Assessing the Social Sustainability of Urban Landscape. 
Case study of Abdali regeneration (The new downtown of Amman)

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ABSTRACT

This study is about assessing the social sustainability of the urban landscape, it focuses on the case of Amman, specifically, Abdali urban regeneration project that is known as the “new downtown of Amman”. It focuses on the social dynamic of the urban landscape in its macro scale. The study illustrates the impacts of urban regeneration projects on the physical and sociocultural settings of Amman, and how these impacts affected its social sustainability. The study aims to provide insight into the dynamics of the urban space, especially those occurred by urban regeneration developments, and then assessing the impacts of these transformations on social sustainability of Amman city.

Abdali Urban Regeneration Project was selected because it is the first mega project that emerged to the city. The impacts of the project on the social sustainability of Amman is arguable as the project occasionally opened to public and many parts still under construction, therefore, the findings must be understood as indicative in character and not as determining facts. Moreover, to enhance the creditability of the findings mixed methods approach was used, various types of the interviews with locals, architects, academics, experts, and developer, and Greater Amman Municipality were conducted. Other methods such as the site analyses, documents analyses, and unstructured observation with photographic survey were also used.

KEYWORDS: Social sustainability, Social impact, Social assessment, Abdali project

1. INTRODUCTION

This study suggests understanding the urban space in a dynamic way and from various perspectives that take the political, sociocultural and socioeconomic aspects as “process” and the built environment as “product” and examining the influence of the product on urban identity and social sustainability. Researchers -Madanipour 1996; Kostof 2009; Lin 2010; and Sepe 2013 among others- provided useful theoretical tools for describing and analyzing the relation between these aspects in shaping the city, and highlighted how urban spaces shaped as a result of continuous processes. It shows that tracing the production of space through time offers a dynamic perspective that bridges the gap between social and spatial dimensions.

This study explored the physical, social, and cultural impacts of urban regeneration projects on the city identity and its social sustainability and found that: Physically, the standardization of architecture and the privatization of space had intensified spatial segregation, and created exclusive cityscape. Socially, urban regeneration had increased the social polarization, reinforced links between specific socioeconomic groups and specific locations, and led to
other societal effects such as the changes in labor market, employment opportunities, status of families, and sense of belonging to community. These projects also created new types of class that emerged to the contemporary cities such as the *creative class* and the *classlessness*. Culturally, the built environment of these projects affected the sociocultural behavior of people that varies according to gender and increased the consumerism culture among them.

To assess the above impacts, the existing international frameworks were studied -such as, the concept of social sustainability, Place-making charter, and SIA framework- to find the most important indicators that are used in social assessment. Reviewing the international frameworks confirmed that implementing them directly on Amman is impractical and may lead to further influences, because there is no ready solution that suits all places all over the world, each culture is unique, what works for European cities might be completely inappropriate for ones in the Middle East. Therefore, the *Dynamic framework*, which merges between urban morphology and social characteristics, is created to be used in assessing the impact of *Abdali* regeneration project on the social sustainability of Amman. This framework resulted from the integration between various international charters and frameworks, and then further developed to respect the sociocultural organization of the City.

2. **Research methods**

The impacts of the *Abdali* project were assessed through studying the urban morphology and the social characteristics of the project. Urban morphology had been tested by conducting site analyses, documents analyses, and unstructured observation with photographic survey, while the social characteristics had been tested by conducting various types of interviews with different target groups (Fig. 1).

![Urban Morphology and Social Characteristics Diagram](https://example.com/diagram.png)

**Fig. 1** Testing the Dynamic framework on *Abdali* by using mixed methods approach

This mixed methods approach had been implemented on *Abdali* case study to assess its impacts on social sustainability of Amman. Mixed methods are selected to overcome the minuses of using only qualitative or quantitative methods, and because it suits the nature of social study as well as urban studies in collecting and analyzing the data and different viewpoints (Bryman 2012). About 80% of the implemented methods are qualitative, while only 20% are quantitative.
3. ABDALICASE STUDY

*Abdali* is the first mega project that is dominating the cityscape of Amman. Amman is considered by the Abdali’s developer, MAWARED, as messy and unattractive for outside investors. Therefore, MAWARED decided to develop the *Abdali* site and give Amman the glory to attract international investments in order to support the country’s economic status (Summer 2005). To achieve this goal, MAWARED and Horizon International –an international construction corporation specialized in investment and development of large scale real estate and construction projects owned by Sheikh Bahaa Rafiq al-Hariri- entered into a joint venture in 2002 (Abdali 2013).

