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INVESTMENT IN TEXTILES ACTIVITIES INNOVATIVE OF THE ECONOMY IN EGYPTIAN REGIONAL PROJECTS

Today, the textile and clothing industry counts 143,000 companies, mostly SMEs, employing 1.3 million people (5% of EU manufacturing employment) generating a turnover of EUR 147 billion (3% of EU manufacturing value added) widely spread across the EU. However, a substantial portion of (mostly lower added value) textiles and clothing consumed in the EU is produced elsewhere in the world, often in Egypt in north Africa, Asia, taking advantage of very low labour costs. Disadvantages of this model include long-distance vulnerable supply chains, poor working conditions in "sweat-shops", and high environmental costs. We in Egypt are striving forward to be partnership is co-developed by member EU regions with an active participation in textile industry, involving the full quadruple helix of players, so to better connect regional authorities with industrial interests and needs. We in Egypt are striving forward the partnership employed a values add chain (innovations) approach along related priority domains of smart specialisation in member regions with the aim to create an investment pipeline of mature projects relying on new cross-sectoral industrial value chains developed by multiple stakeholders, so to achieve lasting improvements, in areas like: values add chain (innovations) in advanced manufacturing technologies for cleaner, less labour, resource intensive and circular production systems. The aim of the thematic platforms is to foster inter-regional collaboration around smart specialisation priorities and modernisation along global values add (innovations) chains.

Keywords: Investment , Textiles Activities, Innovative , Economy , Regional Projects.

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ІНВЕСТИЦІЇ В ТЕКСТИЛЬНУ ПРОМИСЛОВІСТЬ ІННОВАЦІЙНОЇ ЕКОНОМІКИ В ЄГИПЕТСЬКИХ РЕГІОНАЛЬНИХ ПРОЄКТАХ

Сьогодні текстильна та швейна промисловість налічує 143 000 компаній, переважно малих і середніх підприємств, в яких працює 1,3 мільйони осіб (5% зайнятих у переробній промисловості ЄС), які генерують оборот у 147 мільярдів євро (3% доданої вартості у переробній промисловості ЄС), що поширюються по ЄС. Однак значна частина текстилю та одягу (переважно з низькою доданою вартістю), що споживається в ЄС, виробляється в інших країнах світу, часто в Єгипті, Північній Африці та Азії, де дуже низькі витрати на робочу силу. Недоліками цієї моделі є вразливі ланцюги поставок на великі відстані, шкідливі умови праці і високі екологічні витрати.

Ми в Єгипті прагнемо розвивати партнерство з країнами-членами ЄС, які спеціалізуються у текстильній промисловості, залучаючи повну чотиристаронню спіраль гравців, щоб краще поєднати регіональну владу з промисловими інтересами та потребами. Ми в Єгипті прагнемо розвивати партнерство, яке використовує підхід до ланцюга доданої вартості (інновацій) у відповідних пріоритетних сферах інтелектуальної спеціалізації в країнах-членах з метою створення інвестиційного портфеля зрілих проєктів, що базуються на нових міжгалузевих промислових ланцюгах доданої вартості, розроблені кількома зацікавленими сторонами, щоб досягти тривалих покращень у таких сферах, як: ланцюг доданих вартостей (інновації) у передових виробничих технологіях для більш чистих, менш трудомістких, ресурсомістких та циклічних виробничих систем.

Метою тематичних платформ є сприяння міжрегіональному співробітництву щодо пріоритетів смарт-спеціалізації та модернізації глобальних ланцюгів створення доданої вартості (інновацій).

Ключові слова: інвестиції, текстильна діяльність, інновації, економіка, регіональні проєкти.

1. Introduction. The textile industry has long been a cornerstone of economic activity in many regions, providing employment and supporting local economies. As we move into a new era of technological advancement and sustainability, investment in innovative textile activities presents a unique opportunity for regional projects to foster economic growth, create job opportunities, and promote sustainable development.

