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Architectural Design Firms' Social Role to develop Sustainable Heritage Communities in Egypt

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Abstract. Cultural heritage buildings are a crucial element for future generations, as they preserve the cultural identity unique to where they are located. Moreover, they create one of the most dominant and memorable architectural achievement that have significant historical and cultural values. However, heritage buildings in Egypt suffer from a surge in demolition due to the deteriorated conditions of their surroundings areas, as well as, the maintenance of only the physical structures without considering the surrounding communities. Egypt constantly encounters many challenges such as poor coordination from the government due to shortage of skilled people, poor heritage awareness of local communities and lack of finance needed for achieving sustainable development. On the other hand, Architecture Design Firms (ADFs) act as a supporting tool for the government as they have a vital role in the local community development; which further act as the cornerstone of developing the historical regions. Hence, in order for the ADFs to achieve such development, they need to activate their Corporate Social Responsibility (CSR) role which is a driver for developing the heritage community. Consequently, this research aims to develop a matrix that correlates CSR with ADFs as an approach to achieve sustainable heritage communities in Egypt. A research methodology consists of literature review to investigate the topics of CSR, Heritage community development and ADFs. Finally, developing a matrix showing the relation between the architect's social responsibility and the indicators of sustainable development of local communities.

Keywords: *Corporate Social Responsibility, Heritage Community Development, Sustainable Development, Architecture Design Firms, Heritage Buildings.*

1. Introduction

Egypt has some of the world's most important historical sites as it hosts six cultural heritage sites and one natural heritage site [1]. Yet these historical sites fall under great pressure due to a range of aspects, of which include the poor coordination of the government, (b) failure to involve different stakeholders, (c) the lack of financial contribution and mainly, (d) lack of awareness of

the local community towards the significant value of these historical heritage buildings. In the meantime, the lack of the governmental role resulted in the involvement of the private sectors to support the government in sustaining heritage community development. Moreover, local community is considered one of the root aspects that surround such area and shape it, yet very little attention has been given to such communities of these historical sites. Only focusing on the conservation of their exterior aspects of such physical structures, results in a loss of value to these sites and the physical and socioeconomic deterioration of the surrounding areas [2]. Hence the heritage development of such areas have been recently brought to the attention of the Architecture Design Firms (ADFs), which target their focus mainly on the process of engaging with social and environmental causes, known as corporate social responsibility (CSR). As a result, this further leads to achieving the societal needs and meet their expectations.

2. Literature Review
2.1. Heritage Buildings
2.1.1. Definition of Heritage

Heritage is considered a significant source of values, tradition and cultural identity. Heritage helps the community to sustain their local identity. Heritage can be defined as a chosen or understood connection to a history that is greatly influenced by both its surrounding environment and by the values, beliefs and motivations of those who live in it [3]. Meanwhile, heritage is classified into both cultural and natural heritage [1]. Cultural heritage is the inheritance of a community and society's physical structures or sites and intangible qualities retained by past generations, preserved in the current and given to future generations [4]. Hence, Cultural heritage includes both tangible and intangible heritage.

2.1.2. Types of Heritage
2.1.2.1. Physical Tangible Heritage

Tangible heritage includes a) structures b) historic sites landmarks and buildings, that are of a great value and deemed worthy of potential protection shown in Figures 1 and 2. Moreover, these include artefacts that are significant to a specific community's archaeology, architecture, research, and engineering [3].

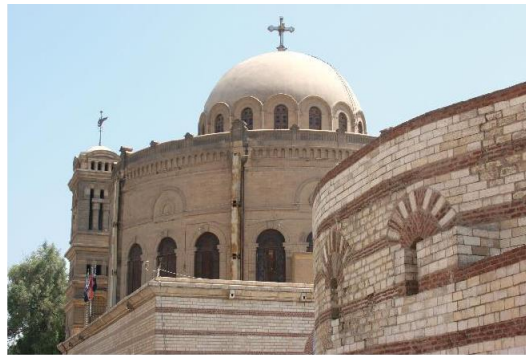Figure (1) Amir Aqsunque Mosque [6].   Figure (2) St. George church [5].

