



## Review Article

# Sustainable Textiles Industries in Brand Technology between Technologies of Brands

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### Abstract

Sustainable Textiles industries in Brand Technology between Technology of production Brands, The technology industry thrives on change, requiring constant experimentation and innovation. Rather than deterring new entries, highly saturated markets beckon for potentially Technology products and ideas. other hand; To stimulate customer loyalty and differentiate from competitors, tech brands strive to continually deliver Technology software updates of textiles, communicate novel use cases or launch new systems of textiles Technology and brand if textiles; to know how strategic tech company branding and marketing can help your company generate a competitive advantage in this fast-moving space.

**Methodology:** A qualitative research approach is applied analyses in-depth profile companies of the world's high-end technology of brand companies "TBC". Purposeful sampling strategy is used to select the companies. The qualitative content analysis technique is used to analyze the companies profile data.

**Results and decisions:** The findings revealed various themes, such as sustainability issues in producing technology of brand companies "TBC", improved value as Brand Technology "BT" creation processes with leading solutions, and perceived difficulties in the adoption of "TBC". Major improvements are perceived in the apparel retail business because apparel companies are more prone to adopt the Industry technologies with advanced business intelligence "BI" solutions. The results prove the pivotal role of economic sustainability in the adoption of Industry technologies in "TBC", companies.

**Keywords:** Sustainable; Textiles industries; Brand Technology; Technology of Brands

### Introduction

In today's smart manufacturing environment, the textile and apparel industry faces challenges such as efficiency, sustainability, and quick response to clients' dynamic requirements as well as product quality and regulatory compliance which ascertain its survival [1-7]. In addition, the industrial ecosystem, global sustainable business trends, and consumer-driven economy put pressure on industries to become more sustainable, innovative, and agile [3,4,8] because consumers, especially generation consumers, are more eco-aware and willing to pay for eco-friendly products [4,9,10].

A brand is a brand is a brand. And then there are technology

brands. While other industries face new competitors, technology companies face disruptors – companies that completely alter the competitive landscape and threaten the very survival of legacy players. Textiles industries in Technology Brands, The term technology brand describes brands from the technology environment, usually engineering-driven, and its definition Textiles Brand includes industry brands of different Textiles sectors. A Textiles technology brand arises in the minds of relevant stakeholders through consistent brand management by companies offering Textiles technological products and/or services and generating a major portion of their revenue with their own key Textiles technologies, so the company also has a large R&D budget. Examples of textiles technology brands in Egypt are Elmahalla Elkubra, Kafrel dawwar, 10<sup>th</sup> of Ramadan City, Fourtexas Sadat, Damietta, Diamond Cairo, MISR Amreya Alexandria, Misrayon Kafrel dawwar Egypt [5,6]. These companies receive great attention and guarantees from the state, And in cooperation with many developed countries in extending technology to the textile, clothing and accessories sector. In terms of machinery and equipment technology, it includes the technology sectors: German, Italian, French, Japanese, Korean, Russian, Swiss, Belgium, American ... countless innovative companies that work on developing, manufacturing and selling distinguished products.

To compete with international sustainability challenges in the global market [12-15]. One innovation that has the capability of structured data integration and analytics to support all industrial stakeholders with valuable information for decision-making is business intelligence systems (BIS) [14,16]. BIS is an umbrella term for technologies' techniques, tools strategies, and software systems integrated by companies to extract various and large data, according to the value processes and relevant knowledge to support a broad array of strategic, tactical, and operational business decisions [17-19]. BIS produce more informative and intelligent reports for decision makers and enhance organizational efficiency [18,20]. The application and integration of BIS have the ability to provide a 360 degree business view by supplementing not only the internal, but also the external, data from the web and markets [19-24]. As mentioned in his Ph.D. [1]. El Nashar, and its use in introducing a technology for sustainable industrialization and innovation based on science. University of Helwan, Cairo, Egypt. Ph.D. thesis entitles "Design of Database for Forecasting the Specification of Woven Fabric Design for Ladies Dresses". It is important to note that some textiles and apparel T&A companies are using advanced Brand Information, not yet broadly investigated by the researchers [25], especially under the brand Industry concept. In addition, Industry sparked the interest of researchers for application in Elnashar systems [1], but the value creation processes for sustainability from the utilization of structured and historical data have not attained the same attention [15,22]. In short, research gaps in existing studies limit comprehension of the role of BIS under the technology Industry concept to maintain sustainability in the technology brand in textiles and apparel T&A industry. Consequently, this study aims to narrow these gaps and answer the following research questions:

### Object Throw Problems

However, most of these companies are unable to turn these

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superior performances into real value, which would allow them to assert profitable prices and achieve increased sales through the brand. This shortcoming is observable across the industry, because technology companies lack the compression of performances and particularities into brands that let their technologies generate strong attraction.

