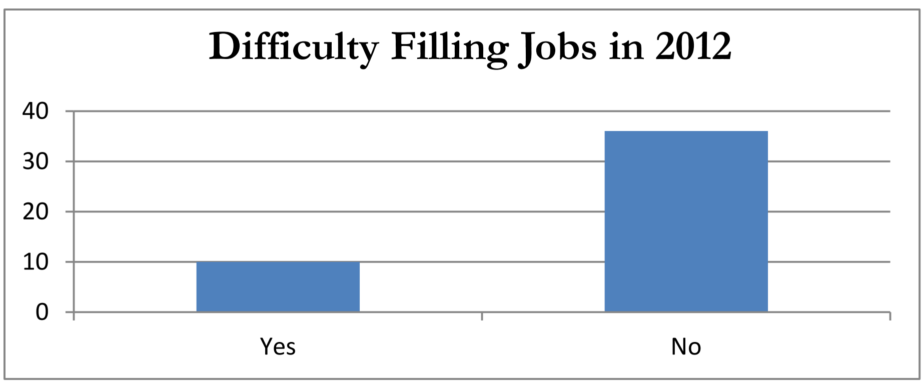
While 13 companies do not anticipate that new workers will have skill deficits, 32 businesses (70%) reported concern over a short supply of skilled workers to meet their workforce needs. Areas in which skilled and semi-skilled labor are needed include marine canvas stitching; manual machining/lathes; CNC numerical control machining; CMM machining; traditional manufacturing skills, particularly experienced stitching technicians; hand sewing; dyeing; and skilled sulzer loom technicians. Other businesses anticipate some difficulty in filling positions such as in website programming; social media/marketing; IT; engineering; as licensed electricians; and as business development managers.

The lack of relevant work experience in the textile industry may prove to be a barrier and will likely warrant the need for On-the-Job Training (OJT). Good eye-hand coordination, forward thinking, energy, detail-oriented focus, mechanical aptitude to provide equipment maintenance (in some cases, for antiquated machinery), and good math skills are some of the important attributes that companies seek.

In 2012, 10 companies (22%) had difficulty filling jobs (table 6). Among those positions were Skilled Machine Operators & Weavers, Cutters, Stitchers/Sewers, Hemmers, Electricians, Loom Technicians, CNC Machinist, Spinner, Finish Tender, general Warehouse/Shipping staff and Sales.

Though filling job openings was not a significant problem last year, as companies expand their workforces, finding sufficiently skilled workers is expected to be a challenge.

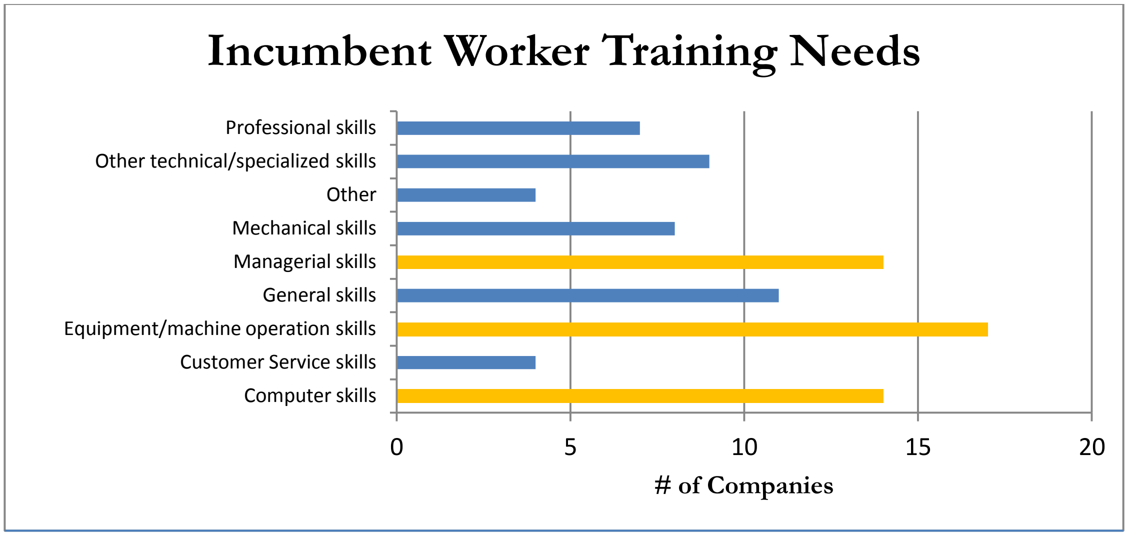
TABLE 6



TRAINING

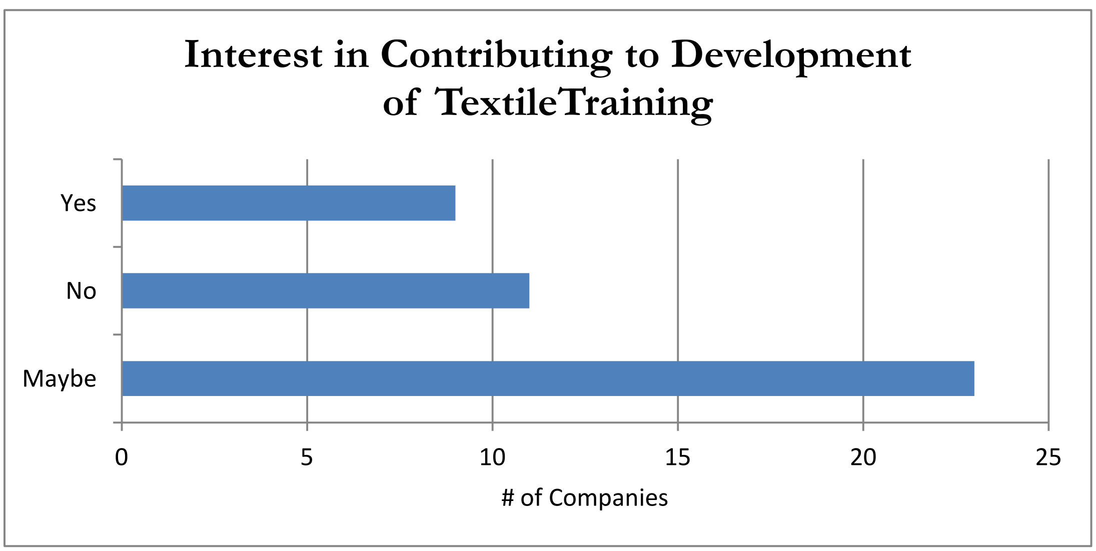
The textile companies identified a variety of areas in which their current employees need training. The most significant training need is in equipment and machine operation (37%). Computer skills and managerial/supervisory training is identified by 30% of companies as a training need; while 24% identified general skills such as basic math, reading, writing, and problem solving. Training to enhance technical and other specialized skills fell closely behind (table 7).