Today, the textile and clothing industry counts 143,000 companies, mostly SMEs, employing 1.3 million people (5% of EU manufacturing employment) generating a turnover of EUR 147 billion (3% of EU manufacturing value added) widely spread across the EU. However, a substantial portion of (mostly lower added value) textiles

and clothing consumed in the EU is produced elsewhere in the world, often in Egypt in north Africa, Asia, taking advantage of very low labour costs. Disadvantages of this model include long-distance vulnerable supply chains, poor working conditions in "sweat-shops", and high environmental costs. In Egypt we are striving forward to be Partnership is co-developed by member EU regions with an active participation in textile industry, involving the full quadruple helix of players, so to better connect regional authorities with industrial interests and needs. in Egypt Weare striving forward The Partnership employed values add chain (innovations) approach along related priority domains of smart specialisation in member regions with the aim to create an investment pipeline of mature projects relying on new cross-sectoral industrial value chains developed by multiple stakeholders, so to achieve lasting improvements, in areas like:

values add chain (innovations) in Advanced manufacturing technologies for cleaner, less labour, resource intensive and circular production systems; The aim of the thematic platforms is to foster inter-regional collaboration around smart specialisation priorities and modernisation along global values add (innovations) chains.

IT&C and Big Data analysis for process effectiveness, systemic design, enhanced involvement of the consumers (co-design, personalisation and of textile products); for Development of new sustainable products able to provide personalized solutions adapted to tomorrow's market demand. In Egypt we are striving forward for Smartex (Smart Textiles) aimed to boost smart textiles innovation to develop an end-to-end smart textiles manufacturing value chain in Egypt and help drive promising prototypes faster to market. in Egypt we are striving forward for project aims to support the creation of new industrial value chains around textile and automotives sectors based on advanced manufacturing. The vision is to drive cross-sectoral innovation to boost new market opportunities, revenues and improve productivity.

In Egypt we are striving forward for project aims to facilitate the uptake of advanced manufacturing technologies as part of the digital transition of the textile home industries and automotives industries. in Egypt we are striving forward for project aims to long-term partnership for Industrial Modernisation of the Textile and Clothing sector, brings together the main Africa and European textile-based clusters with the aim of setting up new co-operations by enhancing innovation capacities, business models, knowledge, skill levels and other key competitive factors at the basis of the future of Egyptian Textile-clothing sector. in Egypt Weare striving forward for projects aims to developed within the Interregional Investments for Innovation Programme, Strand 1a, Topic Green Manufacturing: brings together partners including regional clusters, innovation agencies, RTOs, associations and industry (SMEs) to invest into innovative solutions for textile circularity and to develop regional textile circularity hubs across Africa and Europe.

1.1 The primary objectives are:

1. Enhance the competitive advantage of regional textile industries through innovative practices.
2. Foster sustainable development by integrating eco-friendly practices and materials.
3. Create employment opportunities and boost local economies.
4. Stimulate collaboration between local artisans and modern textile businesses.

2. Current State of the Textile Industry

The global textile industry is undergoing a transformation, driven by consumer demand for sustainable and ethical practices. Many regions still rely on traditional methods, which present both challenges and opportunities. By investing in innovation, regions can modernize their textile production, enhance product quality, and reach new markets.

2.1. Key Areas for Investment

1. Research and Development (R&D): Investment in R&D for new textile materials, sustainable dyes, and production methods can set the foundation for innovative practices.

2. Technological Upgradation: Implementing advanced technologies such as automation, digital printing, and sustainable manufacturing processes can improve efficiency and reduce waste.

3. Sustainability Initiatives: Incorporating eco-friendly practices and materials can attract environmentally-conscious consumers and businesses. This includes the use of recycled fibers, organic cotton, and water-saving technologies.

4. Collaboration with Educational Institutions: Partnering with local universities and design schools can nurture talent and support innovation in textile design and production.

5. Training Programs: Offering training and skill development programs for workers can enhance their capabilities, ensuring they are well-equipped for modern textile production.