The severe deficit in the production of technology for the manufacture of equipment, textile machinery, clothing, spare parts and accessories.... and dependence on imported international brands that lead to high production costs? Which is considered a fertile field for investment and sustainability strategy in this field in Egypt and the Middle East.

The severe deficit in the production of Brands for the , textile and apparel , clothing, and accessories; and dependence on imported international brands that lead to low local production throw quality and quantity, and high there costs? Which is considered a fertile field for investment and sustainability strategy in this field in Egypt and the Middle East.

The severe deficit of Artificial intelligence technology, which offers a sustainable solution to fashion, reducing overall inventory levels by 20-50% and improving labor conditions in the fashion industry.

The severe deficit of Fast fashion poses a serious threat to the planet, with global textile production more than doubling in the last 10 years.

Brands like of Seamless Woven Structures of Application in Integral Constructions are already combining Artificial Intelligent with fashion, indicating a future in which the fashion industry is efficient, sustainable, and personalized.

**The Sustainable industries:** In Brand Technology of Fashion textiles “Companies will have to take more responsibility and accountability for the impact they have on society development.” Effectively summarized the current reality of the fashion industry in a recent interview with worldwide development “WWD”. [23,24] The

problem of overproduction lies at the heart of fashion’s and increase production impacts on both the planet and the people. Brands churn out collections after collections that people don’t care to buy. According to the leading think tank Foundation for establishment the brands trademark, global textile production has more than doubled in the past 10 years. Additionally, harshly juxtaposed against those statistics is the open secret that luxury houses and high street brands routinely burn millions of euros worth of unsold stock. Resource use Regarding total use of primary raw materials in the supply chain for consumption in the EU, clothing, footwear and household textiles represents the fourth highest pressure category after food, housing and transport (Figure 1). These textiles are also the fourth highest pressure category for water use.

Figure 1 The use of primary raw materials in the upstream supply chain of EU-28 household consumption domains, 2017 indexed values with textile consumption = 100 [27].

Most of those garments are in perfect condition but they are incinerated to avoid devaluation of the brand or counterfeiting is served as the justification. Either way, it is hurtful because significant energy human-body and, money with time had been used to produce them in the first place. It is increasingly obvious that the existing system is broken and the industry collectively needs to usher in a system-level change powered by collaboration and innovation.

### Definition of Brands

A brand is an identifying symbol, mark, logo, name, word, and/or sentence that companies use to distinguish their product from others. A combination of one or more of those elements can be utilized to create a brand identity. Legal protection given to a brand name is called a trademark. Companies become very closely associated with their brand, if not synonymous with, their brand. The more the brand is worth, the higher brand equity it is said to have. Branding we bring art and science together to differentiate your brand and build a strong customer experience.