This partnership led the Horizon International to bring their expertise networks which had previously been involved in a similar development in Beirut, known as *Solidere development*, to contribute in the conceptual design of the new downtown of Amman. *Abdali* planners were working together with the planners of *Solidere* in developing the building regulations and codes for the *Abdali* development, thus, similarities between the two projects are outstanding especially in the initial scheme of *Abdali* (Abdali 2013; Rayyan 2013). Likewise, the initial scheme of *Abdali* was designed by the Millennium Development, and the economic feasibility was studied by Shair and Partners from the Dar al-Handasah group (Summer 2005), both of them were international companies that involved previously in Solidere, consequently a little chance was given to Jordanian planners and architects to create something that represent the Jordanian architecture.

3.1 The urban morphology of Abdali

This section is focusing on the urban morphology for the main areas in *Abdali* project compared to its adjacent neighborhoods, to comprehend the transformation on the physical and social forms, and to predict the impacts –positive and negative- of this transformation on social sustainability and urban identity. Typically, the analysis of the physical form focuses on streets pattern, plots pattern and buildings form (Conzen 1980), the process of transformation on streets and plots pattern can be realized from comparison of aerial views and maps, while the architectural characteristic which includes the masses, materials, and the general image can be realized from the 3D images and field observation, while the heights of the building obtained from analyzing the buildings’ heights map designed by Abdalip.s.c.

3.1.1 The physical form of Abdali

The area of study for this investigation includes *Abdali* development and its surroundings. The surrounding areas are divided into two zones; area (1) “the South neighborhood” across Sulaiman al-Naboulsi Street, and area (2) “the North neighborhood” across al-Amin Street (Fig. 2).
The aerial views for Abdali area show the transformation on the physical pattern from curve streets that smoothly follows the topography lines to linear streets that are perpendicular on them; and from an organic pattern that integrated with the surrounding to a designed, systematic one that imposed on them (Fig. 3; Fig. 4). This transformation will affect the arrangement of buildings and the organization of public spaces, thus, change the shape of the built environment and the individual’s behavior as has been shown later.

3.1.2 Gateways

The Abdali development consists of six major gates that define the main sectors (Fig. 5); each gate is safeguarded by different means of security, and most of them are identified by two towers. These gates are distributed as follow:

- Queen Nour Gate, at the western edge, defines the IT zone and the Boulevard.
- Naboulsi Gate, at the southern edge, defines the Abdali shopping mall.
- King Abdullah Gate defines the existing Civic Pole of the Abdali in the east.
- King Hussein Gate 1 defines the Transient housing zone at the northern edge.
- King Hussein Gate 2 defines the eastern edge of the phase two.
- Al Amin Street Gate, located at the north-western edge and the Queen Nour highway, defines the western side of phase two.
3.1.3 Roads Network

The configuration of the streets separates the site from the city and destroys the continuity of the existing vehicular network. The grid street network is imposed on the organic contour. The hierarchy of the streets is divided according to capacity and corresponding width into primary roads and secondary roads. A ring road for service is introduced around the whole site and emphasized its isolation from surrounding (Fig. 6). The site is surrounded by two main traffic arteries at the North Eastern and South Western sides, namely the King Hussein Street and Suleiman Naboulsi Street. Queen Nour Street forms its western boundary, and Al Amin Street marks its northern edge. The connection between the roads network of Abdali and the existing roads of its surrounding is still questionable as the area is already suffering from traffic congestion, so how it will accommodate the increased numbers of cars accompanied with this development in the future?
3.1.4 Zones division and Land use

The current Master Plan sub-divides the Abdali Development into two phases; each phase includes a series of zones and each zone has its characters, and functions (Fig. 7) as shown below:

![Fig. 7 Main sectors in Abdali development (Source: Abdali 2010 edited by the researcher)](image)

