

# Sustainable Development: An Analytical Vision for Smart Dubai City Social Policies

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**Abstract:** This study explores the sociological perspective required for achieving holistic and sustainable development in social contexts. It focuses on Dubai as a smart city exemplar, investigating the integration of comprehensive development that encompasses social, economic, cultural, and technological aspects, as well as sustainable development that includes environmental sustainability. The research provides valuable insights into Smart Dubai's social dimensions and highlights its commendable efforts towards sustainable social development. The discussion explores the various social policies implemented in Dubai, which serve to regulate the conduct, initiatives, and practices of both the government and non-governmental entities, as well as individuals, in order to address a wide array of social challenges. Furthermore, it explores the application of certain development theories, such as post-modernism, and how they have contributed to Dubai's cultural shift towards embracing socio-economic standards. Additionally, the theory of ecological modernization is examined, highlighting its role in integrating environmental concerns with social institutions that promote sustainable policies for the advancement of a smart city. The research employs a case study methodology, analyzing secondary data and official records to assess Smart Dubai's policies and highlight its social sustainability development. Findings reveal that Smart Dubai has made significant progress in embracing social issues through its policies, and it is on the road towards social sustainability in terms of family unity, gender equality, demographic balance, health, education, popular participation and balancing in terms of services between UAE citizens and expatriates. The research recommends that Dubai have a bureau for studying policies to mitigate social challenges and phenomena as well as an authority for collecting social data.

**Keywords:** Comprehensive Development, Smart Cities, Social Policies, Sustainable Development, Sociology.

## 1 Introduction

The rise in global population has resulted in the permanent evolution of cities in diverse forms, from simple cities to complex urban centers. As this population growth continues, various challenges arise, including economic, social, technical, and environmental issues. Addressing these imbalances necessitates parallel development efforts to find sustainable solutions. Hence, the concept of smart cities emerged, driven by the need to alleviate the negative impact of concentrated economic, social, cultural, and technical activities in traditional modest cities. This phenomenon has spurred significant scholarly discourse on the topic of smart cities [1].

In contemporary urban development, the quest for sustainability has emerged as a pivotal aspect. The concept of smart cities has been increasingly applied to address the unintended ecological ramifications. However, the preoccupation with the technological facets of smart cities has tended to overshadow critical human and social dimensions that should constitute their foundation. The primary objective of smart city initiatives is to enhance the public's access to information and opportunities for civic participation, ultimately fostering an improved standard of living in general and social life in particular [2].

Consequently, an examination of Dubai's available specifications is necessary to determine whether its smart city policies can promote growth through the integration of sustainability principles across economic, social, cultural, technological, and environmental dimensions. These facets are inherently interdependent, with each component reinforcing the others. Notably, social development is a driving force behind economic growth, ensuring its sustainability and success, while economic expansion provides the necessary material and human resources for social projects [3]. Moreover, in order to establish a sustainable environment, it is imperative to foster a culture that promotes awareness amongst community members regarding their environmental responsibilities. Additionally, technology can play a pivotal role in supporting the aforementioned dimensions, owing to its efficiency and effectiveness in driving

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comprehensive and sustainable development. As such, this research paper seeks to review the five dimensions holistically, with a special emphasis on the social dimension and its policies. Social policy is implemented by the state to govern the conduct and activities of governmental programs, organizations, and individuals, with the aim of addressing a wide range of social challenges and issues. These challenges encompass areas such as family dynamics, education, healthcare, demographics, social welfare, and other pertinent social aspects. The research conducted in this field explores the impact of social, economic, cultural, environmental, and technological transformations on meeting human needs.

Notably, the social policies implemented in Dubai exhibit a distinct and intelligent approach to social development, aligning with the city's commitment to smart and sustainable practices. This unique approach reflects Dubai's dedication to fostering social progress while taking into consideration the interconnectedness of various factors that shape the well-being of its residents.

## 2 Research Problem

Dubai serves as a prime example of a smart city, providing insights into the convergence of various notions such as comprehensive and sustainable development, which in turn influence social, economic, cultural, and environmental progress. Moreover, the incorporation of technological advancements facilitates the development of a smart city, enabling an assessment of the city's overall achievement of these concepts, with a specific focus on the social policies implemented to ensure a more holistic and sustainable approach to development. Thus, the research statement, "An Analytical Vision for the Social Dimension: Smart Dubai City Policies for Achieving Comprehensive and Sustainable Development", gives rise to the following questions:

- 1- In what ways did Dubai begin its transformation into a smart city?
- 2- What specific policy initiatives have contributed to Dubai's reputation as a socially smart city?

