Abstract
The production of traditional crafts in Egyptian architecture, especially Islamic architecture, has been historically significant, reflecting cultural uniqueness. However, political, economic, and industrial factors have led to a decline in craft production, diminishing their cultural distinctiveness (Abdul Hamid, 2001). Traditional crafts currently face stagnation, lacking modernization in design, functional integration, and technological advancements. Artisans struggle to compete with imported products. This research aims to preserve and revitalize traditional crafts by integrating them with the creative industries. It explores modern Egyptian experiences, traces the craft’s development, and identifies key points for creating creative products. The study evaluates Egyptian models that introduce new products, assessing their suitability and overall development, including impacts on craftsmen, products, and the production process. The application of creative industry principles is also examined. Findings inform proposals and recommendations to preserve traditional crafts in Egypt and explore their local and global development potential.

Keywords
Creative industries
Traditional crafts
Cultural industries
Egyptian architecture
Crafts guild
Introduction

Traditional crafts are an important part of Egypt’s architectural heritage, spanning from the Pharaonic era to the present, with significant contributions to Islamic architecture. These crafts encompassed a range of skills that seamlessly integrated functional and aesthetic requirements into architectural products. Craftsmen in Egypt possessed engineering knowledge, expertise in mechanisms, and implementation techniques, forming the backbone of the architectural system (Ibn Khaldun, 1377). The design process extended beyond aesthetics, prioritizing efficient manufacturing and execution to fulfil its intended purpose. Despite the continuation of various traditional crafts in Egypt today, they face stagnation and crises due to outdated designs and a lack of adaptation to modern technologies. These crafts no longer satisfy functional needs, merely catering to the tourism industry. The influx of Chinese imports has further compounded the challenges faced by local artisans, exacerbating the crisis. Crafts have transformed into an industry, disregarding the aesthetic aspect of architectural production and the development of craftsmanship. Moreover, the absence of specialized industrial education that imparts essential implementation and production skills has contributed to a decline in the quality of architectural outputs during the design and execution phases (Okhasha, 1994).

Background and Context

Traditional crafts in Egypt experienced a period of great prosperity during the Fatimid era, which continued into the Mamluk era. The craft movement reached its peak during the Mamluk era, fueled by political stability and economic prosperity, resulting in a flourishing of Islamic architecture and crafts in Egypt. Several key factors directly contributed to the flourishing of traditional crafts during this time.

Factors Contributing to the Flourishing of Traditional Crafts in Egypt:

These factors collectively contributed to the rise and flourishing of traditional crafts in Egypt. The integration of vocational education, craft production, political stability, economic conditions, societal appreciation, and the preservation of crafts through professional inheritance formed the foundation for the success of traditional crafts.

Political and Economic Stability

Political conditions and their impact on the economic and commercial landscape played a significant role in the development of traditional crafts, particularly in architecture. This led to increased investments in architecture, crafts, and arts. The rulers of Egypt, with their power and financial capacity, played a pivotal role in nurturing the arts. (Al-Sayed, 1996)
Craft Guilds and Vocational Education

During the Mamluk era, craft guilds emerged and thrived, exerting a profound influence on traditional crafts. These guilds served as responsible entities for education and craft production, representing artisans before the state. They safeguarded the rights of craftsmen, ensured the fulfilment of their duties, and provided stability. This stability allowed artisans to focus, innovate, and pass on their craft skills to future generations (Aalam, 1991).

Crafts Education and Professional Inheritance

The keen interest of Muslims in crafts education, along with the practice of professional inheritance, contributed to the flourishing and preservation of traditional crafts. Famous educators like Ibn Khaldun and Abu Hamid al-Ghazali emphasized the importance of diverse industries and professions, recognizing their significance for individuals and society. Sons inherited their fathers' professions, learning from an early age through workplace coexistence and companionship. This practice, driven by parents' desire to ensure family livelihood and workshop continuity, played a crucial role in the development and success of crafts (Okhasha, 1994; Suleiman, 2006).