2.1.2.2. Intangible Heritage

Intangible heritage comprises of a) traditions and images b) words and information, c) abilities d) tools, items and resources, which are connected with cultural areas and are accepted as part of the cultural heritage by communities, groups and, in some instances, individuals [4]. Furthermore, the intangible heritage includes alive cultural transmission practices between generations, and these

practices are based on intergenerational communication such as story telling shown in Figure 3, Dancing shown in Figure 4, art, clothing, food and memories of the heritage community.

Figure (3) Story telling [2].   Figure (4) Dancing [5].

2.1.3. Problems impacting the Physical Heritage in Egypt

Egypt is well known of its architectural and cultural heritage [5]. Egypt is distinguished by some of the world's significant heritage areas, as it includes seven cultural historical sites and two natural historical sites [1]. Moreover, Egypt and especially historic Cairo has a distinctive architectural style and features the largest concentration of Islamic temples in the country, both in quality and quantity [6]. Yet, Egypt falls under great urban pressures which is the vandalism and deterioration of its historical sites and heritage buildings due to many factors. There are three factors that cause deterioration of the physical heritage in Egypt which are: Human-based factors, Environmental factors and governmental factors [5]. However, the human-related factor is considered the main factor due to the discrepancy between the physical heritage structure and the surrounding local community needs. Whereas, community are the main factor affecting the surrounding heritage areas therefore, further consideration is in order to achieve sustainable development of heritage communities.

2.1.1. Human-based Factors

Eight main problems are caused by the human factor affects the physical heritage [5]:
1. Lack of public concern for antiquities due to that most buildings are unused and therefore the local citizens of this area don't benefit directly from it shown in Figure 5.
2. Lack of social awareness of the importance of heritage buildings due to low education levels that cause great demolition to heritage areas as shown in figure 7.
3. Poverty and unemployment shown in Figure 6.
4. Changes in values leading to new uses of heritage resources therefore, applying renovations without previous experience, which spoil the value of the heritage style.
5. Migration to or from site and deterioration of the heritage buildings in this site due to lack of usage or improper usage.
6. Shortage of constant maintenance to the physical structures of heritage areas due to lack of awareness and shortage of financial resources which further on cause demolition to their exterior architectural style.
7. Applying renovations by using modern high tech facilities such as air conditioning which cause deterioration of the cultural identity.
8. View heritage buildings as discrete components of the surrounding environment which spoils the visual image as a whole shown in Figure 7.

Figure (5) Lack of awareness of heritage value [6].

Figure (6) Writing on Citadel of Qaitbay in Alexandria [2].

Figure (7) Garbage in heritage areas [2].

2.1.3.2. Environmental Factors

There are 4 main environmental factors that negatively affect heritage areas [5] which are:
1. Dust accumulated on ceilings and walls of heritage buildings that damages painting and decoration and cause demolition to the architectural style.
2. The presence of polluted air in the area that could cause great harm to stones and building materials, due to transportation in this area or presence of industrial areas nearby the heritage site.
3. Humidity and rain due to poor maintenance that can cause severe demolition to the structure of buildings.
4. Ground water table that negatively affect the buildings.

2.1.3.3. Governmental Factors

1. Shortage of financial resources that cause lack of maintenance due to leaving insufficient financial resources for renovations.
2. Lack of needed skills to renovate the heritage buildings.
3. Renting some of the heritage areas to private sectors, which reuse them in other activities that may not harmonize with the site and cause serious damage.

2.2. Sustainable Development
2.2.1. Definition of Sustainability

Currently, no accurate definition of the term has emerged, in spite of the great influence of the sustainability concept. However, according to Brundtland report [7], Sustainability can be described as the improvement that fulfils current needs without undermining future generations ' ability to meet their needs. Moreover, one preference defines sustainable development as the development that improves the long-term welfare of human and ecological communities and then move on to a more specific discussion of particular strategies [8]. Mainly, sustainability could be described as the philosophy that provide awareness to the community about consequences of their actions towards the environment