TABLE 7



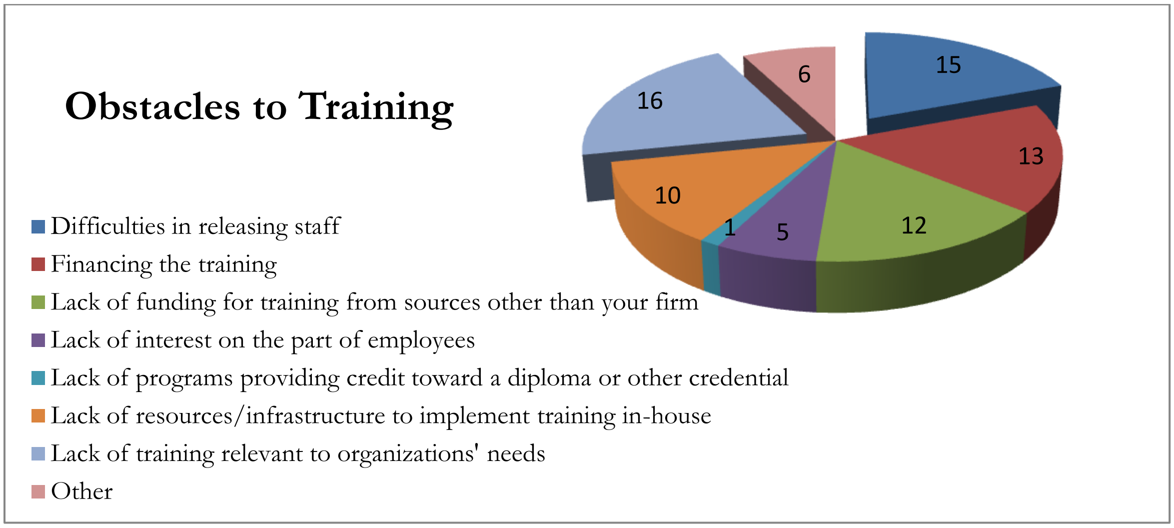
Thirty-two of responding businesses indicated that they *would* or *may* be interested in contributing to the development of a textile training/certificate program for entry-level workers. Modules may include Safety, Quality Practices, Manufacturing Processes, and Technical skills such as Production Methods for Fabrics, Yarn, and Fibers. Nine indicated a definite interest in contributing to the development of such a program (table 8).

TABLE 8



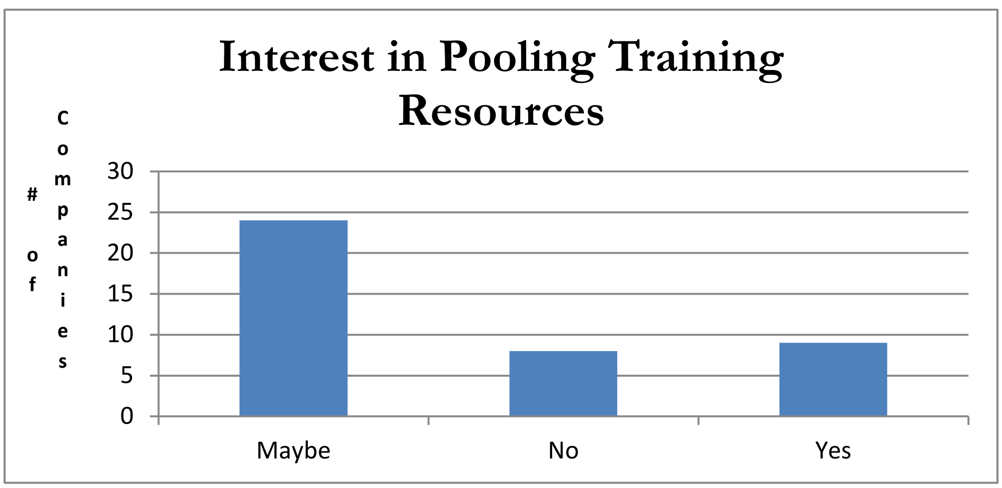
Several obstacles to training were identified. Most notable and perhaps not surprising given the specialty nature of many of the products produced, 35% of the businesses cite the lack of training relevant to their organizations' needs. Perhaps, with the exception of the Maine College of Art (MECA), there is little training or educational infrastructure in place for this sector to train or upgrade workers' skills. At least 33% of businesses indicate they would have difficulty releasing staff. More than half of the companies mention the lack of funding/financing for training as a significant barrier to preparing the textile workforce (table 9).

TABLE 9



Clearly a number of the companies do not have the means to finance training, presumably because the majority are small enterprises that customarily lack training budgets. However, many have some interest in pooling training resources with other companies in Maine. Nine (9) companies surveyed are interested in pooling training resources, while another 24 may be interested in considering such an arrangement (table 10).

TABLE 10



The best time of year for employees to attend training varied, though nine (9) companies indicated winter months would be most amenable to embark on any type of training initiative. Seven (7) companies felt that early to late spring would be best timing for training, while six (6) would opt for fall. Another seven (7) indicated the timing didn’t matter or the timing for training would fluctuate because of superseding production needs.

EXPANSION/ BUSINESS CLIMATE AND COMPETITIVENESS

Twenty-six (26) of the companies surveyed (57%) indicated that they have plans for business expansion, while another 18% indicated that they may be expanding (table 11). The type of expansion varies. Among the respondents, 50% plan to expand their workforce, 39% plan to increase production, and another 20% indicate a potential need for additional warehouse space (table 12).

TABLE 11

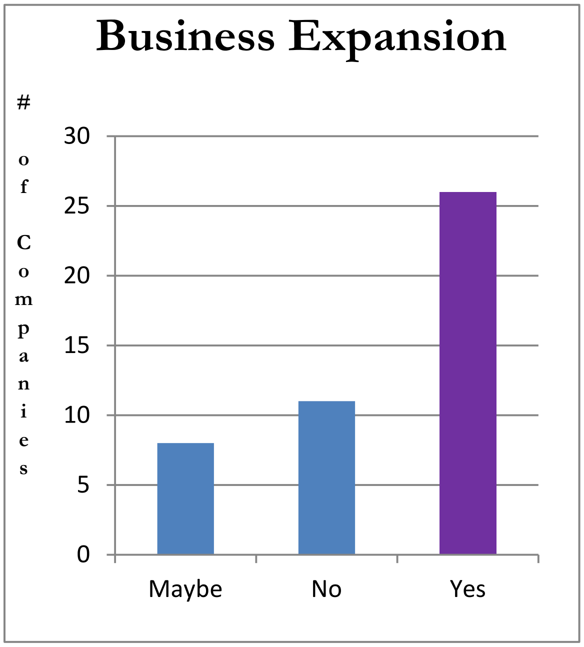
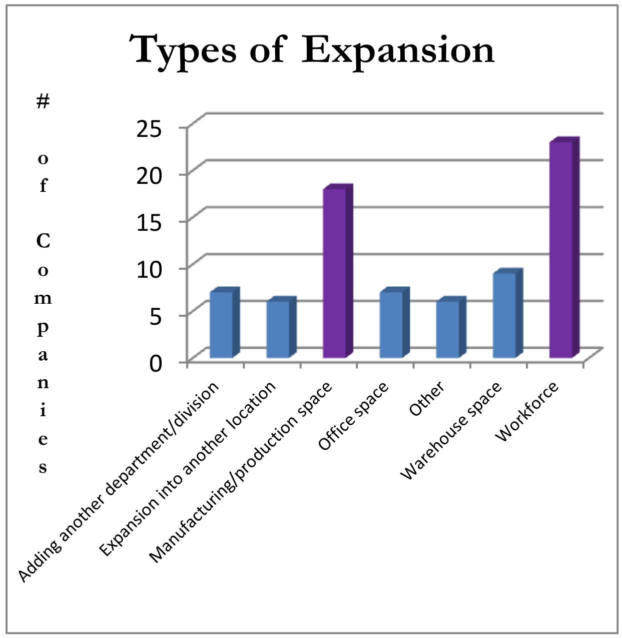
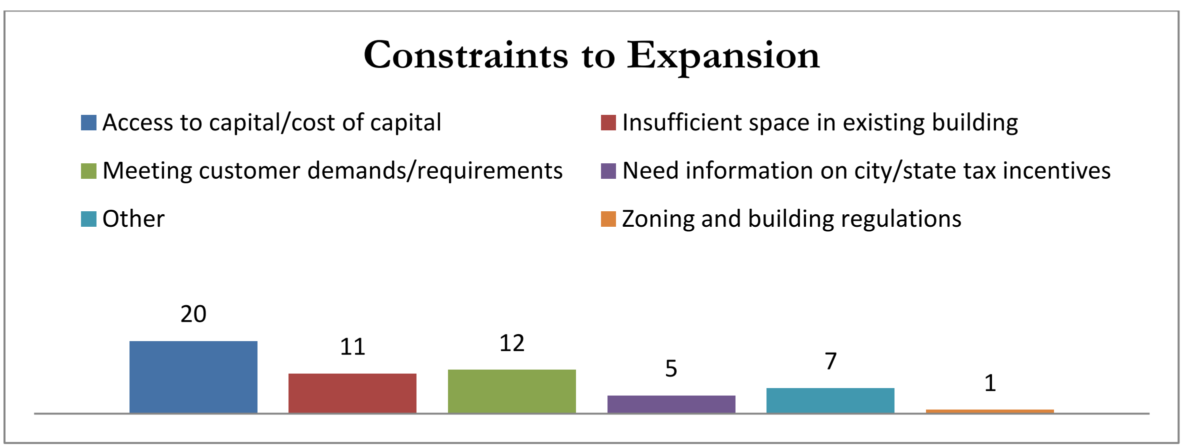