2.2. Expected Outcomes

1. Economic Growth: With increased investment in innovative activities, the region is expected to see a rise in economic activity and local business growth.

2. Job Creation: A thriving textile industry will create numerous jobs ranging from production to design and marketing.

3. Sustainable Practices: Regions will benefit from reduced environmental impact due to the adoption of sustainable practices, aligning with global sustainability goals.

4. Market Positioning: Innovative practices will enhance the region's reputation, attracting more businesses and consumers, leading to a more robust textile market.

3. Results & Discissions:

The economics of regional home enterprises is one of the oldest and most established sciences in history, and it is also one of the most technologically advanced industries. The ability to innovate: -new technological methods and materials, - along with new ways of innovating them, - leads to a revolution in the economy of regional enterprises that can change everything from industries to localization and technological transformation -to innovative and investment activity -the economy. As an industry, it is responsible for a large part of world trade, and employs millions of people around the world. As technology advances, it is changing regional home industries in important ways. The machinery-technological industry and textile manufacturing are highly competitive industries, and as demand for regional home industries goods continues to grow, manufacturers are constantly looking for ways to improve their processes.

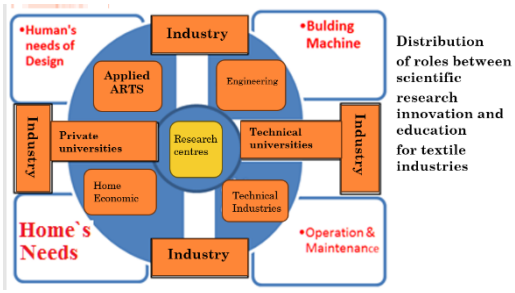

Fig. 1. Roles between scientific research innovation and Education for textiles industries

3.1. Some Major of Technical Textiles:

Automotive textile (MobilTech)- Industrial textile (InduTech)- Medical textile (Medtech)- Home textile (HomeTech)- ClothTech- Agrotextile (AgroTech)- Building and Construction textile (BuildTech)- Packaging textile (PackTech)- Sports textile (SportTech)- Geotextiles (Geotech)- Protective textile (ProTech)

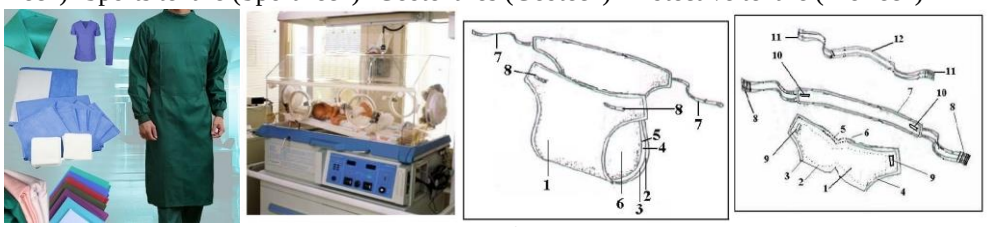

Fig. 2. Some Medical of Technical Textiles

3.2. Medical and hygiene textiles (MEDTECH)

Sutures and wound dressings use fibers like silk and other synthetic fibers. Hollow synthetic fibers are used with nano or very small particles and are used for the delivery of drugs to any specific part of the body to prevent over dosage. Cotton, silk polyester, polyamide are also used in medical applications.

3.3. Other applications of medical textiles are:

- Wipes- Babies' diapers (nappies)- Adult sanitary and incontinence products- Sterilization packs

- Medical textiles of self-inflating on air mattress bed and belt for nursing physical therapy education and training performing a healing process.