and encourage the society to have disciplines and to conserve the vitality of the earth's ecosystem. Thus, sustainable development comprises of three main aspects which are Social, Environmental and Economic as shown in Figure 8 [7].
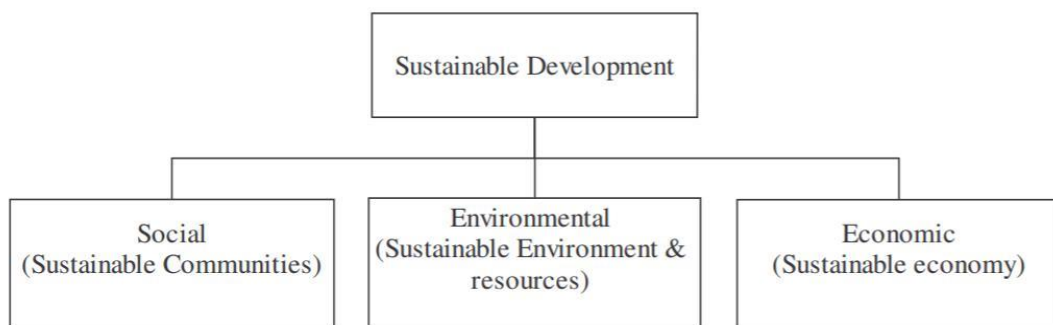

Figure (8) Sustainable development [7].

2.2.2. Sustainable Development Principles

There are a set of principles conducted in order to achieve sustainable development. basic truths about sustainability [9]. These principles reflect a philosophy which shapes the theory of brickwork or which acts as a policy about the existence of sustainability. Through following the implementation of the principles mentioned below, and others that may grow with further public discussion, decision-making could better serve the security and fair distribution of resources in order to achieve equity, through prioritizing real needs before needing while keeping choices available for future generations.

1. Social Equity.

Social equity is considered to be the most significant element to achieve sustainable development. Whereas all economic, environmental and social systems depend on a well-balanced ecosystem, in which the community contribute to be an essential part of this ecosystem. Thus, the relationship of the community and the environment must achieve the ecological integrity in order to enhance the quality of life of the society.

2. Sufficiency and Opportunity.

Currently, human development is encouraged, this is achieved by providing opportunities and raise awareness on using the resources available efficiently. Thus a way to start applying this is by doing more with less. This requires a reduction, and recycling system.

3. Efficiency.

One of the main aspects on sustainable development is efficiency specially in the construction industry. This is achieved by eliminating waste generation by analysing and maximizing the full life-cycle study of buildings and processes in order to address the status of natural systems where waste is not present.

4. Communication and Cooperation

Mainly, systems that affect the need of the society have the responsibility to provide accountability. Communication can be considered as the catalyst for social improvement as public confidence could be boosted by sincere communication. Therefore, Commitment to achieve better social communication and cooperation should speed up the development process and achieve sustainability.

5. Citizen Engagement and Democracy.

One of the main principles of sustainable development is community engagement especially in the architectural field. Whereas, most of sustainability problem could be solved by engagement of the society in the decision making process. Long - term change and sustainable development involves the need for community participation.

2.3. Heritage Local Community
2.3.1. Definition of Heritage Local Community

The term "Local community" and community participation had attracted several researcher's and architect's attentions in the recent decades. "Community" can be defined as a bunch of people engrained in a sense of place in which they have an extremely mutual and trusting relationship with one another and their surrounding environment [9]. Moreover, since the society is considered to be a self-organization, it affects its surrounding environment. Thus, while the community changes its surrounding environment in its lifetime, in reaction the environment changes the community as well. In addition, Local communities that are existing within heritage areas are considered to be cultural guardians and associated users of these areas, and they are identified as a core community [10]. Accordingly, their everyday activities and rituals are connected with their surrounding environment and local cultural heritage. Hence, they have an abundant sense of belonging to heritage and also they sustain a constant connection with local identities and values [8]. This makes them a core stakeholder of importance to heritage areas, as they have the ability to preserve cultural heritage and sustain local identities [11]. Moreover, to strengthen their commitment to protect cultural heritage, the core community's desires and views need to be considered and this is achieved by sustainable community development.