TABLE 12



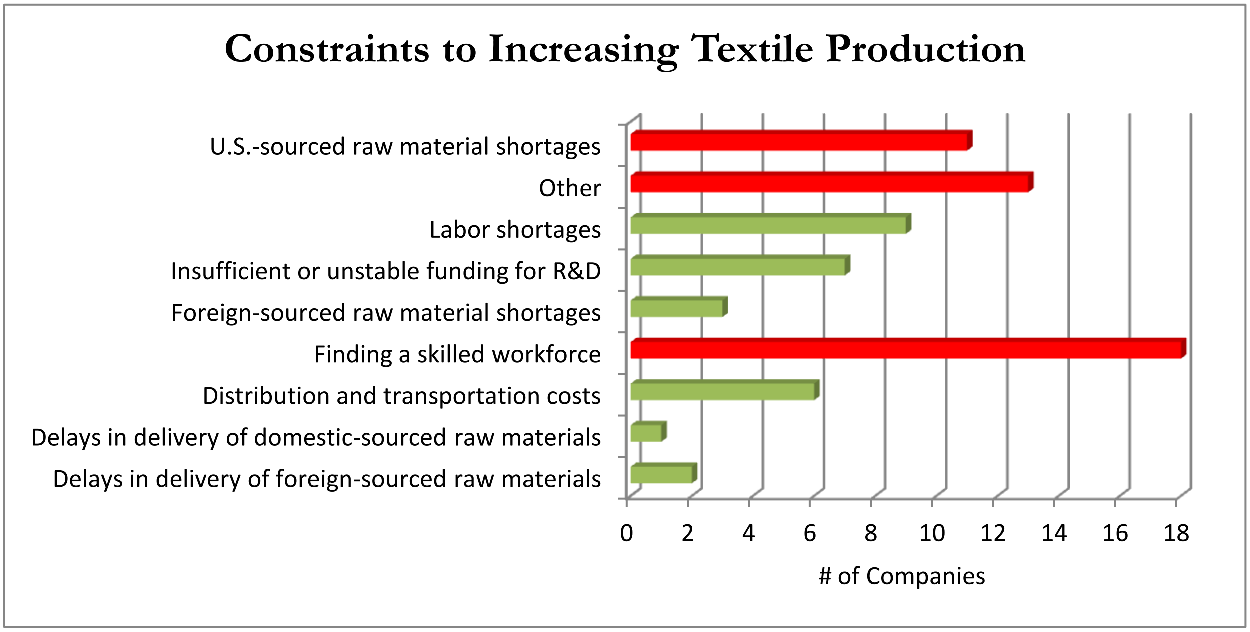
Companies surveyed reported some constraints to expansion. Among the most notable was access to capital/cost of capital, cited as the biggest constraint to expansion for 20 of the textile companies. Meeting customer demands/requirements was a constraint for 12 businesses, closely followed by insufficient space at their current locations (table 13).

TABLE 13



Companies identified a number of difficulties they would experience in their efforts to increase domestic textile production (table 14). Eighteen (18) companies (39%) identified *labor shortages* and/or *finding the skilled workforce to meet production and quality demands* as constraints to increasing production. A significant number of companies, 28%, identified *"other"* constraints. These included concerns with product marketing; level of business management skills; cost of "American-made" products; customers continuing to buy foreign-made products; cost of commodities/cash flow challenges; impact of economic downturn on orders; sales demands; and production facilities. Some 24% of the companies think the *shortage of U.S. sourced raw materials* limits production expansion. To a lesser degree, seven businesses think *insufficient or unstable funding for R & D* is a limiting factor.

TABLE 14



BUSINESS NEEDS

Some companies expressed immediate business needs or concerns keeping them up at night that could be addressed by local governments, the State of Maine, or local private entities. While a handful of companies have no business-related concerns, others have unease in three areas: the cost of doing business in Maine, their customer base, and the workforce.

About one-third of the companies have concerns with the cost of doing business in Maine though these worries varied. Among the concerns are a lack of local support and understanding--a sentiment that small businesses pay the highest taxes yet have the least support from local constituencies; loss of tax credit incentives for potential funding parties; the costs of Workers' Compensation and healthcare insurance; and governmental/environmental regulations. A number of businesses indicate that funding, cash flow, and other business start-up challenges keeps them up at night.

A half-dozen companies have concerns or business needs related to their customer base. Among them were challenges to start-up businesses including finding the right market-channel access partners on a global basis; the volume of business vs. customer demands and turnaround expectations; and the need to increase their sales and customer base. Though companies recognized there is a lack of a skilled workforce, only three expressed losing sleep over this apparent lack of a skilled labor pool. Those few recognized the shortage of skilled cutters and the lack of sewing skills among potential employees as a pressing issue. Location is a concern for some companies, namely the lack of access to the Internet in their local area and difficulty with shipments in and out due to road closure restrictions in the spring.

On a scale of 1 to 4, with 1 being *A Very High Need*, and 4 being *A Very Low Need*, companies rated their needs for a range of business development services. The services included:

- One-stop shops, such as trade associations, to provide linkages and promote the industry
- Professional information services
- Advice or consultancy on specific business areas relevant to their business
- Specific training courses
- Provision of facilities such as incubation units or technology parks
- Financial services like guarantees, loans, grants, etc.
- Research and development capacity

The most significant business services considered necessary are in the areas of *Business Consultation* and *Specific Training Courses*, while companies rated the lowest need for *Incubation Units/Technology Parks* and *One-Stop Shops* to support and work on behalf of their sectors. The survey respondents rated *Financial Services* and increased *R & D Capacity* as somewhat high needs. The degree of need varied from company to company, and the need specific to any one service ranged from high need to low need for individual businesses. The chart represents the average score of all business surveyed (table 15).

TABLE 15

Business Needs	Average Score*
Advice or consultancy on specific business areas relevant to their business	2.3
Specific training courses	2.3
Research and development capacity	2.4
Financial services like guarantees, loans, grants, etc.	2.4
Professional information services	2.5
One-stop shops, such as trade associations, to provide linkages and promote the industry	3.0
Facilities such as incubation units or technology parks	3.3

R & D FUNDING

Only four of the companies have received government (Federal, State or Local) research grants related to textile research and development during the last three years. This lack of sufficient funding/access to R & D capital was a concern for at least seven of the textile sector companies.