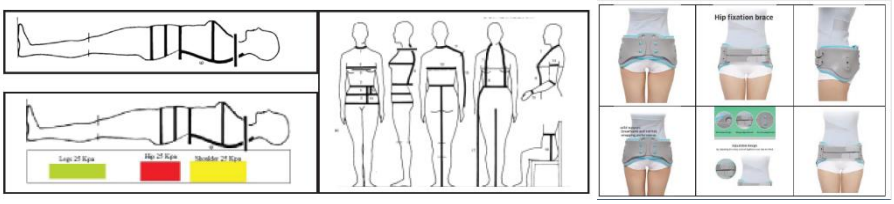

Fig. 3. Medical and hygiene textiles

3.4. Investment In Textiles Activities Innovative of The Economy in Regional Projects Throw the Twinning" The Egyptian Tourism and Regional Textile Industries.

3.5. Hotels and Home textiles (HOMETECH)

Textiles used in a domestic environment: (Interior decoration and furniture, carpeting, protection against the sun, cushion materials, fireproofing, floor and wall coverings, textile reinforced structures/fittings.

Other applications of home textiles are: (Bedding - Sleeping bags- To replace foams in furniture - Carpet and furniture backings - Curtain header tapes).

3.6. Seamless stretch clothes without Spandex

Fig. 4. Ancient Seamless stretch clothes without Spandex

3.6.1. They focus on the psychological mechanisms or physical materials stretch fabric of their effects:

1- Unique woven seamless of clothe draping qualities: draping qualities result in formation of very complex 3D shapes Tube seamless clothes. 2- Dynamic behavior of woven seamless of clothe: This behavioral change in deformation and drape compels researchers to simulate the Tube seamless clothes flow of the surface of the material during wear. 3- Non-linear deformation of Woven Seamless of clothe: The non-linear nature of woven seamless of clothe deformation limits the applicability of conventional.

1- Tube seamless clothes physical models 2- Tube seamless clothes of hybrid models

3- Evaluation of 3D tube seamless stretch clothes 4- Unified tube seamless stretch clothes theory

5- Tube seamless clothes parameters of stretch clothes 6- Geometry linear tube seamless stretch clothes of spider weaves

3.7. Case study: (Mahalla Marhum City, In Egypt).

A village that does not know unemployment. Mahalla Marhum in Gharbia triumphs over the impossible. First in the republic in manufacturing knots and curtains. 95% of its people work in hundreds of workshops there. and its products invade Arab and foreign markets (photos)

Fig. 5. Production Mahalla Marhum in Gharbia. Egypt

- A large proportion of the plant remains unutilized after harvest, and Egyptian farmers dispose of okra stalks as agricultural waste.

- The okra farming sector produces a large harvest annually, and okra fibre plays a transformative role in the economic landscape.

- Along with applications in the fashion world, this meeting aims to unleash the full potential of okra Fiber, positioning it for sustainable economic development and innovation.

3.7.1. Environmental and Economic Sustainability for Egyptians: Utilizing Egyptian Agricultural Waste: By utilizing okra stalks, which are often considered agricultural waste, farmers can create an additional source of income while significantly reducing environmental pollution. In addition to solving waste management problems, converting okra waste into useful fibers promotes the circular economy.

3.7.2. Green Economy for Egyptians: Encouraging the use of okra fibers is in line with global sustainability goals. Compared to synthetic fibers, their environmental impact during production and cultivation is smaller, making them a good choice for developing environmentally friendly products. This could cement Egypt's position as a leader in sustainable Fiber manufacturing, attracting foreign capital and consumers.

Fig. 6. Some stripes of textiles

4. Conclusion. Launch of the national partnership to support green entrepreneurs and starting of training activities and Investment in innovative textile activities is essential for fostering economic development in regional projects. By embracing sustainability, technology, and collaboration, regions can transform their textile industries

into drivers of economic growth. To move forward, it is vital to gather stakeholders, including government bodies, local businesses, and community leaders, to discuss and develop a comprehensive investment strategy. Process vs product: This is important for three key reasons:

1. Most of the value added will take place in upstream design activities.
2. The environmental impacts of a product are determined at the design phase.
3. The focuses on the circular characteristics of the product itself, not the production process.

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