2.3.2. Heritage Community and Sustainable Development

According to the previous, the heritage community is of a great importance and need to be well considered and sustainably developed. The term of community development, mainly, it is a process involving facilitation, coordination and involvement that allows individuals to guide forms of influencing the community they desire to live in and be part of [6]. Furthermore, sustainable community development has arisen as a convincing alternative which involves planning and development, community participation, comprehensive and equitable system that leads to meaningful, substantive improvements to the community. This is achieved through job opportunities, poverty reduction, conservation of natural environment, and empowerment of community [9].

According to [9], community development according to sustainability has three aspects:
1. Environmental aspect, it means attaining the present community needs without negatively affecting the future needs by optimizing the use of natural and environmental resources.
2. Economic aspect, it is considered to be the most important precondition for the real fulfilment of human needs and raising community living standards.
3. Social aspect, includes the enhancement of the quality of life of the society by: addressing its demands, increasing social justice and improving well-being rates.

2.3.3 Indicators of Sustainable Community Development

After examining and studying many literature, four indicators of sustainable community development are concluded as shown in figure 9 [6].
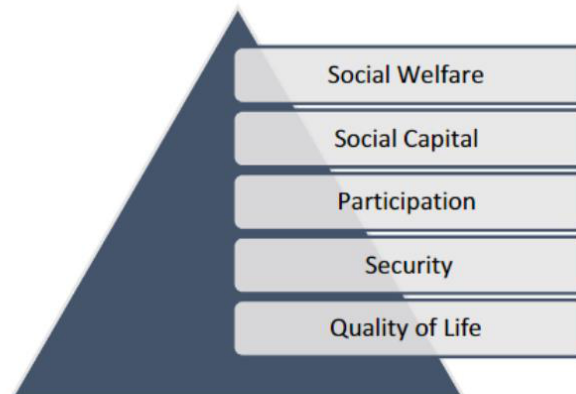
Figure (9) Indicators of Sustainable Community Development [6].

1. **Quality of life**

It's considered as the main indicator. Currently, cultural heritage improvement may make a significant contribution to enhancing the lives of residents. In addition, enhancing the quality of life of local communities positively affect the surrounding heritage areas.

2. **Security**

This can be achieved by the restoration and renovation of heritage areas, while the demolition of such areas contributes to general poverty, violence and destruction of infrastructure due to lack of maintenance.

3. **Participation**

It is one of the main indicators which means allowing community engagement and participation in the decision making process, which gives the local community a sense of belonging and empowerment.

4. **Social capital**

Social capital means creating opportunities for social integration, providing workshops and training to local communities. Which helps in sustaining their local identity and pride.

5. **Social Welfare**

It mainly means the empowerment of the community and improving their standards of living and enhancing whole conditions of the local community.

2.4. Corporate Social Responsibility (CSR)
2.4.1. What is CSR?

Corporate social responsibility (CSR) has extensively started to incorporate with worldwide business' corporates. During the 20th century, the society's expectations from corporates has changed from appreciation of corporate's philanthropy to demanding of social justice. Hence, corporates goals started to go beyond profit maximizing and focus more on the local community and costumer's satisfaction [12]. Although CSR in the architectural field has gained many research's attention, yet little attention has been given to it in Egypt. The concept of CSR applies to what the interaction between global corporations, national governments and local society should be [13]. More precisely, CSR focuses on how the relationship between a corporate and the society should operate. Additionally, CSR could be defined as the responsibility of a corporate to act ethically, improve the quality of life of local society and contribute to the economic growth. Generally, CSR is concerned with the way corporates integrate into their values the following:

- Social responsibility.
- Environmental responsibility.
- Economic responsibility.

CSR is a management approach that positions corporates to handle uncertainties proactively and to take advantage of opportunities, particularly with regard to their reputation and the large stakeholder engagement [14]. This may include shareholders, employees, 8 clients, communities, suppliers, governments, and others influenced by the corporate. CSR of corporate should include several activities such as:

- Sustainable development.
- Corporate ethics.
- Security and health.
- Maintenance of environmental factors.
- Human rights (including the fundamental rights of workers).
- Working conditions (including safety, working hours, salaries).

2.4.2. Principles of CSR

The principles of CSR
- Sustainability.
- Accountability.
- Transparency.