1. **The IT zone:** This zone located on the highest point at the western edge of the site. The towers in the IT zone are designed by London-based internationally famous architect Norman Forster (Abu-Hijleh 2013). This zone will include four high-rise buildings, their heights vary between 120m up to 220m, and this represents a huge difference in height compared to the surrounding neighborhoods where the heights never exceed 13m. Likewise, their High-Tech design is varied between cubic and irregular forms covered with glass panels with no reference to the local contexts (Fig. 8)

![Fig. 8 International designs with no reference to the local contexts (Abdali 2010)](image)

2. **The Boulevard:** Abdali Boulevard is an east-west pedestrian spine that connects the IT zone with the shopping mall; it follows the site contours and built as various terraces within different levels. Each level comprises buildings that include restaurants and retail spaces on their ground floor, along with residential and office spaces at its upper floors
The Boulevard is considered as the main public space in Phase One of the project; it also placed as a buffer zone between the commercial area and the towers of Phase Two. This spine reflects the linear pattern, the quality of the design for the outdoor spaces is high, the landscape features and the furniture are selected to reflect the luxurious brands and lifestyle (Abdali 2008). The buildings in the boulevard are cladded with natural stone and their height is 24m in general except two buildings on the east end, their height increased to 28m, which still acceptable within the Cityscape (Fig. 9). Moreover, the buildings along the boulevard are following specific design guidelines and regulations that issued by Abdali.p.s.c to control the architectural characteristics, heights, materials, colors, massing, and percentage of openings in facades (Abu-Hijleh 2013).

3. The Commercial zone: Located between the Boulevard and al-Naboulsi Street, it forms the southern boundary of Abdali development. Office buildings for corporate companies and the banking sector start boosting and changing the character of the street. The heights of these buildings are about 24m in the center and 28m in both edges -on East and West- with a tower at the western edge, yet, the physical form is considered acceptable compared to the surroundings. The architectural characteristics in this zone are also controlled by a set of guidelines issued by Abdali.p.s.c (Fig. 10).

During the field observation, al Naboulsi Street was the most crowded area with cars as well as workforce, the street includes old restaurants and services that intensify the presence of male workers, thus, the absence of females was highly recognized (Fig. 11).
Traffic congestion as well as the presence of male and absence of females in the main streets were recognized during field observation (Source: The researcher 2013)

4. **Transient housing**: This sector is situated on the eastern part of the site, the main plaza within this sector links between the Residential sector, and the *Abdali* Mall. This sector consists mainly of two rectangular plots; each plot has its own courts and mid-rise buildings, while marked with a high-rise building. Thus, this sector is marked by two high-rise buildings. Transient housing, according to the *Abdali* developer, has been built to serve tourists, investors, businessmen, and other professionals who may visit *Abdali* or Amman and need a temporary accommodation rather than a room in a hotel, and it is not targeting locals.

5. **The Residential zone**: This zone is located at the east part adjusts the Parliament House and the Palace of Justice. It includes three towers, and the other buildings are almost 28m. The presence of the high-rise and med-rise buildings in this sector, dedicated to hotel and residential uses, define the starting point of the new urban composition at the eastern edge, adjacent to the existing civic pole (Rayyan 2013). The existing civic pole is connected with the residential quarter through a central piazza. This piazza, according to Rayyan (2013), is not accessible to locals.
6. **Abdali Mall**: Abdali Shopping Mall is situated almost in the heart of the project on a triangle plot at the intersection of all land uses of the project, similar to traditional cities where the market place built at the city center and connected with different uses (Ryyan 2013) (Fig. 12). The height of the main body of the mall is fixed on 20m generating a homogeneous skyline, with the exception of a 125m high-rise building with retail at its base- marked its southern edge. It is clear from the site plan that the outdoor spaces of the mall tend to be organic, unlike the linear pattern that applied on the master plan.

Fig.12 The construction of Abdali shopping mall (Source: Abdali 2013)

7. **The existing Civic Pole**: This zone includes the major landmarks that identified the existing urban fabric, King Abdullah Mosque, the Parliament House, and the Palace of Justice (Fig. 13). The master plan includes these areas in the design in order to develop the landscape for the outdoor spaces surrounding them. The relation between the high-rises and these existing governmental institutions adjacent them is still questionable regarding the security and accessibility.