Factors and Implications of the Decline of Traditional Craftsmanship in Egypt

The decline of traditional crafts in Egypt can be attributed to various factors shaped by historical events, political and economic challenges and changes in crafts education, all of which have had significant implications for the state of traditional crafts in Egypt.

Political and Economic Factors and Impact of Ottoman Conquest

Political and economic challenges during the Ottoman and Mamluk eras disrupted craft production. Skilled craftsmen were deported to support Turkish industries, leading to a loss of artisans. The Ottoman conquest introduced limitations in industrial progress, and craftsmen resorted to imitating foreign designs. Muhammad Ali's focus on modern industries and appointment of Turkish administrators further disrupted the traditional system and led to the closure of craft shops (Ali, 2003).

Influence of British Occupation

The British occupation suppressed local industries, promoted foreign imports, disrupted trade routes, and influenced consumer needs. European taste and architectural styles replaced traditional Arab approaches, hindering the growth of traditional crafts. Foreign capital monopolized major industries, controlling wages, and dimin-
ishing the popularity of local crafts. The decline of traditional craft in Egypt can be attributed to various factors shaped by historical events, political and economic challenges, foreign occupation, and changes in education. These factors have had significant implications for the state of traditional crafts in Egypt (Abdulaal, 2002; Hanna, 2003).

Deterioration of Crafts Education

The separation of vocational education from traditional crafts and the emphasis on modern industrial methods during Muhammad Ali’s era led to a decline in craft skills and knowledge. And after the British occupation worsened the situation through the abolition of free education and reduced spending on vocational training (Ali, 2003).

While traditional crafts have been regarded as unattainable heritage, global trends have recognized the need to modernize industries and transform them into creative industries. Despite advancements in manufacturing techniques and technology, individuals still seek products that cater to their aesthetic desires and embody manual craftsmanship. Creative industries have introduced a new approach to cultural industries and local identities, aiming to incorporate their vocabulary within a contemporary technical framework.

Through these creative industries, Islamic vocabulary and motifs have been reintroduced in various innovative ways in both design and implementation. This has facilitated the emergence of new ideas that foster the development of traditional crafts, providing a pathway for their evolution in a modern context.

Creative Industries

The concept of creative industries revolves around creativity, which drives social and economic change and serves as a competitive advantage for society. It encompasses various cultural projects, such as publishing, audio-visual media, cinema, music, artefacts, cultural heritage, museums, historical sites, folklore, events, libraries, and software design. Architecture, design, and crafts are part of creative industries, that rely on creative individuals. These industries interact with consumers, allowing feedback for product improvement. Cultural industries are closely linked to creative industries, relying on creative products resulting from design, architecture, crafts or arts (Hartley, 2005).
The Creative Industries Components

For the establishment of creative industries, certain factors must be present. These include:

1. Research and Market Studies: Conducting research and studying the society and market where the industry will be established is crucial.

2. Fostering Creativity and Innovation: Government agencies and universities often play a role in nurturing talent and supporting creative industries through research and development costs.

3. Infrastructure Support: It is essential to have legislation and laws that protect intellectual property, support individual and collective initiatives, and provide financing for small and medium enterprises. Additionally, a free and open economy is beneficial for creative industries.

4. Aesthetics of Marketing: Paying attention to marketing aesthetics is crucial for presenting products and merchandise in an attractive and visually pleasing format.

5. Creativity is a fundamental aspect of creative industries. It encompasses four components: the creative person, the external conditions, the creative processes, and the innovative product. These components interact and influence each other, making it necessary to study and analyze them together (Hartley, 2007).

The creative products

A creative product can take various tangible or intangible forms, such as industrial inventions, scientific methodologies, skill development, distinctive services, or innovative problem-solving ideas. It involves using groundbreaking materials, techniques, and connecting previously separate elements. Evaluating a creative product focuses on three main aspects: novelty and originality, utility and suitability for its purpose, and structural details encompassing aesthetics, elegance, appeal, and overall quality. The ability to incorporate precise and diverse details into an idea is also important (Raafat, 1997).