2.5. Architectural Design Firms' CSR

Architects have a significant role, through their practices as experts and members of the local community as well. Architects are the main point of communication in the construction industry with customers, thus they always have the motivation, inspiration and spirit of creativity to play this role [6]. In addition, architects primarily design structures and service which acts as a catalyst towards improving the cultural development while contributing in economic growth.

Although architects have a significant contribution in improving the environment and boosting the economy. In Egypt, they neglect their social responsibility that they need to play besides the environmental and economical responsibility. Hence, ADFs need to activate their social responsibility in order to achieve sustainable development [14]. In the meantime, architect's commitment to heritage areas extends beyond the boundaries of maintaining the physical heritage to include all facets of sustainable community development [5]. Therefore, to attain sustainable development, the role of ADFs within the scope of CSR is classified under the following:

1. Social responsibility.
2. Economical responsibility.
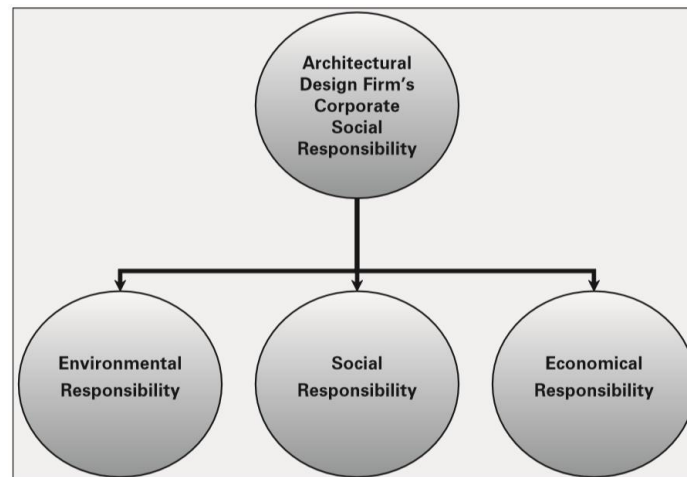3. Environmental responsibility.

Figure (10) ADF's CSR [15].

2.5.1. Architectural Design Firms and the Society

The social aspect according to [6], includes enhancing the quality of life of the society by: meeting its desires, increasing social justice and rising well-being rates. Moreover, architect has a vital role towards the society which is: raising awareness of the important role that architects can play in improving society, guaranteeing that the final design meets the needs of community, such as preferences, traditions and cultures, involving community in the decision making of the design process and getting input from other corporates and motivating them to fulfil their social responsibility [14].

2.5.2. Architectural Design Firms and the Economy

Mainly, economical responsibility is the most significant requirement in order to fulfil society's needs and increase the community's living standards. Through the position of built environment, this contributes to economic growth in particular. Furthermore, the economic responsibility of any design firm can be seen from two different viewpoints. The first one, is to provide job opportunities and increase the percentage of gross domestic product by encouraging the growth and development of the construction industry. The second one, is increasing the profit and return on investment for the client. Hence, ADFs have a significant responsibility towards the economy such as ensuring that the resources of society are used effectively, joining any other sales from other businesses that are committed to improving their goods ' quality and minimizing the total running and maintenance costs and generate innovative ideas [14].

2.5.3. Architectural Design Firms and the Environment

The environmental responsibility of the ADFs can be defined as the contribution to optimize the use of the environmental resources in order to ensure the human development. Mainly, the architect's responsibility towards the environment is to encourage the community to save the environment and to encourage the sustainable usage of resources during the architectural design process [5].

2.5.4. ADFs' CSR and heritage community development

In order to achieve the sustainable community development in heritage areas, ADFs have to play their social role toward the community [6]. Whereas, heritage community development does not require only their social responsibility but also their economic and environmental responsibility. Therefore, this could be achieved by applying several activities of ADFs which are: Public engagement, Community empowerment, strengthening social structure, enhancement of local culture and awareness and enhancement of liveability.

Figure (11) Architect's role in heritage community development [6].

2.5.4.1. Public Engagement

Public engagement is considered to be the most significant aspect in enhancing the quality of life of the community [6]. Whereas, it encourages social enclosure and sustainability as well as preserving the cultural identity. It is significant for the communities to have the awareness about the importance of heritage conservation. Hence, one of the main roles of architects is to raise awareness among the communities about their important role in the decision making and in heritage preservation.