## 3 The Importance of the Research

The significance of scientific research lies in its ability to drive growth by improving the quality of life for people and addressing social challenges faced by the city, thereby achieving optimal stability for citizens, residents, and visitors, all of whom represent investments in human capital. This is a crucial component of genuine, comprehensive, and sustainable development. Furthermore, it is essential to have policies that outline the parameters of intelligent projects to bring about sustainable development in Dubai. Identifying and gathering these policies is essential for comprehending the city's progress and its intelligence in current and future contexts. This study sheds light on the relationship between comprehensive development and Dubai's progress towards becoming a smart and socially sustainable city. Consequently, decision-makers must increasingly recognize the importance of sustainable development, particularly the social dimension to make informed decisions and implement policies for development projects that align with smart cities and promote sustainable development.

## 4 Theoretical Framework

### 4.1 Development theories from economic interest to socio-economic

Development theories emerged in the mid-1930s, but they were neither well-defined nor effective, especially after the Second World War, when the issue of independence of peripheral countries from central ones became prominent. These theories were authored mainly by academics from the bourgeois class and were later exported to the colonies. In the 1950s, development theories focused on GDP, or gross domestic product, and one of the most prominent proposals at that time was Rosenstein Rodan's strong advocacy of investment to overcome recession. In the 1960s, development theories expanded to include not only GDP but also job creation, international relations, human capital, technology, and the role of the agricultural sector in development. The most well-known of these was Whitman Rostow's theory. In the 1970s, development theories evolved to encompass poverty reduction and attention to socio-economic criteria [4].

This neglect of the socio-economic criteria by development theorists before the seventies resulted in the failure of many development theories to explain the various aspects of underdevelopment and how to overcome them in developing countries. This deficiency in assumptions also led to policies derived from these theories being unable to achieve development goals, particularly for peripheral countries. Economic development and social development are dynamically related to each other and are mutually influential. The economy of private, governmental, and non-profit institutions cannot function without workers and employees who, in turn, provide support for their families. Likewise, workers and their families cannot survive without income and expenditures, which represent a social reality and meaning for the life of the society. However, the previous development theories did not consider social, cultural,

environmental, and technological factors and their interrelationships. This research, therefore, focuses on these factors as they will push for future economic restructuring [5].

The United Nations' 2005 World Summit's statement defines sustainable development as comprising three interdependent elements: economic development, social development, and environmental preservation, each of which influences and depends on the others. However, cultural diversity, which has undergone changes due to the production and consumption patterns of central countries, is also a crucial element of comprehensive development which should be emphasized alongside these three elements. Therefore, the priorities of comprehensive development may evolve with changing societal needs and circumstances [5].

#### *4.2 Postmodern theory and the city of Dubai*

Initially, we will discuss the relevance of postmodernism and its implementation in Dubai. This involves a shift towards extending the concept of development beyond solely economic growth to include social development. This approach emphasizes the significant role of the government in promoting and protecting sustainable human well-being, which advocates for socially oriented state policies. This research aims to examine the extent of the social policies that the government of Dubai has implemented to achieve comprehensive development in Dubai. During Dubai's inception in the 1970s, government intervention occurred through the elite, ruler, or fatherhood authority, and merchant influences. Ibn Fahd (2009) suggests that Dubai's astute decisions have enabled it to overcome obstacles that impeded its growth through pioneering and innovative mindsets. Dubai did not compete with Western or central country markets but instead fulfilled growth requirements, such as trade, re-export, infrastructure, aviation, and other resources. By avoiding competition with Western countries and Asian tigers, Dubai was able to steer clear of the economic conflicts that arose between them.

Dubai is recognized as one of the capitalist economies [6]. According to Adam Hanieh (2011), the increasing demand for oil worldwide has transformed the Gulf Cooperation Council region, with its oil reserves, into a central part of the global capitalist economy in the post-World War II era. Nevertheless, Dubai has outperformed other non-Gulf peripheral countries in this regard. Through the Gulf industries of cement and aluminum and the circulation of oil money as loans to multinational companies and governments, in addition to oil exports, Dubai has safeguarded itself from the central countries. As a result, the Gulf region has become the Middle East's fastest-growing region in terms of foreign investment flows. Even though heavy equipment for local investments and consumption was imported, this does not indicate better social welfare in Dubai under capitalist pressures.

#### *4.3 The cultural dimension of Dubai and post-modernization*

The prioritization of material values and standards during the modernization of Dubai's society gave way to a cultural shift towards post-material values through national agendas and cultural policies. This shift, which recognizes social needs alongside economic ones, has led to the emergence and flourishing of social entrepreneurship. In contrast, the cultural shift during modernization led to the emergence of business entrepreneurship. The informal institution of culture plays a significant role in economic and social transactions and affects formal institutions. Collective meanings and understandings reflected by informal cultural institutions can influence cooperation and coordination among society members. A culture that shares values and beliefs can influence the decision to start a social or business enterprise [7].