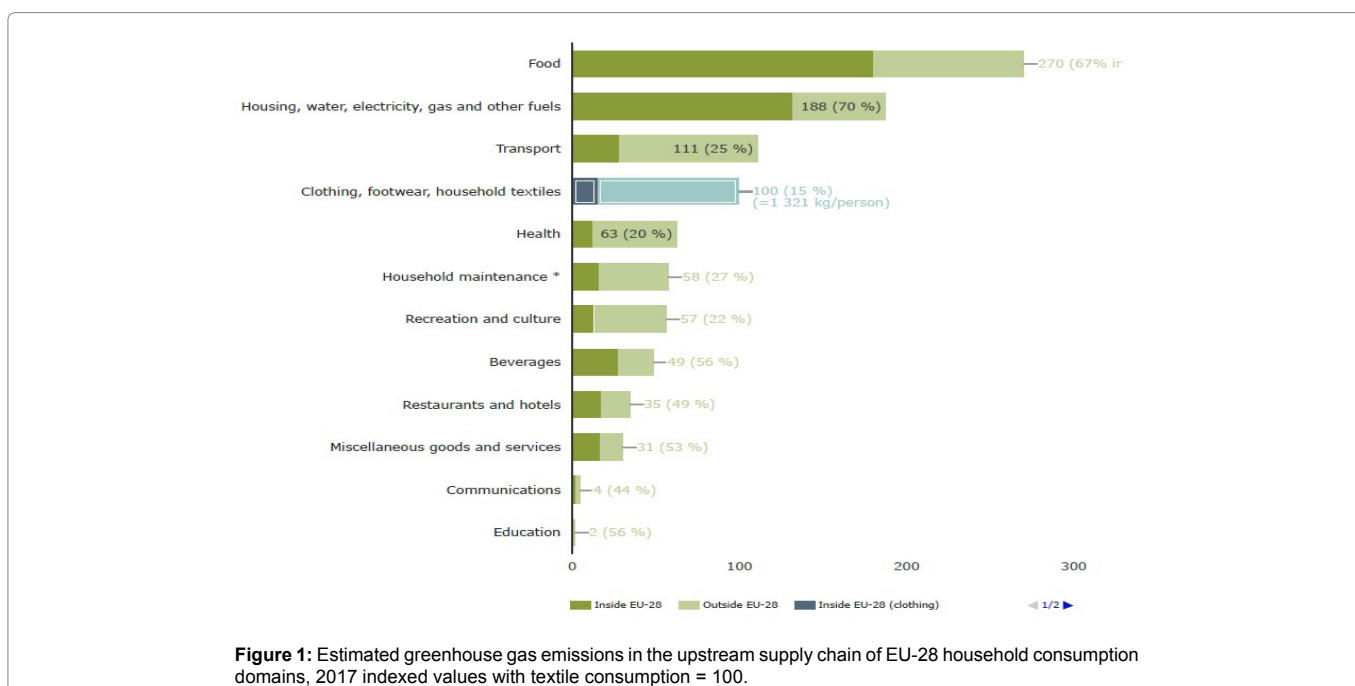


Figure 1: Estimated greenhouse gas emissions in the upstream supply chain of EU-28 household consumption domains, 2017 indexed values with textile consumption = 100.

- **Brand Insights:** We marry analytical and creative processes to convert data that reveal important customer and market opportunities.
- **Brand Strategy:** We devise strategies that differentiate and elevate your brand with defined missions, visions and values.
- **Brand Experience:** We increase brand value and reinforce loyalty through experiential assets and fusing together communication and design principles.

**Understanding Brands:** A brand is seen as one of a company’s most valuable assets. It represents the face of the company, the recognizable logo, slogan, or mark that the public associates with the company. In fact, the company is often referred to by its brand, and they become one and the same. A company’s brand carries with it a monetary value in the stock market (if the company is public), which affects stockholder value as it rises and falls. For these reasons, it’s important to uphold the integrity of the brand [20].

**Building a Brand through Art and Science:** Building and growing your brand is part art and a lot science. We immerse ourselves in the hard and soft data of your world, then use what we learn to create, express and grow your presence and influence. Brand Extract offers 360° strategic brand management. Start with extensive research, data analysis, customer insights and company brand touch points. Map out a course of action through smart communication plans and programs. Build the necessary brand assets and help you integrate new behaviors and methods that spread your message and foster customer advocacy. Equip you with the tools and technology to monitor performance and adjust quickly and easily. the add value chain mapping is important for business performance, but how do you define and document the internal delivery cycle of your product or service and Who’s involved in The process is incredibly scalable, but every company is different so the approach will vary. As a result, it might be not immediately clear what steps you need to take. All aspects of your organization will affect the way you map your value chain – whether it’s your business model, product pricing or the sales and marketing strategy. With that in mind, we’ve put together a framework that outlines strategic considerations to help map your company’s value chain. And, in turn, position your brand for growth in the marketplace [1, 20].

- a) Designate a Project Lead:
- b) Involve Your Managers and Subject Matter Experts,
- c) Ask the Right Questions.
- d) Frame the Information.

**Creating a Brand:** When a company decides to settle on a brand to be its public image, it must first determine its brand identity, or how it wants to be viewed. For example, a company logo often incorporates the message, slogan or product that the company offers. The goal is to make the brand memorable and appealing to the consumer. The company usually consults a design firm or design team to come up with ideas for the visual aspects of a brand, such as the logo or symbol. A successful brand accurately portrays the message or feeling the company is trying to get across and results in brand awareness, or the recognition of the brand’s existence and what it offers. On the other hand, an ineffective brand often results from miscommunication. Once a brand has created positive sentiment among its target audience, the firm is said to have built brand equity. Some examples of firms with brand equity—possessing very

recognizable brands of products—are Microsoft, Coca-Cola, Ferrari, Apple, and Facebook [16,18].

**Related Terms:** “Logo” A logo is a graphic mark, emblem, symbol, or stylized name used to identify a company, organization, product, or brand.

**Understanding product differentiation:** Product differentiation is the process of identifying and communicating the unique qualities of a brand compared to its competitors.

Create a Strong Brand to Grow Your Business : “Brand identity is the visible elements of a brand, such as color, design, and logo, which identify and distinguish the brand in consumers’ minds”.

### Definition of Brand technology

Technology companies that embrace their brand as an articulation of the promise that they deliver through their people, their products and their services will elevate their value in the market and will better position themselves for long-term success. The very definition of ‘technology’ is evolving, with major implications for branding. Not long ago, the industry was defined by hardware and software – IBM and Microsoft and everything in between. Today, old definitions don’t cut it. Is IBM a technology brand or a professional services brand, Is a technology company or a media company, Is Amazon an online juggernaut or a web-enabled catalogue retailer, While we prefer an expansive (and porous) definition of technology amid an industry of shifting boundaries, we will focus on discussion in this sector on companies who generate the bulk of their business directly through the sale of technology products and services.