To assess the overall success of a creative product, we examine the extent to which it meets these three criteria. In the case of architecture, when the recipient effortlessly satisfies two of these creative criteria, it indicates a successful integration of form and content. Consequently, successful architectural products fulfill the second criterion of creative products by delivering value and usefulness. This is achieved through the incorporation of functional and structural aspects in architectural components. Architectural creativity is thus accomplished by applying innovative thinking to a distinct idea and implementing it in one or more elements of the architectural product, and according to that the case studies chosen and analyzed (Hartley, 2007; Raafat, 2007).
Research Methodology

To achieve the research goals and fulfil the main objective, the following methodology was employed:

• Overview of Traditional Crafts in Egypt including their current state and their challenges. This involves reviewing previous preservation efforts and understanding the factors contributing to their decline. Additionally, the transformation of traditional crafts into industries and the impact of mechanization are explored. The emerging trend of creative industries, which integrates crafts and industries to produce innovative products with global and cultural significance, is also investigated. The aim is to extract general principles from these creative industries.

• Data Analysis and Evaluation: The collected data on traditional crafts in Egypt, as well as the case studies, are analyzed to assess the current state of the crafts and their level of development. This analysis aims to identify the potential for further advancement. The data is examined by presenting Egyptian case studies that aim to add new value to the traditional craft sector. The analysis begins by presenting the basic data of the study cases, followed by an examination of the production process in three levels: learning and acquisition, production mechanisms (including design methods, machines, techniques, and raw materials), and methods of marketing and product presentation to the community. The features and characteristics of the case studies that are deemed significant in developing the level of craft production in Egypt are extracted and discussed.

Egyptian Case Studies (Encode-Rhimal)

The case studies selected aim to add value to traditional crafts in Egypt and fulfil the goal of being considered creative products. The selection process followed specific criteria to ensure the chosen cases aligned with the concept of creative industries and showcased preservation and development methods.

Focus on Handicraft Industries: The first criterion focused on handicraft industries specializing in wood products, primarily located in Cairo. This choice was made to examine the state of traditional crafts that have persisted over time, with Cairo being the governorate with the highest concentration of traditional industries.

Unconventional Preservation and Development Methods: The second criterion aimed to identify cases that presented unconventional methods of preserving and developing crafts. These cases emphasize creativity and innovation in the preservation and advancement of traditional crafts.

Functional and Aesthetic Products: The third criterion aimed to showcase cases that produce products with essential applications, fulfilling both functional and aesthetic aspects. The selected products go beyond heritage value and resonate with practical functionality.
Geometric Formations and Islamic Decorations: The fourth criterion focused on cases that feature geometric formations and Islamic decorations, which hold historical and cultural significance. These patterns have evolved over centuries and demonstrate innovation in engineering and mathematical relationships.

The selected case studies primarily relate to architecture and interior design products to showcase how traditional crafts can contribute to the built environment and interior spaces.

The analysis of the case studies will focus on three crucial aspects: the design stage, the production stage, and the presentation stage, including marketing and target users. This analysis aims to extract the most important features and characteristics of each case study and explore their potential to enhance the level of craft production in Egypt.

First case-study (Encode)

The Egyptian Node for Collaborative Design (ENCODE) is a research and design center focused on developing local designs and products using computer programs and modern digital manufacturing technologies. ENCODE emphasizes research, communication, and collaboration with partners interested in the field. Established in 2011 in Alexandria, Egypt, Studio Encode aims to innovate the traditional production model by blending education, practice, and practical application. They collaborate with universities and factories, offering ideas and products in architecture, interior design, and furniture. In the short term, Encode Studio aims to introduce parametric design as a new language for design in Egypt. Parametric design involves using computer systems and mathematical analysis to generate and develop contemporary designs in two-dimensional and three-dimensional forms. This approach facilitates the translation of computer models into practical applications, overcoming the limitations of traditional manufacturing techniques.

Fig. 1
Designer: Encode studio, sample of Encode working to generate the patterns by using Cad programs. Copyright http://www.encodestudio.net
Target group of their work: designers rather than craftsmen; their efforts attempt to provide a creative environment through interactive workshops, courses, research and education of new methods of design in Egypt and making industrial prototypes for products that help the designer to understand, implement and develop.