The hallmark of postmodern societies is their reliance on intellectual capacities rather than natural resources or material inputs. This cultural shift towards postmodernism also supports other social and environmental dimensions, as evidenced by the growing emergence of the service and technology sectors. This results in high levels of wealth and economic development, as seen in Dubai. The cultural values associated with post-industrial or post-modern societies can have a positive impact on social activities during times of crisis, such as the COVID-19 pandemic in Dubai. Therefore, policy makers should also consider the cultural practices of the country when designing policies to promote various forms of social entrepreneurship aimed at addressing social and related issues [7].

#### *4.4 Theory of ecological modernization and environmental sociology*

An important component of holistic development pertains to the sustainability of the ecosystem. Modern studies on development have come to recognize that ecology plays a greater role than ideology in shaping development, and that the condition of the ecosystem directly impacts the social system [8]. Previous research has also emphasized that excessive consumption of resources has led to a range of environmental and social challenges, placing a significant strain on the planet [9]. Moreover, as environmental sociology is expected to become more uniform and global in the future, theories that apply to the entire world, including smart cities like Dubai, will be increasingly relevant [10]. To prevent misguided prescriptions and theories from derailing our plans and policies for environmental recovery, it is crucial that we address the risks at hand. The ecological modernization theory has emerged as a prominent and well-defined variable within the fields of green capitalism and environmental sociology. This school of thought asserts that

the economy can benefit from taking environmental factors into account and hypothesizes that by combining economic and environmental concerns in a positive way, we can create opportunities for environmental renewal. Furthermore, there has been a growing trend towards integrating environmental interests into social relations and institutions, and daily practices in order to serve members of the society [9].

However, recent studies in human-environmental relations have highlighted population and affluence, as measured by per capita GDP, as the primary drivers of environmental degradation at the national level. As resources become scarce, each round of investment increasingly prioritizes technology and reduction in labor costs over energy and resources, ultimately leading to a greater demand for ecosystem components that results in pollution. This dynamic is exemplified in the contradictions of capitalism, which often deplete natural resources such as oil and transform them into higher-cost resources. In addition, the dependence on foreign direct investment has contributed to environmental destruction, such as with oil refining conducted abroad [9].

Capitalism, as a mode of production oriented towards growth and profit, is characterized by an inequality in economic and environmental relationships that has contributed to our current environmental crisis. The theory of ecological modernization has been criticized by ecological sociological theorists and advocates of green capitalism who highlight the profit and growth obligations of capitalism. However, it is imperative that we recognize the importance of considering alternative values, beliefs, and policies related to human-environmental relations if we are to address our environmental crises. The exclusion of alternative environmental perspectives from policy and social science discussions is unjust and threatens the viability of any strategy aimed at achieving sustainable human-green-environment relations, which is a pressing need for Dubai's future policies [9].

The concept of environmental modernization describes a series of social, institutional, operational, and economic transformations, that result from environmental changes and drive social and technological progress through the development of new technologies. It also entails a shift in responsibilities between public and private sectors, as well as between governments and citizens. Even though poor government decisions have contributed to our current environmental issues, the theory of environmental modernization argues that there is an opportunity for reform and remediation that can be both feasible and effective. Proponents of environmental modernization emphasize the critical role of the state in achieving more sustainable and harmonious societies across different sectors, while maximizing opportunities for participation for broader social interests. These opportunities are likely to emerge alongside increased activity of private organizations and changes in the institutional structure of society, as well as economic drivers [11].

Furthermore, environmental modernization presents a promising opportunity to shift decision-makers' attitudes by supporting industrial and market development in ways that do not threaten economic growth. It also emphasizes the importance of public disclosure and community participation in decision-making, particularly in emerging markets where the government takes the lead in guiding and changing policymaking from reactive to preventive measures. Environmental modernization addresses environmental issues through better design to eliminate inefficiencies and encourages the use of technology as one of the five dimensions of overall development for a more efficient environment. It also promotes the redesigning of economic, social, and environmental institutions to create incentives that effectively separate economic growth from the use of raw materials in a way that harms the environment [11].