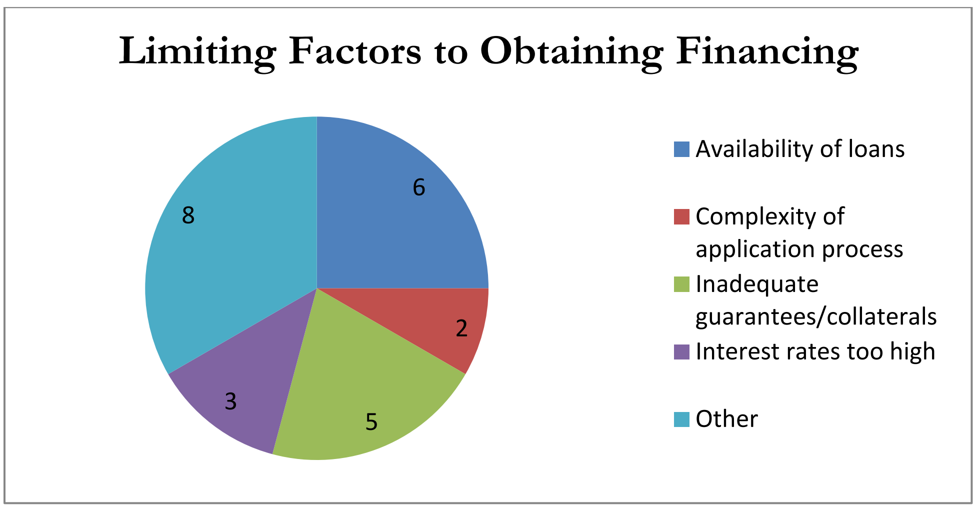
FINANCING

Most companies have been able to obtain financing that addresses their business needs. A number of businesses reported that they recently had acquired financing or have not had the need for additional financing. Some do not have any outstanding debt and have no intentions of taking on any additional debt. However, nearly one-third of the businesses indicated they were not able to obtain sufficient financing/loans to meet their business needs. Five companies cited inadequate guarantees/collateral necessary to access the funding they need; six companies considered the availability of loans as a limiting factor to obtain financing while three companies considered interest rates too high (table 16).

Eight companies reported that "other" factors have influenced their ability to access or seek additional financing. These factors include a build-out overrun; a need to build customer base before taking on additional debt; several are working on paying down debt; and one company indicates that though they have been able to get financial support from other businesses, it has been difficult to get financing from banks. A few companies indicated they would be interested in venture capital but have had no interest from those entities, while another start-up company is fully capitalized with venture capital but states there is not adequate venture capital in Maine.

Lastly, one company reported that to some degree a combination of all the factors, the availability of loans, lack of collateral, high interest rates, and the complexity of the application process limits their ability to access financing. That particular company has a product which has demonstrated significant market interest and currently imports their core item from Asia. They believe they can produce their product in Maine and create hundreds of jobs here, but will need financing.

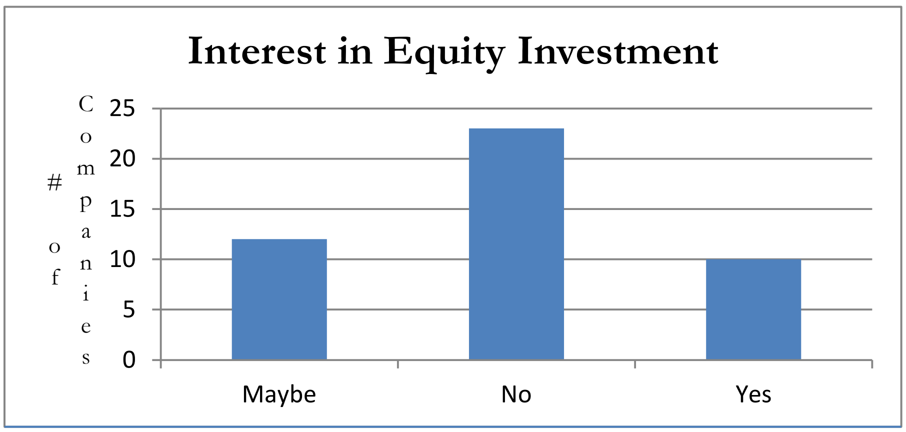
TABLE 16



The most noteworthy financing needs fall into several categories: new/upgraded equipment; working capital; energy upgrades to facility; staff development; and research and development. Fifteen (15) companies state the most significant need is for working capital to invest in training/staff development & hiring world class talent, and sales & marketing. Eleven (11) companies identify a need for new or upgraded machinery and equipment. Five (5) companies have a need for financing for R & D/product development. A couple of companies cite a financial need for energy upgrades, two (2) mention relocation and real estate costs while another two (2) see financing for purchasing product and raw materials as significant financing needs.

There is some interest on the part of companies to explore selling an equity interest in their business to investors (local investors, seed/venture capital, business angels, etc.) to raise capital. Ten (10) companies expressed interest in equity investment as a means to raise capital for their businesses, while another twelve (12) may be interested in exploring equity as a capital option for their businesses (table 17).

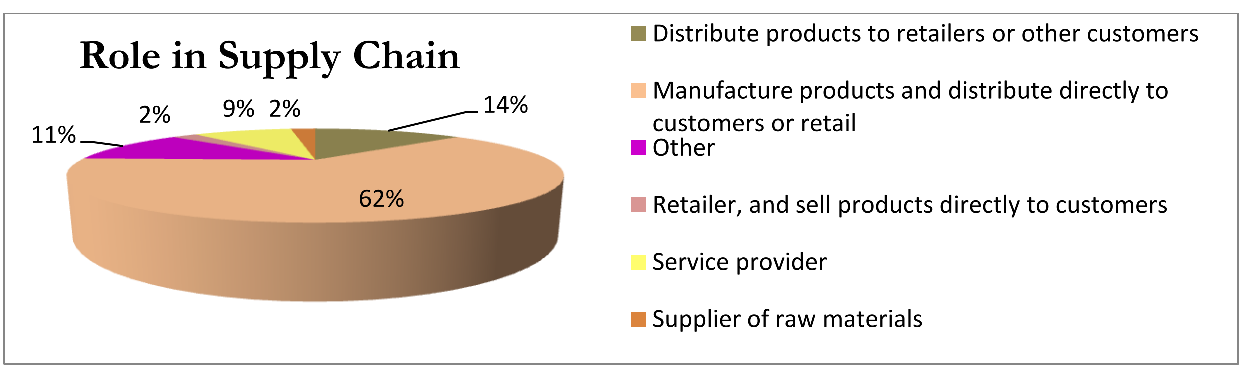
TABLE 17



TEXTILE INDUSTRY SUPPLY CHAIN

The companies surveyed have different roles in the supply chain and 18 reported that they assume multiple roles. Most companies (61%) manufacture products and distribute directly to customers or retail. Five (5) distribute products to retailers or other customers; three (3) are service providers; and one (1) is a retailer selling products directly to customers while two (2) enterprises supply raw materials (table 18).