### Budget of TOYOTA Textile Machinery, INC

**Textile Machinery:** The roots of the Toyota Group go back to the renowned Japanese inventor Sakichi Toyoda and his invention of the automatic loom. Since its founding, Toyota Industries’ Textile Machinery Business has developed, manufactured, and marketed textile machinery, the majority of which has been supplied to customers outside Japan. They are manufacture two main categories of textile machinery: spinning machinery and weaving machinery. The textile machinery receives high praise from customers around the world for its high reliability and productivity as the products are developed through technological expertise accumulated over the years. Especially the flagship air-jet loom boasts the No. share in the industry (Figure 2).

**Textile Machinery:** The textile machinery market was stagnant in Asia, including China, Toyota Industries’ primary market. Net sales of the Textile Machinery Segment totaled 61.7 billion yen, a decrease of 14.6 billion yen, or 19%, due mainly to decreases in sales of weaving machinery and yarn quality measurement instruments. Operating profit amounted to 2.9 billion yen, a decrease of 4.4 billion yen, or

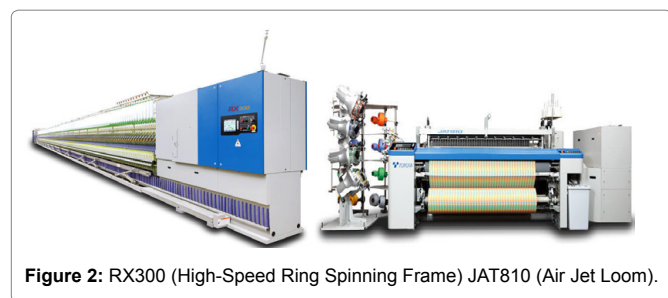


Figure 2: RX300 (High-Speed Ring Spinning Frame) JAT810 (Air Jet Loom).

60%, from the previous fiscal year. Reason of decrease to the impact of COVID-19.

**Budget of H. Stoll AG & Co. KG, Textile Machinery:** Knitting Machines Market analysis (Report 2019-2027) – market size US\$ 10.84 Billion by 2027, January 28, 2020, the global market for knitting machines was valued at US\$ 6.79 billion in 2018 and is projected to reach US\$ 10.84 billion by 2027, increasing to CAGR by 5.3 per cent during the 2019-2027 forecast (Figure 3).

**Budget of Stäubli:** Textile Machinery, 1892 in Horgen, Switzerland, 1.3 billion Swiss francs (CHF) turnover, 2,100 granted or pending patents, 600 R&D specialists and application engineers

**Budget of Sulzer weaving:** Machines for technical textiles are often similar to those already used in other fields. However, in many cases they have to be modified, for example to cope with different types of materials. In future, technical textiles will be used in more and more application areas. Today the global market for technical textiles has an estimated volume of US\$150 billion and it is growing rapidly – an excellent opportunity for the textile machinery industry in Switzerland.

Figure 4 So we can visit the websites for many companies to see Budget of Qmatex, Textile Machinery, Budget of Lakshmi Mills Group, Textile Machinery, Budget of Smit, Textile Machinery, And Budget of Picanol, Textile Machinery,

**Textile Machine Producer:** In fact, adopting too narrow a definition can be dangerous. The H. Stoll AG & Co. KG never thought of itself as a technology company, nor did it see itself as competing with textiles technology companies. Then along came Stäubli, which understood that it stood at the intersection of technology and financial information. The Smit, Picanol, the Sulzer weaving was sold for \$2.3 billion in 2015; in 2019, TOYOTA Textile Machinery, INC. was valued at \$3 billion. (And in 2019, wrote down the value of

Qmatex by \$2.1 billion.) The Lakshmi Mills Group – and continues to have, a venerable brand. But that brand was stuck in a world in which media and technology textiles, apparel and textiles accessions. ITMA trade presented its latest seamless circular knitting machine at the International Textile Machinery Exhibition (ITMA) 2019. to understand what constituted a ‘technology’ company may have cost Dow Jones brings together world-leading data, media, membership and intelligence solutions to power the most ambitious companies and professionals shareholders billions of dollars.

### Research Methodology

#### Sustainable Textiles Industries

They are two sides of the coin, one whose goal is to promote an industry for example on Sustainable of Brand Technology and Technology of Brands; technology and brand. That is what do all of these people have in common?

**Elon Musk** – Net worth: \$70.8 billion. Source: Tesla Motors. Country of origin: South Africa.

**Sergey Brin** – Net worth: \$66.0 billion. Source: Google. Country of origin: Russia.

**Jan Koum** – Net worth: \$10.1 billion. Source: WhatsApp. Country of origin: Ukraine.

**Isaac Perlmutter** – Net worth: \$4.6 billion. Source: Marvel Comics. Country of origin: Israel.

**Osman Kibar** – Net worth: \$1.4 billion. Source: Biotech. Country of origin: Turkey.

#### The Value Chain is Your Benchmark

When people can understand your exact procedures and see what makes your company different, the more confident they'll be in your ability to deliver on your brand promise. We've helped companies collapse or expand product lines, bundling them into a suite of offerings that their customers were willing to pay more for. Other clients have been able to monetize specific processes and incorporate them as differentiators in service guarantees. All because they documented every stage of their value chains. Incremental improvements can transform your brand so that it not only outperforms your competitors but also outlasts them. I've never seen a value chain that did not pay for itself many times over. Feel free to get in touch if you want to know more about the branding process and how we help companies create brands that inspire belief among their constituents.