As a result, the government of Dubai is committed to promoting environmental efficiency in both institutions and society through its national agendas. This approach aims to minimize risks and prevent further environmental degradation by leveraging technology. The theory of environmental modernization provides valuable insight into the decision-making process for environmental reforms from a sociological perspective. In Dubai, there is a favorable economic and social environment that supports the adoption of high environmental standards [12]. Instead of focusing on reducing production and consumption, Dubai's approach to protecting the environment is through collaboration with government and market actors to achieve environmental improvements. This approach encourages manufacturers and investors to adopt environmentally friendly practices not only because of government mandates but also because environmental values and culture are integrated into Dubai's prudent policies. This cultural shift will make it beneficial for companies to prioritize environmental protection. By emphasizing recycling and the use of renewable resources, Dubai aims to reduce the need to exploit virgin natural resources and reduce its dependence on income from oil [13]. In addition, governmental policies will be developed to integrate the costs of environmental impacts into economic and social decision-making models, fostering a cooperative system between the government and civil society.

That being said, Dubai government will remain the primary catalyst for environmental modernization until the community's appreciation of the importance of preserving the environment improves. Environmental modernization, which integrates the environment with technology and the economy, while activating the role of society and social relations, is an ideology that supports more sustainable and comprehensive development policies.

## 5 Methodologies

The present study adopted an analytical approach to investigate Dubai's policies as a smart city within the context of comprehensive and sustainable development in general and social sustainability in particular. The study draws upon relevant literature related to smart cities, social policies, and development theories. The research starts with how smart cities evolved followed by an explanation of how it is connected to the five dimensions of sustainability – social, economic, technological, cultural, and environmental - in general. It then takes the social dimension and presents what it derives from the social policies and draws a conclusion. A case study approach is utilized to explore Dubai's policies and their social implications in the context of smart city development. This method allows for a comprehensive understanding of the research subject, and an in-depth analysis of various sources of data, including secondary data from government reports, academic literature, and official websites. Policies were collected to simulate the topics of the social dimension.

## 6 Review of the Background

### 6.1 *A smart city from comprehensive to sustainable development*

Smart cities are cities supported by technology and communications in an innovative way to improve people's lives and the services they need while simultaneously meeting the needs of current and future generations in terms of economic, cultural, social, and environmental aspects alike [14]. Smart cities also make our lives more efficient by increasing the quality of communication through technology [15]. To gain a clearer understanding of the dimensions of smart cities, it is crucial to differentiate between comprehensive and sustainable development.

Comprehensive development emerged after World War II and aimed to achieve economic and social independence by introducing radical structural changes in the economies of post-colonial countries, promoting social justice, and addressing dependency. As comprehensive development evolved, the need for appropriate technology emerged as a crucial element in achieving economic and social progress. In the 1990s, sustainable development emerged as an alternative term for comprehensive development, reflecting the growing importance of the environmental dimension. Technological advances have expanded human activities in cities, creating new dimensions of economic, social, and technological development, but there is also a need to address environmental concerns. Sustainable development reconciles the three dimensions of economic, social, and environmental development, which were originally proposed in the concept of comprehensive development [16].

### 6.2 *Smart sustainable city policies with their dimensions*

After defining the terms "smart cities" and "comprehensive development" within the context of sustainable development, it is important to examine how smart sustainable cities are linked to policies that promote the integration of social systems. The concept of sustainability encompasses various notions such as social justice, cultural assimilation, environmental and economic boundaries, individual safety and security, and national rights in economic development as well as environmentally friendly technology. On the other hand, the idea of smart cities involves a combination of technological and social systems, where the city's intelligence is determined by the integration of these two elements. This includes not only the use of cutting-edge information and communication technologies but also effective management and policy tools. The focus of smart cities is on policies, regulations, and initiatives that promote sustainability and enhance the quality of life and development. As a result, the concepts of smart sustainable cities and their intelligent nature intersect, supporting policies and initiatives that integrate with the social systems [17].

This research centers on the prevailing perspective of sustainable development in a smart city such as Dubai with a particular emphasis on policies that impact social systems and their integration. However, it raises the question of whether economic and social development, environmental preservation, and technology integration alone constitute a comprehensive and sustainable development approach. Should we not also consider the cultural dimension of a smart city? As sustainable development in a smart city is intrinsically linked to social and cultural integration, incorporating the cultural dimension into policymaking and decision-making is crucial. By integrating the four dimensions of economic, social, environmental, and technological development with the cultural dimension, we can motivate society towards better development [17].

According to Ismail (2018), a smart city aims to adopt forward-looking policies that prioritize economic and social development, fostering a culture of learning and creativity. To achieve this, the city must invest in its human capital, including knowledge, experience, and skills, as well as social capital, which encompasses the benefits derived from social networks and other resources. Furthermore, a smart city must focus on developing infrastructure, energy, and a sustainable economy, while also practicing astute management of natural resources. By pursuing these objectives, the city can provide its citizens with a high quality of life [18]. Based on the above, it can be inferred that a smart and

sustainable city must incorporate each of the five dimensions - social, economic, technological, environmental, and cultural - into its policies to enable effective integration of all systems, with a particular emphasis on the social systems and the social dimension.