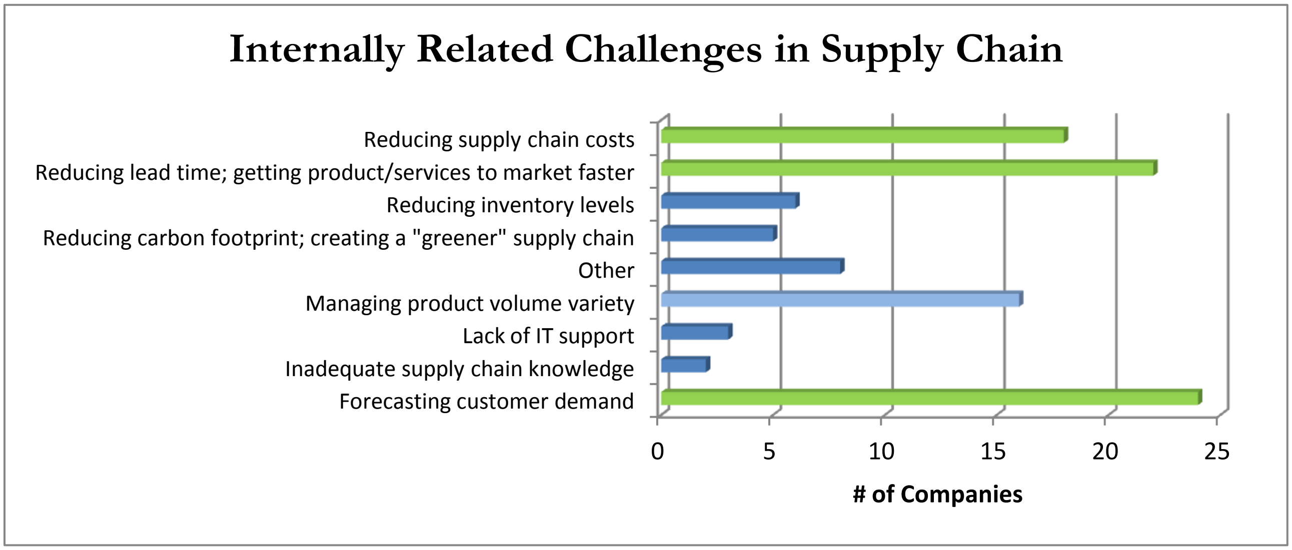
TABLE 18



CHALLENGES

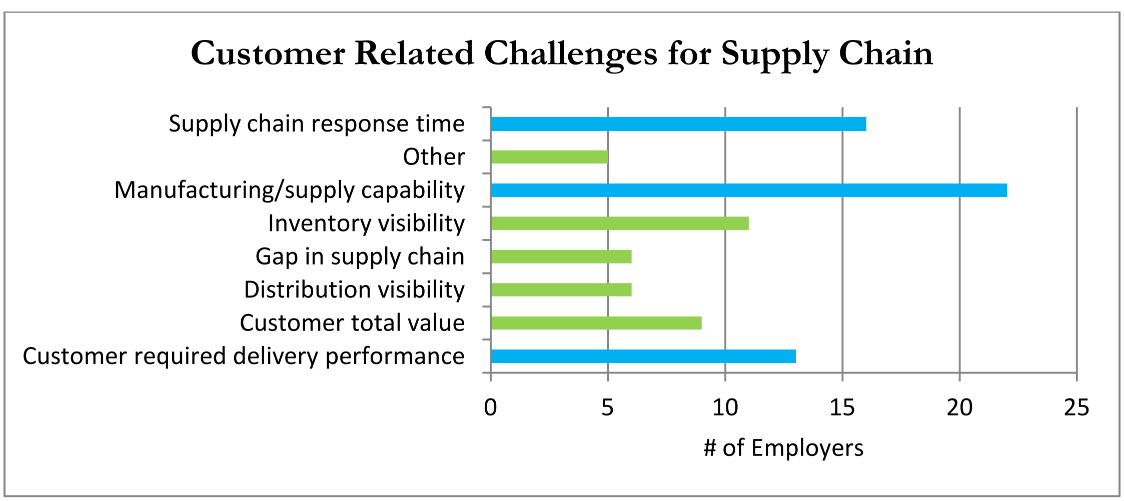
More than half (52%) of the textile companies view *Forecasting customer demand* as the most significant internally related challenge for their supply chain. *Reducing lead time* (48%), followed by *Reducing supply chain costs* (39%) are cited as the other two notable internally related challenges in their company's specific supply chain. *Managing product volume variety* falls just slightly behind at 36% (table 19).

TABLE 19



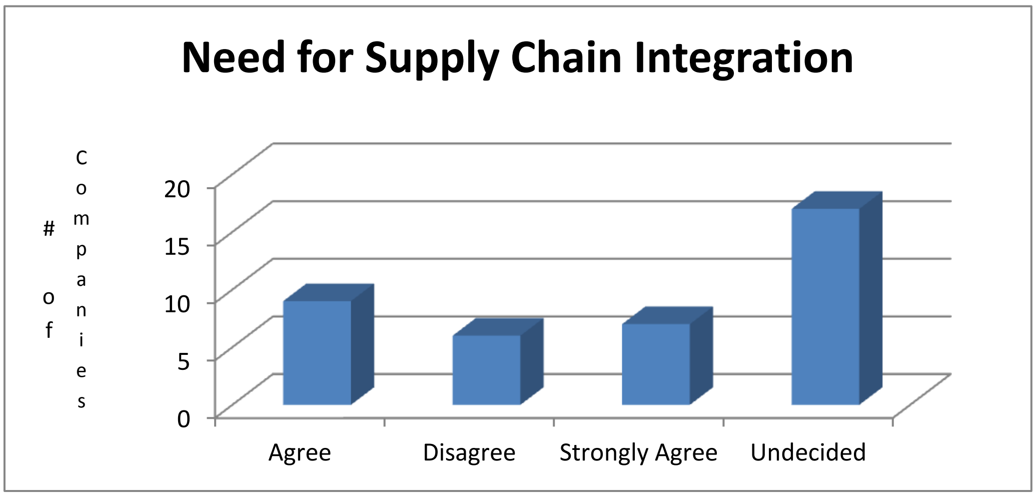
Manufacturing/supply capability is the greatest customer-related challenge for the companies' supply chains at almost half (48%) of the businesses; 35% of the textile firms are challenged by the supply chain response time; and customer required delivery time is identified as the third most pressing challenge (table 20).

TABLE 20



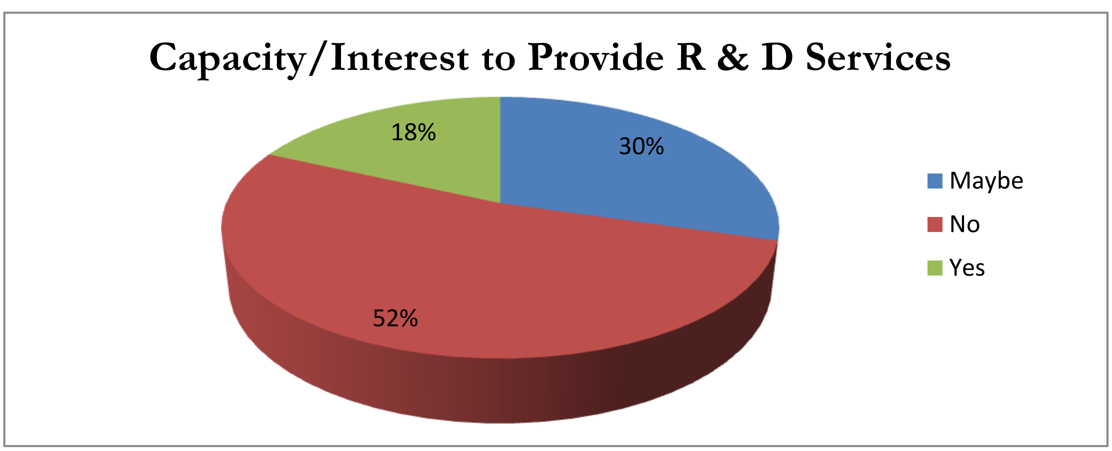
Over one-third (35%) of the textile companies surveyed, agreed or strongly agreed that outside market demands are driving the need for implementing Supply Chain Integration (table 21). Seventeen (17) companies were undecided, while seven (7) did not think implementing Supply Chain Integration is necessary. Most companies are not utilizing any IT solutions to manage their supply chain. Those that do, mainly the larger companies, use a variety of software tools including Finance, Inventory Management, CRM; full-blown MRP system; Shopify; MRP; Fishbowl; GRP, Ininum; Made to Manage, and several use QuickBooks. Many companies seem hesitant to adopt and invest in effective Supply Chain Management (SCM) solutions, despite citing increased supply chain response time and other more demanding customer requirements as the top concerns facing their organizations.