#### Business Strategy Driven by Data

Data is our science. Through the dedicated methods of gathering data intelligence, we work to form business strategies that help grow your brand and remove uncertainty. To craft business strategies that remove uncertainty, push efficiency and grow your bottom line.

- Promote Efficiency: Through predictive analytics, we identify strategic initiatives that help achieve the largest financial impact while doing less.
- Increase Accountability: We ensure accountability and the execution of focused strategies through a maximized financial performance.
- Align Stakeholders: Our benchmark approach can increase



Figure 3: Budget of H. Stoll AG & Co. KG, Textile Machinery.



Figure 4: Budget of Sulzer weaving.

alignment by cascading the strategy, execution process, and objectives to key personnel. We enable companies to develop and implement a customer-focused strategy to:

- Align senior leadership, middle management and front line employees on the most important drivers of customer value
- Drive revenue by focusing on the most important strategic areas driving customer value
- Achieve higher margins by eliminating initiatives that do not add value to customers

### Benefits of textiles Approach

Brand Extract partners with Producers and Investors™ to develop and implement a customer-focused strategy for small and medium-sized companies. Our science-based framework and benchmarks Producers and Investors enable you to coalesce the needs of key stakeholders using four main principles:

- **No Guesswork:** We use a validated framework to accurately predict the financial performance effects of each strategic initiative. By stating specific financial consequences, we remove the guesswork that normally plagues strategy and execution.
- **Focus on a Few:** We use predictive analytics to help identify strategic initiatives that have the largest financial impact. As a result, we are able to advise companies to achieve more by actually doing less.
- **Align Stakeholders:** Our benchmark approach helps increase alignment around the stakeholders by cascading the strategy and execution process, and chain linking the objectives of the shareholders/board members, senior leadership team and the managers/employees.
- **Increase Accountability:** After we discover strategic areas that maximize financial performance, we can identify small sets of customer, operational and financial. This ensures that managers can hold themselves accountable to achieve the focused goal of strategy and execution.

### Results and Discussions

The main themes were designed from the interpretation of the analyses. Each research question addressed why brand technology companies need to integrate technology of brands to cope with sustainability issues in global markets; and how brand technology companies have enhanced their sustainability with value creation processes with the adoption of technology of brands under the industry brand technology concept and perceived difficulties for the adoption of technology of brands. How do companies reach their decisions to adopt technology of brands? What are the sustainability issues in brand technology industry that lead to the adoption of technology of brands in the era of industry?

**First answer:** However, most of these companies are unable to turn these superior performances into real value, which would allow them to assert profitable prices and achieve increased sales through the brand. This shortcoming is observable across the industry, because technology companies lack the compression of performances and particularities into brands that let their technologies generate strong attraction.

Prior researchers have just discussed the sustainability issues

in brand technology industry without explaining how companies reached their decision to adopt technology solutions to resolve these issues. Prior studies have not proposed technology of brands for decision-making processes to overcome these challenges in brand technology industry. Major sustainability challenges emerged as a theme from the qualitative analysis of companies profile data. This study provides deep insights into face-to-face Sustainable Textiles industries in Brand Technology with companies from all over the world, it is also a significant limitation of this study, because the current cases only covered a small portion of Textiles industries. A survey with analyses may help to attain better insights with data that will cover a larger number of brand technology companies. Every case company is different in terms of infrastructure and business situation. Textiles industries in brand technology of developing countries are unable to integrate the advanced brand technology solutions and textiles industries in brand technology technologies despite having all the resources; therefore, further studies are required to explore the reasons by using more qualitative and mixed method research approaches. All case companies are from the world's top high-end textiles industries in brand technology companies with rich resources; meanwhile, a significant portion of technology of brands industry is comprised of small and medium-sized companies with limited resources.

**Second:** The severe deficit in the production of technology for the manufacture of equipment, textile machinery, clothing, spare parts and accessories.... and dependence on imported international brands that lead to high production costs? Which is considered a fertile field for investment and sustainability strategy in this field in Egypt and the Middle East.

Major sustainability challenges in textiles brand technology case companies generally, the major problems faced by brand technology companies were long product lead time for fashion items, short product cycle, and forecasting issues for fashion articles. Another issue was the elimination of a quota to international markets in which created a critical challenge for effective sustainability in brand technology companies. for example, it was pointed out by the technology of brands executive of company: "company has approved the technology of brands project to integrate with existing systems, as company exports the apparels to European countries and USE and this international trade demands short supply lead time and efficient supply chain".