This research incorporates secondary data to explore the social dimension as a complementary study to the existing research. The approach involves initially examining the overarching trends, then gradually delving into specific aspects, and finally transitioning from the broader to the more nuanced levels. It is important to note that the emphasis on the smart identity of Dubai as a city extends beyond the economic aspect. The focus also incorporates the social dimension, including leadership in social services, fostering stability among residents by addressing social disparities, encouraging public participation, and prioritizing education and healthcare. These topics will serve as a comprehensive roadmap for understanding and analyzing the social dimension [19].

## 7 Results

### 7.1 Social development policies of smart Dubai

In the UAE Vision 2021, social development has been integrated as a major component of economic development [20], and we know from the background review that sustainable development is about ensuring environmental, economic, social, cultural, and technological sustainability. Also, the social dimension of sustainable development is the dimension that rejects poverty, gender discrimination, unemployment, matters that limit women's rights and freedom, and the gap between the rich and the poor, and thus this dimension expands to social justice [21]. Therefore, this title "social development policies of smart Dubai" aspires to highlight the policies that are more relevant to Dubai and the social element because human beings are the essence of any successful society, so we need to make sure that society as a whole in Dubai is living well, not just the citizens of the UAE. This is what makes this research paper new in terms of social policies that accommodate not just the minority group of citizens but are also responsible for accommodating the majority group of non-citizens.

There are some policies that represent the elements of the social dimension in Dubai, including the policies that want to control or achieve a social demographic balance to begin with. The rapid growth of the UAE in general, and Dubai in particular, strains the social frameworks and contradicts the traditional values of its citizens. One of the effects has been the alienation of its citizens in an inconsistent environment, making it difficult for Emiratis in senior positions to plan the UAE's future with such a large number of expatriates [21]. One of the policies that somewhat alleviates this problem is creating residential complexes exclusively for UAE citizens where they can socialize within a community that shares their values and traditions. For those Emiratis who do not wish to be a part of the citizens-only complexes, there is also the option of buying housing units in investment projects in Dubai that have a foreign orientation. The UAE does have a policy that allows foreigners to own property, but only in areas designated for freehold ownership for foreigners [22]. In the UAE, all seven emirates are required to be tolerant of international values and accept people from all over the world, and not the other way around, making it a great challenge for the Emirati people.

Also, among the policies that alleviate social problems such as those accompanying the demographic imbalance, which is a challenge for the government and the citizens of the UAE, are the policies of assimilating expatriates. This concern must be addressed because it affects social stability as well as sustainability. Integration and assimilation of expatriates into society to ensure their continued contribution and participation in the development path has caused tensions for policy makers, who have to strike a balance between the city and the state in addition to reckoning with the threat to national identity with social, cultural, economic, and political consequences if citizenship is granted to expatriates [6]. In order to accommodate expatriates, a smart policy has been put into place in Dubai to embrace the best, most skilled, and efficient ones. For example, the Green residence visa targets high-performing graduates, entrepreneurs, and investors. Also, improvement in procedural policies, for example, in the Golden residence visa and the Free residence visa, enriches the community with talents that add intellectual value to the smart city of Dubai [23]. Moreover, the policy also has added value for the expatriates, not just in terms of long-term residency but also enhanced career opportunities and access to social benefits. It is also easier for expatriates to live together as a family and be exposed to a more vibrant and cosmopolitan society.

Furthermore, the social dimension also includes smart health policies. Mental health policies for future students at Dubai schools have been initiated, such as the policy of stimulating the private sector for mental health services in Dubai in addition to the public policy of granting insurance to treat children in need, free health services in the government sector, and the policy of having a single platform that links health institutions together. Other similar initiatives include the policy of stakeholder participation in the health sector, the policy of educating people to address the stigma in society for delinquent children, and the policy of early detection of mental illnesses by collecting information [24]. These policies show that Dubai is human-centric and invests in all its residents, not just in UAE nationals. Thus, we can establish that government intervention in such social policies reflects the importance of

balancing free market with social values and postmodern culture that leads to government institutions with sustainable services and attention to socioeconomic standards.

