

Sustainable markets and how to create a healthy environment built on effective foundations for efficient resources.

An Applied Study of Market Square at AL-Manshiya Central Zone in Alexandria

Aya Hassan Mohamed Yusuf Afifi

Faculty of Arts and Design, Pharous University, Alexandria, Egypt, aya.hassan@pua.edu.eg

Abstract:

The research discusses the concept of sustainable markets, which focus on achieving a balance between economic, environmental, and social dimensions to ensure that the needs of current generations are met without compromising the opportunities of future generations. It emphasizes the importance of reducing resource usage and carbon emissions by applying sustainable design in urban buildings. It also highlights the human role in exacerbating environmental problems such as greenhouse gases and the consumption of non-renewable resources, stressing the need to shift towards renewable energy and apply sustainable development principles. The research further explains the transformation of food exchange from open markets to covered markets for reasons related to investment, economy, and health. These covered markets are preferred by consumers as they offer a wide range of food products and sell them directly to consumers. The research proposes a project idea that combines closed and open markets to create a "Market Square," where the space is divided and designed into platforms, sales areas, and warehouses equipped with cold and dry storage rooms, as well as service halls like waiting areas and cafes. The design features open spaces for selling, with units made of light metal structures (containers) used as closed platforms for selling meat, fish, and other products.

Importance of the Research: This research is a step towards studying the interior design of sustainable markets. It aims to highlight the formative impact of modern technology on the interior design of sustainable markets and simulate the principles of standard architecture.

Research Problem: Due to the spread of street vendors in public areas and the continuous efforts of officials to limit this phenomenon, the problem has only increased, obscuring the city's aesthetics. Some markets have emerged amidst public buildings, homes, and residential areas, leading to increased visual and auditory pollution. One of the most famous examples is the Manshieh Square Market, known for its fish market, in addition to various other products sold within the residential areas. This has created a need to establish a market that serves the local community in a more humane way, striving to achieve environmental, economic, and social sustainability. The proposed solution is to design a market in the open space of Manshieh Central Square, in a way that aligns with modern requirements, given the existence of closed markets, malls, and the misinterpretation of open markets as merely chaotic spaces. The need has arisen to design a market that is both open and enclosed at the same time. The chosen location is significant due to its proximity to the original market site and the problems previously faced at Manshieh Central Square, including a fire caused by the negligence of vendors after they were given wooden kiosks. Despite the attempts to reduce their street presence and disorganized selling, the issue has resurfaced, erasing the renovation efforts by the local authorities.

Research Objectives: The need to find solutions for poor planning between kiosk design and the surrounding environment and the lack of alignment with the pace of development.

To achieve a flexible design that promotes development within the market and achieves sustainability and the application of technology. For the designer to follow visual rules that create an aesthetically pleasing work that attracts users and achieves environmental, economic, and social sustainability. To highlight new and modern design trends and methods to find the best design solutions for these spaces that suit the nature of life and address the lack of development in interior and exterior design solutions.

Research Hypotheses: The research is based on the following hypotheses: -There is a relationship

between advanced design methods, modern technology, and the role of the interior designer. -There is an interaction between design elements and the surrounding environment.

Research Methodology: The research follows a descriptive, analytical, and comparative approach. It presents an applied model to showcase contemporary, future, and sustainable design treatments and ideas related to the project and its functional nature. This is done through an analytical and applied study, illustrating the past and future states of the market.

Research Limits: The research includes a study of modern design methods, as well as the integration of market design with complementary elements and services. This will be studied through an applied study of the market adjacent to Manshieh Central Square in Alexandria, assessing the compatibility of design and aesthetic coordination.

Questions: What are the forms of design treatments with visual perception for a sustainable market? What is the role of the interior designer in achieving intellectual and design excellence for sustainable markets? What role do modern materials play in creating innovative treatments that match technological advancements? What are the future directions for the development of these markets?

Research Findings: Designing an eco-friendly commercial market consisting of two floors, using containers to create sales units and platforms within the market, along with some environmental treatments to enhance building performance and improve air quality and natural air circulation. Using lightweight construction materials with eco-friendly containers, as cement production releases a ton of carbon dioxide for every ton produced. Container structures require less cement and concrete compared to bricks and mortar. Utilizing technology to achieve and create interactive and sustainable work environments suitable for designing a sustainable market that fulfills all aspects of environmental, economic, and social sustainability.

Recommendations: Efforts should be made to establish commercial markets in most areas using systems that achieve sustainability from all aspects. One proposed location is the Omar Pasha area near the auto garage opposite the Egypt Station Central to eliminate chaos and pollution. A market model should be designed there that achieves sustainability, aligning with the "Go Green" initiative and preserving the rights of future generations in progress.

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