Thus, researchers should investigate small and medium-sized Brand Technology companies in the perspective of Textiles industries adoption under the Industry concept. Researchers are also guided with the help of the current study's results in order to map their current research directions and should pay particular attention to the related research areas especially from the perspective of adoption with Industry technologies for resolving sustainability challenges.

The application of robotics, 3D technology, artificial intelligence, machine learning, and augmented reality in Brand Technology industry is still in its infancy, as depicted by the results of this study. More research is required to investigate how advanced technologies perform in processes with 3D technology and augmented reality and contribute to the triple bottom line framework for sustainability in Brand Technology industry in the era of Industry Furthermore, the results of this research revealed that Textiles industries of developing countries is lagging towards the Industry concept because of barriers such as unavailability of vendor support and integration with existing

systems. Therefore, the researchers and vendor companies should focus on virtual technology solutions by using cloud technology and IoT. Additionally, future research should consider other elements of Industry such as interoperability, sustainability, and cyber-physical systems. The current study also emphasizes that more investigation has to be done in the application of Industry in Brand Technology industry, the feasibility of implementing smart factories, and how developed countries can play a key role in this context by supporting the Brand Technology industry of less-developed countries. Researchers should propose a collective mechanism among the developed countries and the developing countries for resolving triple bottom line sustainability issues before entering the modern industrial revolution.

**Third:** The severe deficit in the production of Brands for the , textile and apparel , clothing, and accessories; and dependence on imported international brands that lead to low local production throw quality and quantity, and high there costs? Which is considered a fertile field for investment and sustainability strategy in this field in Egypt and the Middle East. The textiles industries in brand technology executive of the companies also stated: “the companies has already adopted enterprise resource planning, supply chain management, customer’s relationship management, and human resource management of ElNashar systems to strengthen the supply chain, marketing and international customer’s satisfaction. However, these systems doing meet the company’s analytical and decision-making requirements. Now, the companies is ready to adopt technology of brands to aggregate and analyze data from internal systems as well as external sources from market and web, etc.” This study is also beneficial for industry experts to use structured data for decision-making that is generated everyday by the implementation of Industries’ of textiles brand technologies. as a result, they can not only plan a better way for manufacturing, production, retailing, marketing, and selling strategies to sustain in the fourth industrial revolution, but also can handle different financial, social, and environmental sustainability issues in terms of saving time, money, energy consumption, and material waste with the best bisolutions. Additionally, results are also helpful to guide the software vendors to identify their target markets and customers and make technology solutions with attractive offerings available, especially in developing countries which are facing more sustainability challenges because of mass shifting of manufacturing units from developed countries to less developed countries due to easy availability of labor and material at low costs. Notably, this study is beneficial for textiles and apparel industries. Theoretically, this study is one of the first studies to examine the role of brand technology under the industry concept in textiles and apparel industries and has contributed in the current body of knowledge.

**Fourth:** The severe deficit of artificial intelligence technology, The Technology of Brands is provided by one of the leading software vendors. On the other hand, to deal with dynamic market challenges, companies need to stay in step with evolving business trends. which offers a sustainable solution to fashion, reducing overall inventory levels by 20-50% and improving labor conditions in the fashion industry, between whereas the sustainable textiles industries of companies was retail who revealed that: “dynamic business of apparels created lot of challenges relating to the ambivalent production yield rate of textiles industries in brand technology products for the companies in terms of inventory management that headed to the unpredictable production ratio and also facing the demand for shorter lead time by companies franchisers.

The main objective of all case companies was customer satisfaction. Another important finding was that high-end apparel companies from advanced countries are more prone to adopt the Industry Brand Technology and Technology of Brands technologies. As a result, they are enjoying market leadership with less employees and investments, rather than those companies that belong to developing countries, despite having a complete value chain of textiles and apparels with huge investments and a large number of employees. All companies integrated advanced proprietary Technology of Brands solutions such as BOBJ on SAP, Oracle Technology of Brands solutions, Micro Strategy BI solutions based on SAP HANNA, Birst Technology of Brands solutions, Informatica Powerceter, Cognos, SAS, Oracle, SAP BI solutions, Trade Gecko Technology of Brands solutions, AI powered sales-tech platform, and Tableau Technology of Brands solutions. The giant Companies that we mentioned adopted many proprietary or source software/technology. Eight case companies are using artificial intelligence with big data techniques for decision-making and they are benefiting more compared to the other companies that are just using a single analytical system. Technology of brands companies and brands technology are equipped with artificial intelligence technology for manufacturing, production, and tracking items in inventory management across international stores which has resulted in a reduction of energy material waste logistics and cost of supply chain. Technology of brands integrated robotics and augmented reality only. Companies also uses click and collect, and augmented reality apps. Only companies are using technology of brands with artificial intelligence techniques and companies built technology of brands on machine learning. Results of this study show that retail companies are more ready to enter the Modern industrial revolution rather than only textile companies.