Since the start of the COVID-19 pandemic, there have been several smart health policies related to pandemics that are worth mentioning, such as the policy of early detection of the pandemic which helped to better control the situation. The policy of transparency in communicating about the pandemic helped people acknowledge the size of the problem. The policy of changes and additions to health legislation was very important to show the impact of how fast the government took decisions during pandemics. The policy of educating society about risks and obligations helped people interact better. The policy of a 14-day quarantine on arrival in the emirate helped in reducing the spread of the disease and the severity of its impact, as did the policy of monitoring and limiting the movement of those who tested positive for COVID-19. Other policies that were crucial in controlling the spread of the virus included the policy of increasing the number of COVID tests for the public, the policy of initial mandatory testing at airports, the policies of measures and preparations in hospitals to deal with the pandemic, the policy of improving health protocols, the policy of physical distancing, the policy of closing certain public facilities, the policy of limiting gatherings, the travel restriction policy, border closure policy, punitive regulations policy, and the non-essential movement policy [25]. These policies showed that Dubai is capable of mitigating the impact of such a pandemic on its residents and it cares about people as much as it does about the economy. It also shows that everyday health policies in such a city have to be smart and sustainable, both during and after pandemics.

In terms of pioneering social and health policies, Dubai takes the lead. For example, during the COVID-19 pandemic, Dubai government imposed strict policies to maintain the safety and well-being of society to a large extent. One of the community health policies that deserves a special mention is vaccination for all segments of society including residents and visitors, showcasing Dubai's commitment to equality for all. This policy also demonstrated that financial gains not the main motive for the Dubai government. Instead, it believes being a pioneer and investing smartly in an integrated social system is also important [25]. Thus, the application of pioneering social policies comes at times when society needs quick solutions built upon strong and coherent community systems for the success of these policies. It is also important to emphasize that there are non-material values that have arisen after modernity, which harness smart policies, including health policies already mentioned and exemplify the promotion of wealth as well as sustainable socioeconomic development in Dubai.

Another element of the social dimension is education [19]. Education has achieved its position in Dubai through the implementation of various policies, such as involving students from both public and private schools to give their views on the development plan for the next fifty years, supporting workshops on learning about future lifestyle, sustainability, the future of the environment, jobs in the future, and the future of learning about Emirati values. Other policies include the policy of partnership ideas encompassing all members of society, the policy of increasing the number of engineers for the Start program, the policy of supporting students in finance and accounting in the most prestigious universities, the policy of supporting the telecommunications sector through information technology scholarships for a mission program, the policy of global partnerships in the field of higher education, the policy of instilling a spirit of competition in outstanding students taking standardized tests, the policy of diversifying educational curricula to include British, American and International Baccalaureate programs, the policy of providing higher education opportunities for non-citizens and residents, the policy of supporting counseling for students in Dubai by students on scholarships abroad, the policy of clarifying educational protocols in the time of the pandemic, supporting and facilitating distance learning, and setting up of new schools by UAE citizens of Dubai to encourage educational investments [26].

Dubai also recognizes behavioral issues in educational institutions and has put into action the following policies to combat the situation: the policy of behavioral conflict reduction in educational institutions, the policy of building positive behavior in schools, the policy of promoting integrated upbringing in schools, the policy of providing a controlling reference for students' behavior, the policy of supporting mechanisms for treating and preventing problems and violations in the educational environment, the policy of behavioral and educational rehabilitation of students, the policy of supporting home education and its checks and balances, and supporting lifelong learning programs [26].

Furthermore, policies have been implemented to support matters of health and safety in schools, educational electronic platforms, digital schools, scientific curricula for online learning as well as supporting education, providing equal educational opportunities and early intervention, promoting a culture of inclusive education, and supporting technical training for people of determination. There are also policies supporting cultural exchange of students from abroad, technical, and vocational training to help students participate in the economic and social development of Dubai, and the policy of supporting science fairs to present scientific projects to students [26]. These policies have advanced Dubai into a new era of smart cities that foster increased social cohesion and support human capital for a better future. Furthermore, there is a discernible presence of social entrepreneurship that aims to diversify educational methods and institutions for all segments of society.

With regards to popular participation, the Dubai government has expanded its engagement in various sectors to find out the opinion of its citizens, residents, and visitors regarding its services in general. This has facilitated the implementation of policies encouraging people's digital participation in Dubai's policies and services. In addition, the government provides forums for people to express their opinions and ideas, or to file complaints as well as allowing them to vote on topics initiated by the government. For example, the Mohammed bin Rashid Smart Majlis alone has received 3,500 ideas from 460 employees in the period from 2015 until now. Among the policies that support popular participation are the policy of community design for quality of life, which designs initiatives in partnerships between the public and private sectors, the policy of supporting communication between citizens and decision-makers, free educational courses for electronic participation, the policy of supporting children's participation in the community and hearing their opinions, and the policy of supporting social outsourcing. In the regulatory framework for the financial sector, Dubai has policies supporting brainstorming in the UAE, community opinion in the health and education sector, the elections of the National Council, and open data competitions for the use of data in developing government strategies [27]. Cultivating such mindsets through these policies will push Dubai to experience better and more transparent community participation and thereby lead to better social sustainability.