TABLE 21



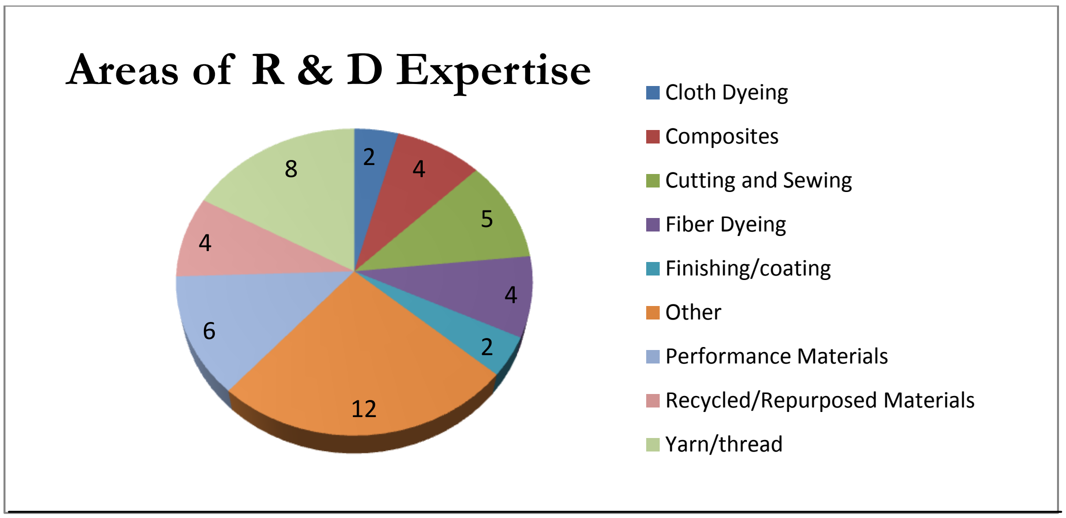
The majority of textile companies are not interested in providing R & D services to other companies. However, 18% of the respondents do have the capacity and willingness to provide R & D services to other companies, while 30% may consider providing such services (table 22).

TABLE 22



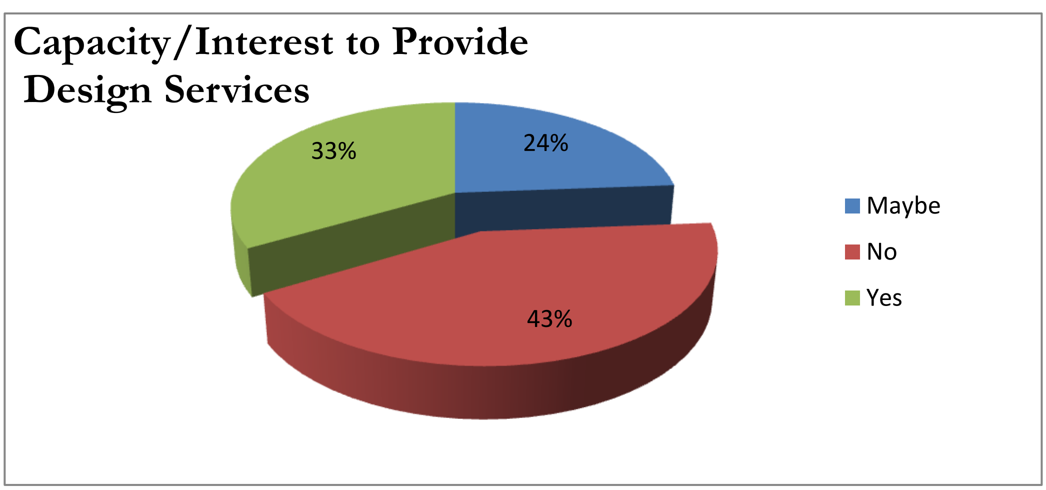
Much of the capacity and interest to provide R&D services to other companies is in the yarn and thread sector with eight (8) companies expressing interest, and, in the performance material sector, six (6) companies stating some interest in providing R & D. However, twelve (12) companies have areas of expertise beyond those listed, with capabilities including design/development; production of an original textile; testing of detergents; footwear; raising, breeding, sheering alpacas; wet felt, needled felt, fabrication & die-cutting; meld-blown non-woven products from polylactic acid and other petroleum based polymers; and specialty textiles (table 23).

TABLE 23



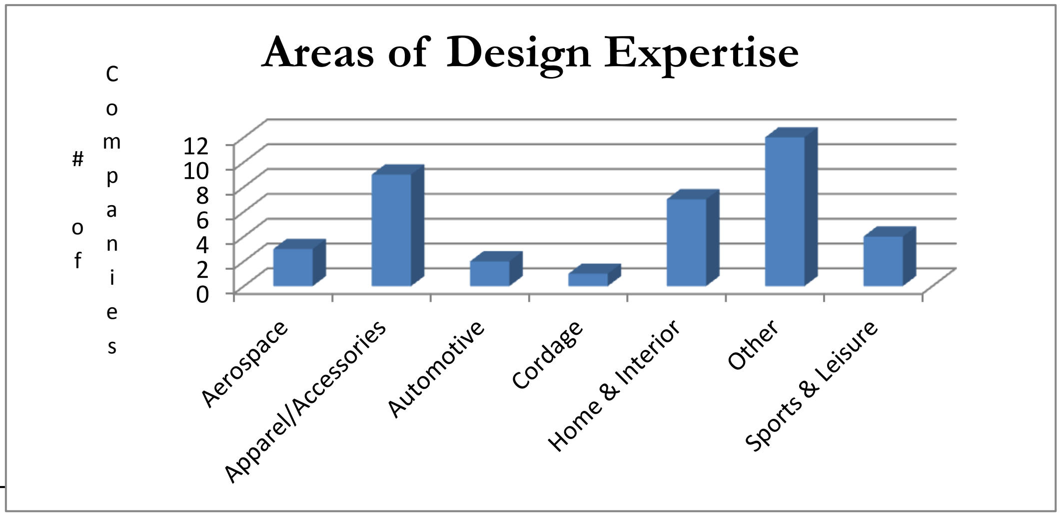
A significant number of businesses (57%) also have or may have the capacity and/or willingness to provide design services to other companies. Less than half do not have any interest in providing these services (table 24).

TABLE 24



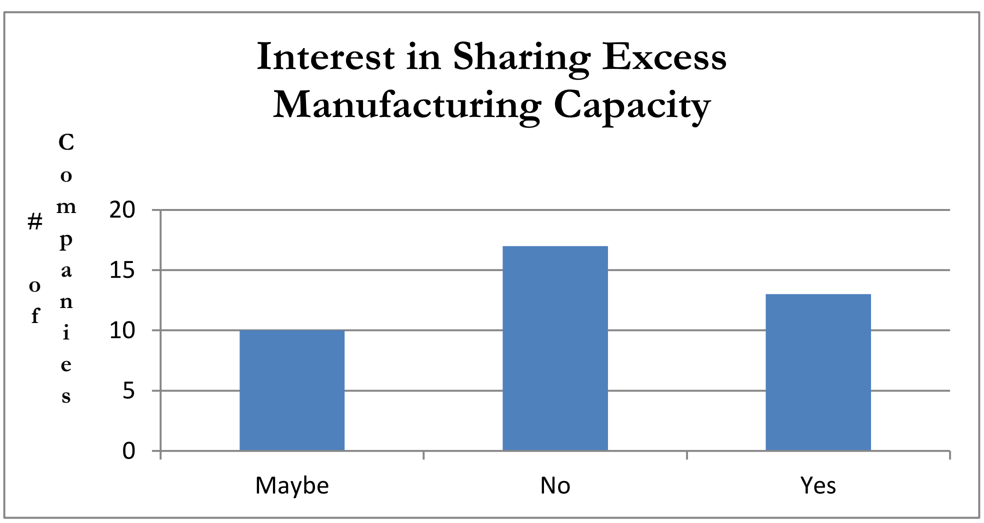
Nine (9) textile companies surveyed have design expertise in the apparel/accessories sector, seven (7) in home and interior design and eleven (11) companies have expertise in "other" areas including sewing/cutting; yarn/fiber for spinning, weaving, knitting and felting; fiber dyeing process; industrial/office fabrics; graphic design/print-making; marine canvas covers; U.S. government /military; textile and coating products; sails; cleaning/microbe control; and yarn/thread (table 25).