**Fifth:** The severe deficit of Fast fashion poses a serious threat to the planet, with global textile production more than doubling in the last 10 years. Highly volatile requirements caused many operational and delivery problems”. To deal with these issues, Companies fashion industry integrated Textiles industries in Brand Technology -based versatile business objects Technology of Brands for retail processes. Furthermore, major barriers such as cost and complexity, vendor support, top management support, technical skills and expertise, integration with existing systems, and change management also emerged. All perspectives of the current study should be considered seriously by policymakers and strategic managers of manufacturing companies before entering in the fourth industrial revolution. The current study can be helpful not only for decision makers of textiles and apparel companies but also for vendors to improve adoption processes and sustainability technologies in terms of budget, time, and business requirements. In a contemporary competitive business scenario, it is very important to understand the relationship between the industry of brand technology and business technologies of brands conditions with technological solutions in companies that will enhance their sustainability by converting data into actionable intelligence. It urges the industry to examine all possible ways before implementation of any innovation. If organizations integrate technology solutions according to their requirements, then they can harness great benefits from technology and maintain their sustainability in competitive markets. In this way, this study has great importance to guide policymakers and decision makers to overcome the return on investment (ROI) and sustainability-related issues with the help of current case companies.

**Sixth:** Brands like of Seamless Woven Structures of Application

in Integral Constructions are already combining Artificial Intelligent with fashion, indicating a future in which the fashion industry is efficient, sustainable, and personalized. It is believed that these cases will attract other textiles and apparel companies to apply modern technologies in the era of Industry the technology of brands. The industry experts can gain desired results without trial and error by mapping this study's results with the adoption of big data and Artificial Intelligent with fashion techniques together in order to maintain the industry's sustainability in international markets. Other companies with same domain and businesses can also be directed to the successful integration of Industry technology of brands concepts with Artificial Intelligent with fashion. In short, the present study adds to the empirical literature by utilizing the Artificial Intelligent with fashion and big data techniques together for resolving sustainability issues in textiles and apparel industry under the Industry technology of brands concept which is more effective to lead future research in the field of the modern industrial revolution by using the triple bottom line approach.

## Conclusion

the current exploratory analyses study is one of the first studies conducted to explore the sustainability issues of textiles industries in brand technology in the era of textiles industry, companies' integration of technology of brands with emerging technologies such as artificial intelligent, big data, robotics, cloud technology, augmented reality, virtual mirrors, artificial intelligence, machine learning, and 3D body scan & printing technology, and how technology of brands resolve the sustainability issues with industry technologies. All technologies make significant contributions to enhancing the sustainability in textiles industries in brand technology by improving supply chain management, inventory management, marketing, fast merchandising, quick shipments, retailing, and distribution processes which result in optimization of a company's business, customer satisfaction, cost saving, and generating high revenues. Technology of brands major improvement was observed in retail business with fast insights and well-informed decision-making.

## Strategy Setting Up Mega Textiles Park

The Egyptian Ministry of industry and holding company of Textiles must establish the process to create an ecosystem model that would allow creation of new mega textile parks exclusively for technical textiles and up gradation of existing (In the new societies: (Sinai- New Valley - Toshka - Siwa - Aswan - Matrouh - Wadi Natrun - El Alamein, ..., .., ..) In Egypt. Functional textile parks will be support by the government. Characteristics of such a textile park could entail a comprehensive 'technology-driven' ecosystems with R&D, start-up incubation, forward linkages with logistics parks and market access systems and backward linkages with creation of textile standards under It is under the auspices of the Prime Minister (SPM). Creation of job quality certification systems through Syndicates And specialized professional chambers of commerce (SPCC), harmonization with international testing norms for, plug and play infrastructure for product realization and machinery production are some of the additional features of the textile park.

## Requirements for Strategy setting up a Mega Textile Park

- High investment to the tune of \$ ~350 Mn for development for Establish Textiles Technology Centers (ETTC).
- An area of ~ 100,000 acres (20.000 industrial, production

and research facilities) (80,000 textile fiber farming).

- Interdependence on other ancillary industries for raw materials and accessories, including sustainable small industries.
- Common state-of-the-art facilities for promotion of textiles science & innovation.
- Amenities for textile and apparel products testing, packaging and quality assurance.
- Infrastructure for inventions and producing textile machinery.
- Exemptions on duties on capital textiles equipment imported.
- Uninterrupted power (electricity, solar energy supporting tissue research to establish it) and water (and desalination ... promising to manage it) supply,

The shared services particularly those related with textile technology, testing, packaging, machinery production, research among others, can be operated on Purchasing power parity (PPP) Purchasing power parity (PPP) allows for economists to compare economic productivity and standards of living between countries. Mode by competitively selecting specialized service providers, simultaneously to multiple manufacturers located nearby. For instance, a Primary sampling unit, in sampling (statistics) PSU such as Central Agency for Mobilization and Statistics Corporation of Egypt can be invited to build their own warehouse at their own cost.