Among the policies for the participation of citizens and residents to get their opinions on various issues are policies such as those of the secret shopper, who becomes an effective partner in improving and developing services by sharing his opinion through smart mobile phone platforms [28] and of reporting violations through the smart application of the "We are all police" initiative to engage the public and activate the principle of communication between members of the society and the police [29].

There are several key principles for the transformation of any city into a smart and sustainable city, and the government, which is the main driver of the city's vision and policies, provides the appropriate means through higher authorities to achieve this transformation. In terms of the partnership principle, the government should participate in the private, governmental, and non-profit sectors as part of its national strategies to ensure the implementation of the smart city plan and its sustainable policies and reduce social disparities [30]. One of the smart social policies of the Dubai government is to embrace societal cohesion and reduce social differences, for example, by promoting gender equality and equitable salaries in the workplace. In addition, women are taking leadership positions at par with men and creating workplaces that support gender balance. Certain initiatives have been put in place, empowering women in some sectors that are presently dominated by men. Efforts are being made to increase women's presence in nursing, social services, and basic education [31]. Moreover, some of these policies are imposed on companies to enhance their social responsibility, including holding annual events that support community service, as well as writing reports on their operations and initiatives related to volunteering and community service. These measures encourage commercial enterprises to take responsibility and contribute to the development of strategies for social sustainability and allow the involvement of different social systems in sustainable development [32].

Continuing with the social dimension elements, the research also highlights some policies that promote cultural diversity as a social dimension [19]. These include policies that support tolerance, cultural dialogue, and human ties [33]. In addition, there are policies for exchanging knowledge through artistic, educational, and awareness-raising workshops, supporting cultural sites such as multinational museums, markets and exhibitions, and educational institutions of various nationalities such as Indian, Pakistani, American, and British schools [34]. There are also policies supporting diversity of restaurants offering food from different cultures, cultural clubs, national celebrations, decorating the state's landmarks with the flags of other countries and celebrating their independence, and the transfer of knowledge, all of which characterize Dubai's successful experiences from which others can benefit [35]. Dubai has created an environment that allows and celebrates diversity.

Dubai is considered a pioneer in social leadership in the United Arab Emirates, as was evident in the Dubai Plan 2021, which was based on four pillars – the cohesion of citizens and residents, and their happiness, and empowerment. In terms of the budget, 28% of Dubai's total expenditure from 2014-2020 was on the social development sector, and it rose to 31% of the total budget in 2021 [36]. Since 2014, spending on social development has doubled from nearly ten billion dirhams to nearly twenty billion dirhams in the 2020 budget [37].

Dubai also established the social enterprise "Consult and Coach for a Cause" (C3) in 2012 for a policy aimed at enabling social entrepreneurship for young people in the Middle East, allowing them to become active agents of positive social change, and for a policy promoting social projects by bringing together the public and private sectors to talk about their experiences and give them prizes for it [20].

Another of Dubai's policies is to embrace global platforms for culture and technology, including the GITEX Technology Exhibition. This initiative attracts many segments of society, including students, technology lovers and professional specialists, and it is one of the most prominent exhibitions of knowledge exchange where the technological and cultural dimensions unite to nurture a pioneering community network that enhances community life in myriad ways



[38]. There are also policies that have been implemented to transform the existing social systems into better social networks in the decision-making process. One such policy makes the sharing of data obligatory by law. This benefits the stakeholders from government agencies, the private sector, citizens, and residents, and supports policy frameworks and development plans. In addition, the data protection policy protects the confidentiality of data providers, including individuals, institutions, and companies. Dubai also has policies covering intellectual property rights related to data, the classification, publication, and exchange of data, the using and reusing of data, and the technical standards for the dissemination and exchange of data through electronic platforms [39]. These policies related to exchanging data allow stakeholders to make better decisions, as the government and private sectors share data with citizens and residents, which in turn reduces uncertainty in decision-making and helps towards achieving sustainable development goals.

One of the key principles that intersects with the social dimension is human development. Human development views human beings as the nucleus or engine of any development process, with everything being both exported from and imported to the individual. For instance, the per capita share of the GNP in Dubai is approximately \$64,000, and the average life expectancy is 78 years, as reported by the United Nations Development Program [40]. Therefore, for a smart city to succeed, the government must support human development in its social policies for citizens and residents and ensure transparency in partnerships between sectors.