Techniques used for production: Digital manufacturing technology has been relied upon, which does not require manual intervention except at the end for finishing and assembly; They also tried to find new uses for available resources.

Marketing and after sales: ENCODE stops at the initial implementation and making an industrial model, after which the manufacturers that take their designs take over the formation of a production line and implement it with their technologies.

Second case-study (Rhimal)

Rhimal Design is an institution focused on bridging the gap between design and industry in Egypt and the Middle East. It aims to raise the level of design, enhance the competitiveness of local production, and position Egypt globally in industrial design.

The idea originated when a group of young leaders took charge of the manufacturing and furniture sectors in the Egyptian government’s Ministry of Industry and Investment. They observed that despite the expertise of the wood and furniture industry in Egypt, it struggled to keep up with global competition in design development and lacked strong export capacity.

Rhimal identified the root cause as the lack of connection between design and industry. To compete effectively, a new and innovative product with global design is crucial, and the reciprocal relationship between design and industry is necessary. When the industry recognizes the benefits of design, it invests in design and designers, enabling them to develop and compete.
Rhimal’s objectives revolve around four main axes. Firstly, it aims to promote design as a cultural aspect through effective education strategies to raise public and professional awareness of its role and importance in industrial development. Secondly, Rhimal acts as a bridge, connecting local and international designers, makers, decision-makers, academia, and society. Thirdly, it seeks to encourage and support young designers with global aspirations. Lastly, Rhimal aims to establish an international presence by engaging international names and brands to sponsor and support local design while providing necessary contacts, support, and services for designers.

To address this problem, the Industrial Modernization Center provided financial support to the Furniture Export Council and promoted the significance of design in the industry. The Furniture Export Council turned to Rhimal to develop and implement a strategy to create innovative design concepts and products that cater to the global market while leveraging the capabilities of Egyptian factories and embracing the country’s goals and cultural identity. The aim is to build an international brand for Egyptian products characterized by a unique style that reflects their cultural identity.
Target group of their work: designers, craftsmen, manufacturers.

Launching creative design ideas without placing restrictions on the role of the designer in developing these ideas by transferring his experiences to the trainees to convert their ideas into products, and this comes in an interactive manner that includes the designer, the trainee, the craftsman or the executing company. They tried to establish a creative industrial structure where new designs and ideas, training centers for craftsmen, interactive workshops for designers and producers, forming brands, searching for support and financing for development and providing raw materials, machinery and expertise, in addition to cooperating the government to establish centers for preparing workers and developing their performance to deal with modern technology without neglecting to learn manual skills.

Results

The analysis reveals important findings and recommendations for the current state and development of traditional crafts in Egypt.

Current State of Traditional Crafts: Traditional crafts made of wood and metal industries remain significant sources of employment. However, challenges like mechanization, waning interest among younger generations, and a need for modernization persist. Preserving traditional crafts is vital for cultural heritage.

Impact of Innovative Approaches: Case studies like Encode and Rhimal showcase innovative approaches that integrate modern technologies and design methodologies. They demonstrate the potential to elevate design standards and enhance local production’s competitiveness.

Opportunities for Development: The case studies highlight opportunities for developing traditional crafts in Egypt through the application of creative industries principles and modern techniques. Digital manufacturing technologies offer precision and efficiency. Collaboration and incorporating functional aspects and Islamic patterns add value.
**Recommendations**

Support and Funding: Provide support and funding from government entities, NGOs, and private stakeholders for research, education, and training programs focused on traditional crafts.

Education and Skills Development: Establish specialized training centers and integrate traditional crafts into educational curricula to raise awareness among younger generations.

Collaboration and Networking: Facilitate platforms for collaboration and knowledge-sharing among designers, craftsmen, manufacturers, and stakeholders.

Market Access and Promotion: Develop effective marketing strategies to promote traditional crafts locally and internationally, collaborating with the tourism industry.

Policy and Regulation: Formulate policies and regulations to protect and preserve traditional crafts, ensuring sustainability and maintaining quality.

**Author’s Notes**

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