TABLE 25



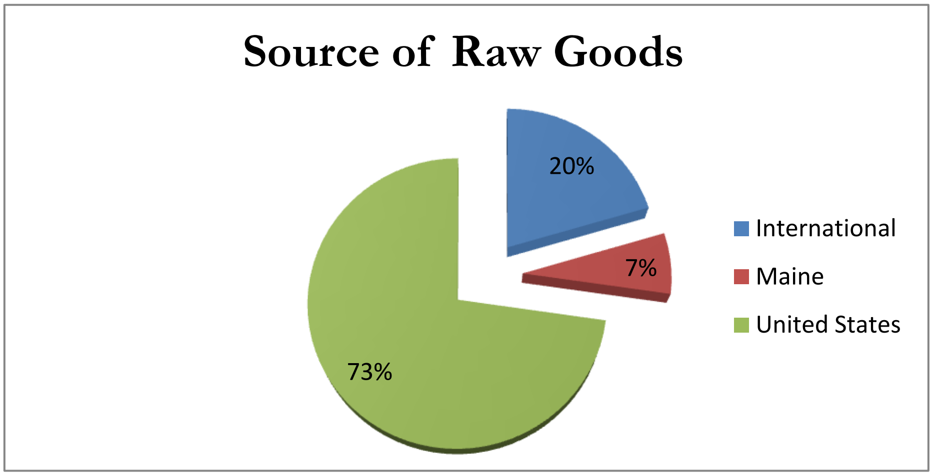
There is also some interest in sharing excess manufacturing capacity with other Maine based suppliers. Thirteen (13) companies have an interest in sharing excess manufacturing capacity with other Maine suppliers, while another ten (10) may have an interest. The manufacturing processes that these companies possess in-house are not conclusive as many companies did not respond to this follow-up inquiry (table 26).

TABLE 26



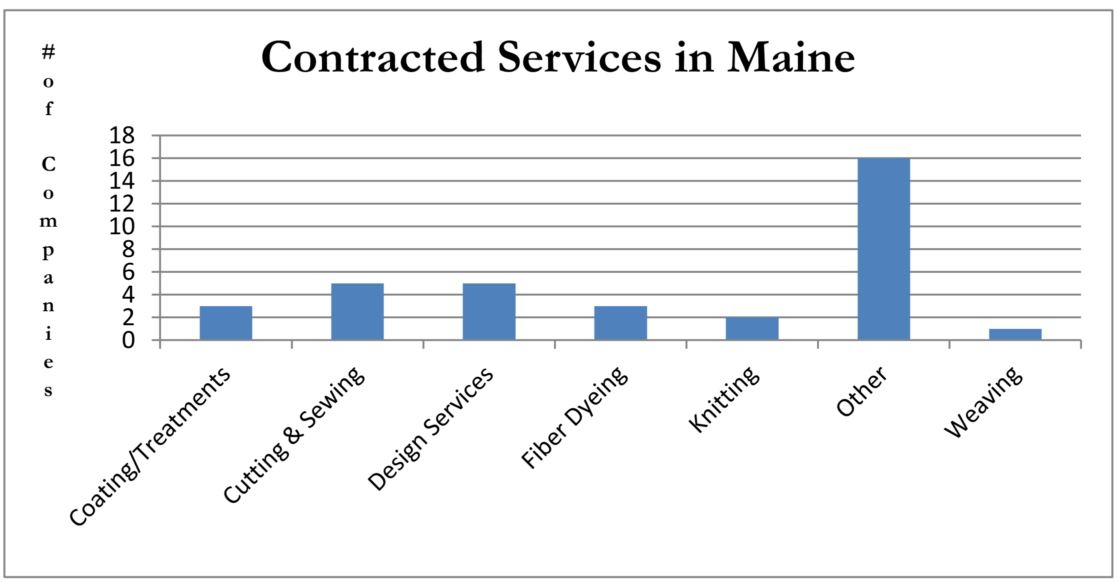
Most of the textile companies (80%) either get the majority of their raw goods from Maine or elsewh in the United States. About one-fifth of the businesses get their raw goods from international sources (table 27).

TABLE 27



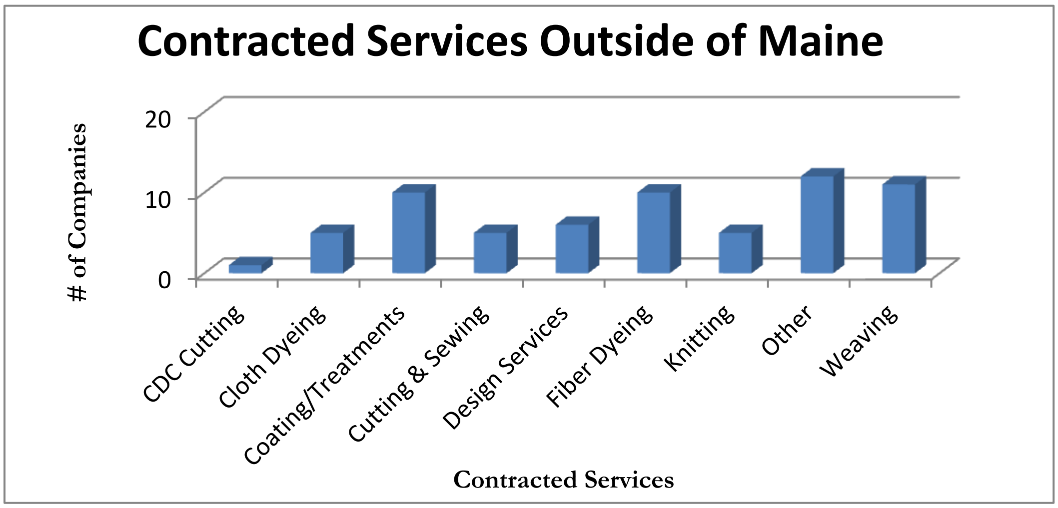
Textile businesses responding to the survey contract for a variety of services from other Maine companies. They selected all services that may apply to their businesses operations. Five (5) companies contract for cutting & sewing; five (5) for design services; three (3) for coating/treatments; three (3) for fiber dyeing; two (2) for knitting and one (1) for weaving. Companies also contract out to other Maine companies for other services as well, such as labor; screen printing, yarn processing, spinning, monogramming, injection molding compounder, silk screening; leather, thread, machines; water treatment; shipping of finished product; IT; and architecture (table 28).

TABLE 28



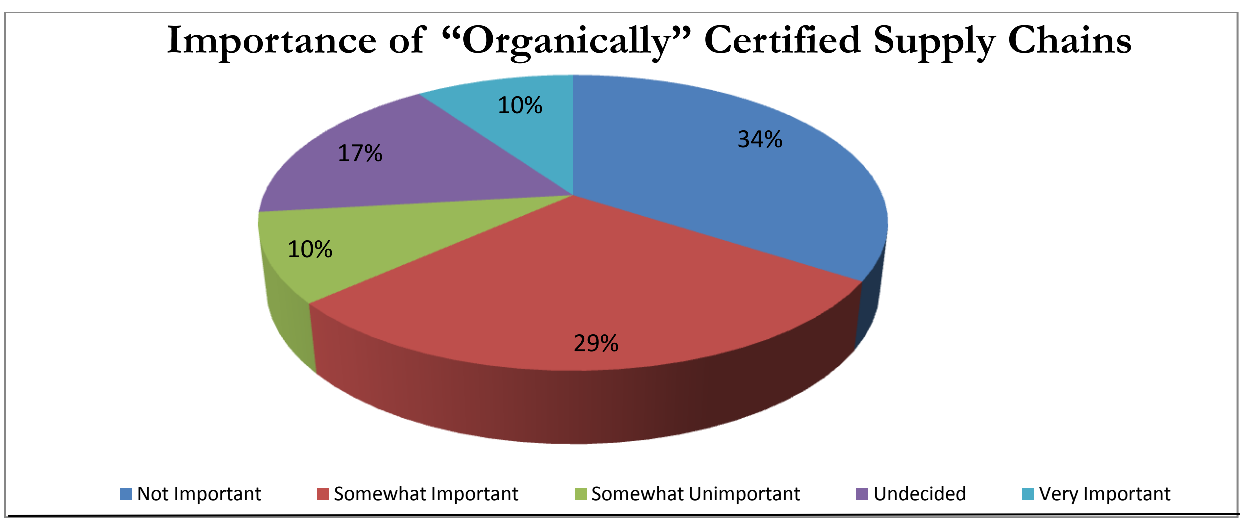
The Maine textile companies surveyed also contract with out-of-state companies for a range of services. One company contracts with an out-of-state firm for its CDC cutting. Nearly one-quarter (24%) of the companies rely on non-Maine contractors for weaving services. Twenty-two percent (22%) contract for fiber dyeing, and 22% contract for coating/treatment services. Thirteen percent (13%) of the textile companies contract for design services. Eleven percent (11%) contract with out-of-state firms for cloth dyeing, cutting & sewing, and knitting. Twenty-six (26) of the respondents contract for "other" services. The "other" services include: spinning; laundry; leather, soles; machine repair; dye mixing; yarn distribution; twisting; yarn processing; and purchasing products for the company store (table 29).