Fig.13 The proposed design for the plaza of the existing civic pole as presented at Abdalip.s.c (Source: The researcher 2013)

8. **Phase Two**: This phase envisioned with a central dynamic park that contains a circular plaza and a semi curve pedestrian spine which surrounded with mixed-use towers. The 3D model shows that this phase has been a battle field for a big number of glass towers with different High-Tech styles (Fig.14). The relation between these masses and their surrounding neighborhoods, regard the height and the whole image, still annoying.
3.2 The social characteristics

The social characteristics of *Abdali* were tested through various types of evaluation, however, it is important to highlight that the responding sample of the structured interview with locals does not represent the entire population in *Abdali* development. Therefore, the findings must be understood as indicative in character and not as determining facts. For this reason it is supported by additional twenty interviews with Other Ammanis who lived far away from the Area of development, moreover, the findings are supported by other methods such as the focused interview with architects, academics, developer, and GAM, besides the unstructured interview with the legal and real-estate advisor, and also with the project designer. Other methods are also used to enhance the creditability of the findings such as the site analyses, documents analyses, and unstructured observation with photographic survey.

The general results of the interview with different target groups confirm that the social sustainability of the Areas surrounding *Abdali* is threatened. Using the main aspects within the *Dynamic framework* to assess the impacts of *Abdali* development on Amman’s sustainability in general and on its surrounding areas on specific shows that the transformation in the project’s area is not accepted by the architects, experts or even locals, especially who reside in the northern neighborhood (Area 2).

The findings confirm that existing areas surrounding *Abdali* are suffering from lack of social infrastructures such as parking lots, pedestrian friendly areas especially for elders, women, and children, safe walkways, and effective public transportation. Congestion surrounding the project was recognized during field observation especially at al-Naboulsi Street, and locals still suffering from this issue. However, the developer states that the investors paid about 80$ million to improve the infrastructure surrounding the project, yet *Abdali* may help in enhancing the social infrastructure and overcome the current problems.

Accessibility, affordability, integration, and efficiency of the public transport network are vital indicators when studying the social infrastructure (EU 2011). The previous analyses shows that the newly introduced functions and the public areas inside the project such as the main plaza, the Boulevard, the exclusive office space, as well as Housing zone; are physically and visually inaccessible and separated from their surroundings. The site analysis shows that the project is located as an exclusive island that is physically surrounded by major streets, and socially is dedicated to certain strata of the society. The outer boundaries enhance this separation, where a continuous facade for the commercial buildings found in the south, the towers at the IT zone in the west, the Civic Pole with its controlled gates in the east, and the towers of Phase Two in the north. The plantation within the proposed landscape is forcing
these boundaries and creating a continuous fence that isolate the unwanted existing images in the surrounding neighborhoods. This separation is likely to intensify the socioeconomic and the spatial segregation not only between East and West Amman, but also between this new urban island and the rest of the city.

4. SURVEY OUTCOMES
4.1 Urban morphology

Abdali emerged to the city with an attractive image and comprehensive functions that smoothly integrated with the surrounding neighborhoods, but under the power of capitalism, it had been transformed to an exclusive island. Capitalism forced the developers to modify the initial scheme, delete all the public facilities and replace them by mixed-use towers and commercial uses, with various international High-Tech designs, with cubic and irregular glass masses which going to dominate the skyline of Amman, especially within Phase Two.

Although Abdali.p.s.c. tries to preserve the architectural characteristics of Amman by establishing buildings guidelines for the architectural details of the mid-rise and the low-rise buildings, the type of stone, opening percentage, type and color for glass, but still, the high-rises’ designs are totally controlled by the investor’s passion, therefore, the project is going to be an architectural exhibition that displays High-Tech style that is not related to the local identity or the accumulated history.

While Abdali remains in its first phase of implementation, the results are expected to impact the evolution of Amman, the whole urban landscape, and provide a model for future urban growth; therefore, understanding the transformation of Abdali schemes, the reasons behind it, and the urban morphology for the current scheme give us the chance to imagine the future image for the area, and highlight that a considerable care should be taken -especially in Phase Two- and a detailed analysis should be made to minimize the future impacts of this development and to understand why many locals and professionals in Amman rejected this new real-estate development? Is it acceptable to shape the city by the power of capitalism and disregard the locals’ sociocultural needs? Abdali provides a model for future growths. Thus, it deserves to learn from its mistakes and avoid repeating them in future developments to enhance the logic of sustainability and preserve the social solidity.