2.5.4.2. Community Empowerment

Mainly, community empowerment is described as a system in which the community has full control of their existence and society and can understand their surrounding objectively. Therefore, architect should provide an encouragement for community members to demonstrate spirit of leadership in order to guide their society [5].

2.5.4.3. Strengthening Social Structure

Social structure is assisted by a participating strategy, which is highly effective for community reconstruction [10]. Thus, architects may create opportunities for volunteers in the area of cultural heritage and play an active role in heritage conservation projects.

2.5.4.4. Enhancement of Local Culture and Awareness

Mainly, local culture is considered to be local pride and social understanding to the surrounding heritage community. Therefore, these cultural values reinforce the sense of pride and gratitude of the people for their heritage. Consequently, local community should have the awareness to protect and preserve their heritage. ADFs and architects can use their skills to demonstrate the strengths and beliefs that shape society and increase public members ' awareness [10].

3. Results

Figure (12) Design Matrix. Developed by Author.

4. Conclusion

In conclusion, the literature reviews along within the case-study proposed have highlighted the need of ADFs to activate their CSR role. It emphasized the importance of ADFs CSR in the sustainable development of heritage communities. Heritage buildings demolition is resulted from the focus of only the conservation of the physical structures of heritage and not focusing on local communities. CSR was introduced in the 20th century an approach for ADFs to behave ethically and not only maximize the profit but also enhance the social conditions of the community. Hence, CSR is proposed approach for ADFS to achieve sustainable heritage communities' development. The paper's methodology consists of comprehensive data collection from several reliable and valid sources in order to create literature review that would help form a design matrix showing the relation between ADF's CSR and local communities needs shown in figure 12.

5. References

[1] UNESCO World Heritage Sites in Egypt. (2017, July 28). Retrieved from UNESCO:https://everything-everywhere.com/unesco-world-heritage-sites-egypt/   WCED. (1987). Sustainable Development. Berlin.

[2] Hanna, M. (2017). Egypt: Cologne Aswan Summer School on Heritage Management and Storytelling.

[3] Marmion, M. M. (2012). Understanding Heritage: Multiple Meanings and Values.

[4] Rudolff, B. (2006). 'Intangible' and 'tangible' heritage. Germany.

[5] Mostafa, S. L. (2014). Historic Cairo: Causes of Deterioration and Suggestions for Preservations.

[6] Hasan, A. E., Al-hagla, K. S., & Alana, H. a. (2018). A framework for architects' role in attaining sustainable community development in heritage areas Al-Darb AL-Ahmar, Islamic Cairo, Egypt as a case. Alexandria Engineering Journal, 11.

[7] Darwish, M. M. (2010). incorporating Sustainable Development and Environmental Ethics. Eighth LACCEI Latin American and Caribbean Conference for Engineering and Technology (LACCEI'2010), 10.

[8] Phillips, R., & Pittman, R. H. (2009). AN INTRODUCTION TO COMMUNITY DEVELOPMENT. USA and Canada: Routledge.

[9] Flint, R. W. (2013). Practice of Sustainable Community Development a Participatory Framework for Change. Napa, CA, USA: Springer New York Heidelberg Dordrecht London.

[10] Poulios, I. (2014). Discussing strategy in heritage conservation Living heritage approach as an example of strategic innovation. Cultural Heritage Management and Sustainable Development, 19.

[11] Wesemael, P. v., Roders, A. P., & Krishnamurthy, S. (2019). unity participation in cultural heritage management: A systematic literature review comparing Chinese and international practices. ELSEVIER, 9.

[12] Keinert, C. (2008). Corporate Social Responsibility as an International Strategy. Vienna, Austria.

[13] Crowther, D., & Aras, G. (2008). Corporate Social Responsibility. ventus..

[14] Hohnen, P., & Potts, J. (2007). Corporate Social Responsibility an Implementation Guide for Business. Canada.

[15] Othman, A. A. (2012). An Innovative Protocol for Improving the Ethical Behaviour of the Quantity Surveying Profession in South Africa. Research gate.