The proposed textile park must have technological and scientific infrastructure in power station, dump yard, rainwater harvesting, recycling, solar infrastructure, textile training center, testing center and labs. In addition, social infrastructure such as food courts, convention centers, restaurants, banks, petrol pumps, first aid and fire station should be included.

In order to encourage the spirit of innovation in textiles and a new breed of young textile innovatorsthrow (Changing the curricula specialized in mechanical industries (fiber production - spinning - weaving - weaving - printing and dyeing - clothes - accessories) in the different education stages ... in line with modern technology ... Adopting technology and providing opportunities ..), the government should frame a scheme to provide various fiscal and non-fiscal incentives to develop and promote incubation centers, provide seed money for startups, scale up funding and other support required by the startup units.

## Finally International brands needs Technology use

- ❖ Sustaining leadership and management during (R&D).
- ❖ Sustainability of training and education during (R&D).
- ❖ Sustainability of raw materials through (R&D).
- ❖ Sustainability of production through design and innovation for technology and maintenance. During (R&D).
- ❖ Sustainability of production through design and innovation of product consumption (fabrics - clothes - accessories). During (R&D).
- ❖ Sustainable development for marketing and promotion (with multiple languages and use of technology). During (R&D).

❖ Sustainability of after-sales services during (R&D).

## References

1. ElNashar EA (2000) Design of Database for Forecasting the Specification of Woven Fabric Design for Ladies Dresses. University of Helwan, Cairo, Egypt.
2. ElNashar EA (2021) Novelty Filtration Theory of Liquid Chromatography-Mass Spectrometry in Volume Nanotube of Cotton Filament of Layers Woven Fabrics. J Tex Sci and Tech 7: 14-21.
3. ElNashar EA, Liubokhynets L, Tanasiienko N (2020) Analytical Study Of Business Models In Fashion Theory Strategy For Global Marketing. Scientific journal, HERALD of Khmelnytskyi National University, Economic sciences 4: 99-107.
4. Elnashar EA (2020) Effect of Fashion on Economic Growth from Egyptian Small Industries through the Home Economy Theories. Magazine Online magazine for Textiles, Clothing, Leather and Technology 1:14-24.
5. Elnashar EA (2019) Woven Seamless of Clothes between Ancient Egyptian History and Future. Latest Trends in Textile and Fashion Designing 3: 4.
6. ElNashar EA (2018) Philosophy of the Construction Elements of Fashion. J of Trends in Tex Eng & Fash Tech 4: 4.
7. ElNashar EA (2018) Decision Support System of Global Brands in Fashion Marketing Strategy for Entrepreneurship. Trends in Tex Eng Fash Tech 3: 1-2.
8. ElNashar EA (2018) Smart Textile Circuitry and There Application. J Current Trends in Fash Tech & Text Eng 4:2.
9. ElNashar EA (2018) Engineering Aesthetics Science and Ergonomics by Using Technology in Ancient Egyptian for Textiles Design. J of Latest Trends in Tex and Fash Desig, Trends in Tex & Fash Desig 2:3.
10. ElNashar EA, Zlatev Z (2018) Analysis of Data from Software Sensor for Smart Airbags Deployment. Adv Robot Autom, 7: 2.
11. ElNashar EA (2018) Utilization of Forecasting Global Trends in Fashion and its Applications. J Latest Trends in Text and Fash Desig, Trends in Text & Fash Desig 1:3.
12. Fibre 2 Fashion (2011) Egyptian textile industry comes under the global radar.
13. Dun & Bradstreet (2021) Textile Manufacturing Companies in Egypt.
14. Brand Extract (2021) Technology Branding.
15. Sustain Your Style (2021) Our Fiber Eco-Review.
16. Alyssa Kastner (2018) Fashion's Future Fabrics: Brands Tap Sustainability & Tech.
17. Sbtechnology, Seiko Epson (2021) Sustainable Brands.
18. Lena V, CNN (2021) Fashion With tradition and new tech, these Japanese designers are crafting more sustainably made clothing.
19. Hannah Gould (2014) sustainable fashion.
20. Sharma A, Lakshmanan R & Nayyar M (2020) Technical Textiles: The Future of Textiles.
21. Judith M (2020) Building brand trust – How it's done.
22. Anne P (2018) Digital technology as a driver of sustainable innovation.
23. Laurine P Consultant, Deloitte (2021) Egyptian Textile Industry 2021-2024.
24. Kenton W (2020) Brand.
25. AP news staff (2020) Knitting Machines Market analysis (Report 2019-2027) – market size US\$ 10.84 Billion by 2027.
26. Toyota Industries develops and manufacturers (2021) Weaving Machinery.
27. European Environment Information and Observation Network (2021) Textiles in Europe's circular economy.

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