TABLE 29



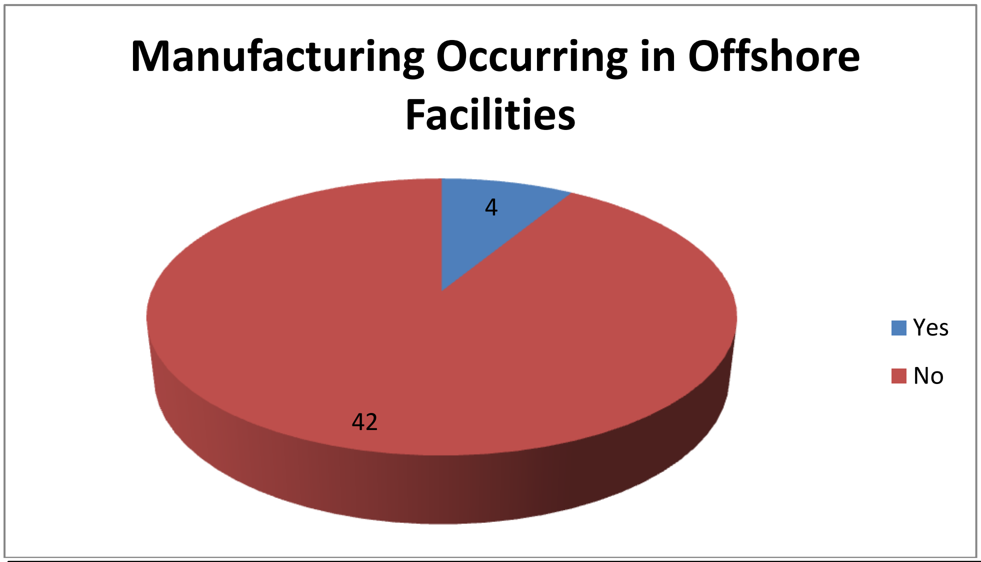
Of the employers surveyed, 34% do not think it important for their supply chains to be "organically" certified (as opposed to individual components of the chain/source materials being certified), while 29% think it is somewhat important and 10% think it is very important (table 30).

TABLE 30



Among the textile companies surveyed, only four companies manufacture products offshore (table 31).

TABLE 31



SUMMARY OF SURVEY FINDINGS

Clearly, the re-emergence of domestic manufacturing is good news for the textile industry in Maine and the United States. Consumer demand for U.S./locally-produced products is up, and companies surveyed have had various degrees of success in finding niches for their products and services, though a number of companies would like to broaden their customer base.
Employers project considerable growth over the next three years. Of the firms, 56% report expansion plans, mostly in the areas of workforce and production. Including both expansion and replacement jobs, the firms surveyed indicate the desire for nearly 500 new entrants into the textile workforce to meet their needs for continued growth. Additionally, over 100 part-time jobs will also need to be filled. The greatest demand will be for production workers, followed by individuals skilled in management, business development and design, as well as for people with engineering backgrounds and experience.

Finding a skilled and knowledgeable workforce is a stated concern for about 70% of companies in Maine's textile industry. Companies also report significant skill needs for their current workforces, particularly in the areas of equipment and machine operation, computers and general workplace skills. There is some interest on the part of companies to develop a textile training program relevant to their organizational needs. However, survey results suggest that many companies would have difficulty financing the needed training. Further, 22% of the firms are interested in pooling training resources, while many others may be interested in exploring that strategy further, which could help address this issue.

However, there are identified constraints to expansion for these companies beyond finding and training a suitable workforce to meet business needs. Access to capital and meeting customer demand for products and services are identified as concerns as well. The cost of doing business in Maine and increasing a company's customer base are also areas to focus on to facilitate expansion of the industry. Providing business consultation and customized training are also viewed as important business services to support growth of the textile industry.

The need for financing is primarily in the areas of working capital, buying new or upgrading equipment and machinery, and in R & D/product development. Among, the companies, 22% have some interest in exploring selling an equity interest in their businesses as a means of raising capital, while another 26% may be interested.

More than half (52%) of the textile companies view *forecasting customer demand* as the most significant internally related challenge for their supply chain. *Reducing lead time* (48%), followed by r*educing supply chain costs* (39%) are cited as the other two notable internally related challenges in their company's specific supply chain. At almost half of the companies (48%), *manufacturing/supply capability* is the greatest customer-related challenge for the companies' supply chains ; 35% of the textile firms are challenged by the *supply chain response time*; and the third most pressing challenge is *customer required delivery time*. These challenges present opportunities to develop training programs and to link companies to suppliers/service providers that could improve efficiencies while increasing capacity to provide R & D, design, manufacturing, and other contracted services among Maine's textile companies.

RECOMMENDATIONS

Information gained through the survey will help the textile industry sector partnership shape and adapt services and strategies that are responsive to the textile community in Maine. A network of state and local agencies and organizations are poised to provide an array of business assistance services coordinated through CEI and the Manufacturing Association of Maine. The strategy to create outreach and to provide business services would include: outline the areas of need; assess resources needed to respond; identify appropriate provider(s); and create a referral system.

Areas of focus to address business needs include:

1. BUSINESS EXPANSION

Fifty-six percent (56%) of the firms report expansion plans.

- Assess the findings and develop an outreach strategy to address expansion efforts either through one-on-one business assistance or consortium assistance.

2. TRAINING

The current training infrastructure is inadequate for both the number of people trained and also the types of specialized training that meets employers' needs. New for 2013, Maine College of Art (MECA) began offering a major in Textile and Fashion Design, which is the only formalized textile training available in Maine. The focus of the program is on apparel design and construction. While these courses are supported by technology, there is strong emphasis placed on hand processes. However, there is very little training in the state targeted at the shop-floor level. The newly inducted workers in the textile sector mostly learn through informal training and learning from the experience of the existing workforce, but employers indicate the need for additional training for both their current workforce and new entrants.

- Structure a sector partnership.
- Training needs have been identified. Put a training plan in place; identify the appropriate training providers; and coordinate the training in either a consortium/cluster or customized training.

3. BUSINESS ASSISTANCE

The highest business service need is in the area of Business Consultation**.**

- Assess the findings and develop an outreach strategy to address business growth strategies.
- Identify partners.

4. SUPPLY CHAIN

The challenges reported by companies present opportunities to develop training programs and to link companies to suppliers/service providers that could improve efficiencies while increasing capacity to provide R & D, design, manufacturing, and other contracted services among Maine's textile companies. Resources are needed to fund the supply chain platform.

- Identify resources/funding.
- Outreach and begin development of the Maine Textile Supply Chain Platform. (Review Textile Connect web site; North Carolina)

CONCLUSION

In Maine's textile sector, both traditional and high performance companies are clearly expanding and in need of assistance and services. Since 2010, the Manufacturers Association of Maine and CEI have partnered with this sector to identify and address their challenges. In the past three years, we have combined resources, knowledge, and expertise to analyze this sector. Today, we begin the implementation strategies.