4.2 The social characteristics

Studying the social infrastructure addresses one of the main research objectives that aim to explore the impacts of urban regeneration projects on the physical and sociocultural setting of the city, and reveal the relation between the physical content and the social content. In general, participants from Area 1, Other Ammanis, and some architects were more optimistic about the accessibility to Abdali and that the infrastructure of Abdali will enhance the quality of services in Amman. However, they are suspicious about the project affordability, this feeling, according to them, emerged from the luxurious facilities that were promoted which they know that they could not afford, they always wondering during the interview, “Why to visit something we cannot afford? It is not built for us”. It is clear that promoting Abdali as a place for luxurious facilities that targeting only high-class residents and investors negatively affect the locals; documents analysis to promotions material confirms this fact as well. Although the Shopping Mall and the Boulevard’s facilities are expected to include high-end brands, yet not affordable to most of locals, but still, many experts believe that Abdali will improve the quality of the built environment. Creating diverse safe, clean, livable urban
spaces for pedestrian will encourage locals, especially women and children, to socialize and enjoy their city, it may also offer jobs opportunities and attract locals to visit the project and socialize.

The survey outcome shows that the transformation of the urban identity occurred by Abdali affects Amman’s sustainability, some effects are temporary and anchored with the construction period such as the sense of instability, sense of insecurity, and other psychological effect, thus as soon as the project operated and established all these emotions may vanish. Another, temporary, psychological effect on locals represented by their feeling of danger, the whole area, in their opinion, became unsafe and insecure. The presence of the foreign workforce in Abdali, who came from different backgrounds and brought annoying behaviors with them threatens the locals and decrease their sense of security. Although it is a temporary impact, but still, it affects their sense of security. Today, locals should be back at home early and lock the main doors before sunsets, and they cannot enjoy walking in the streets as they used to, consequently the absence of women and children in the street was obvious during field observation. Furthermore, some locals as well as some architects and experts believe that Abdali will enhance the consumption culture among locals, as it includes a variety of facilities that will attract specific strata of the community, the elites. The above situations negatively affected their sense of security, stability, and belonging to the community. Thus, the area becomes unattractive for them, but could the project become an attractive place for the middle-class to visit and enjoy without any further consumption? Could Abdali become an attractive place for various social strata after operation?

The survey also identifies the importance of socially innovative and inclusive governance in enhancing the social sustainability. Abdali reflects a serious shift in city governance, GAM who is usually responsible for planning Amman, was not an effective part of the planning and decision-making processes of Abdali, just recently, they involved in designing the traffic on the surrounding areas, and in reviewing and authorizing the international proposed designs that is following Abdalip.s.c. guidelines rather than GAM’s guidelines. Under the power of capitalism, the developer had a dominant position to impose the project without any consent of GAM. The results of the survey confirm that the social capital within the existing communities need enhancement by governing the city in an inclusive manner, by supporting public participation, by developing the existing policies and regulations, and by educating locals and encouraging them to participate in city making. As architects and experts proposed during the interview, this could be achieved by enhancing the sociocultural activates, improving the social infrastructure, building more social centers, and encouraging the locals to participate in voluntary works and small businesses to develop their neighborhood.

5. CONCLUSION

The survey analyses of physical and social form indicated that imposing Abdali within the heart of Amman under the power of capitalism increased the gap between these forms, and also confirmed that these towers are not relating to the sociocultural context, not connected with surrounding areas, and not reflecting the locals’ needs as well, which may lead to considerable threats on the social sustainability of the city. These threats could be minimized, controlled, and turned into opportunities if seen from a different perspective.

Analyzing the impacts of Abdali on the social sustainability of Amman by using the Dynamic framework confirms that the real impact of Abdali on social sustainability and urban identity is still ambiguous for locals, architects, and experts as well, minuses and pluses,
advantages and disadvantages, are still arguable and can be observed from different perspective. Architect and experts believe that *Abdali* will change the quality of life, but it is not clear yet if this change will be positive or negative till its opening. *Abdali* may improve the quality of life for its users, who can afford the services, and create more job opportunities, but it may also create a more consumer society, and may transform Amman’s identity. This stand gives a tremendous chance to re-understand this development and realize it from different perspective, which is more creative, practical, and rational, in order to enhance the project sustainability and help in turning the predicted threats into valuable opportunities.

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