This is in addition to the social policies that cover those segments of society that need attention and care such as the policy of supporting people of determination with smart services as they are an important component of society and not marginalized in Dubai. Dubai also has policies that focus on starting and shaping families such as the social welfare policy to finance those who are about to get married and for collective weddings, the policies that contribute to investment in starting new families, the policy of helping distressed families, the policy of reducing energy bills for those who are not capable of paying it, the policy of stimulating and training productive families, and supporting families in need of counseling, and the policy directing the centers for family counseling and the feedback on family counseling. All these policies support families – not only nuclear families but also extended families - and mitigate social challenges for greater social sustainability. For example, the policy of caring for senior citizens not only in health centers but also in their homes helps in taking care of senior citizens while maintaining family cohesion and reducing burdens and related social issues. These are further supported by policies that direct institutions of charity and their licensing, provide feedback on institutions of public benefit and solidarity, forecast the services that individuals might need in the future, support the stages of family formation, and encourage digital participation by presenting the needs of the community [41]. Dubai has also implemented policies providing financial, social, and health support for minors and education and housing for all, integrating people of determination into society, empowering people of determination, providing early intervention in the life of a child and support for bereavement in the community by paying for the funeral services, rehabilitating juveniles and delinquents, ensuring social rehabilitation for those recovering from addiction, providing job opportunities for the needy, and motivating volunteering in various sectors [42]. In addition, policies have been put in place to protect children from abuse, mitigate issues related to violence, research the issues of abused children, support children with helplines, and listen to children's opinions and suggestions [43]. The number of proactive policies in place for ensuring family unity by supporting marriages and providing all the services that a family needs has provided family stability for both expatriates and citizens and has been instrumental in Dubai's success in such a short span of time.

## 8 Discussions & Conclusions

By studying the aforementioned theories and the collected policies, the research concluded that postmodernity is an attempt to reform what was destroyed after modernity and to address the growing problems of resource depletion, pollution, as well as economic and other collective issues such as an increase in the gap between the rich and the poor, exploitation of the goods of the third world, a decline in religious and cultural values and the spread of material values. Since postmodern theory asserts that truth is relative, not absolute because we make the truth by deciding how to plan for a better reality [44], Dubai has endeavored to create its own unique reality by achieving a balance between religious and environmental values, customs, and traditions as well as tolerance in its economic and social policies. This was driven by the aim of enhancing the quality of life for individuals and safeguarding them against unemployment, disease, and poverty. Social policies are often at odds with capitalism, as the latter tends to prioritize narrow interests and centralized decision-making within the government. This can result in a lack of incentive to provide free services to others. However, in Dubai, a different approach has been taken by adopting social policies that prioritize citizen welfare and motivate government institutions to serve the country. This approach stands in contrast to the central and capitalist policies of other countries and has resulted in successful development and progress in Dubai.

While Dubai may follow some central countries in certain policies, it has achieved a balance between policies focused on social development and those influenced by central powers. The shift towards social policies and sustainability in Dubai's strategic plans reflects a government culture that prioritizes socio-economic criteria, including the provision of

smart health services, health tourism, and support for family unity and marginalized groups such as the elderly and people with disabilities. These policies reflect the hallmarks of a smart government and a smart city, with a focus on sustainability, innovation, and the use of technology to reduce environmental harm and improve the quality of life.

Dubai has embraced a culture of environmental conservation and modernization, with the government playing a leading role in driving initiatives that encourage public participation and promote the importance of a clean, sustainable future. By adopting smart policies and leveraging technology to save time and resources, Dubai has positioned itself as a leader in sustainable development, with a clear focus on serving its citizens and improving the quality of life for all.

The research and theoretical frameworks we have examined highlight the need to integrate overlapping concepts that complement each other. These include the dimensions and pillars of a smart city, as well as the four dimensions of comprehensive development (social, economic, technological, and cultural sustainability) that should merge with the fifth dimension, which is the environment. It is essential to leverage technology to serve society and ensure that social policies complement economic, cultural, environmental, and technological policies to promote stronger social and cultural systems and improve the quality of life.

To achieve comprehensive sustainable development in a smart city, it is crucial to focus not only on the infrastructure and technology, but also on developing the human and social capital of smart individuals. Dubai's smart city initiatives comprise discrete social policies that engage all stakeholders, including citizens and residents, to strengthen social systems.

Dubai has demonstrated its commitment to upholding the core principles that prioritize the significance of human beings as the fundamental building blocks of a thriving society. It is imperative to ensure that the entirety of Dubai's population, encompassing both the majority and minority groups, experiences a high standard of living within this technologically advanced city. This research paper sets itself apart by focusing on the implementation of inclusive policies that not only cater to the needs of the minority group of Dubai's citizens but also address the responsibility of accommodating the larger population of noncitizens. Consequently, it exemplifies the harmonious equilibrium achieved through holistic social policies, highlighting the city's exceptional approach towards fostering societal well-being.

It has also implemented a comprehensive range of policies aimed at promoting social sustainability. These initiatives have been specifically designed to address social challenges and provide support to families, ultimately contributing to the overall advancement of social sustainability in the region.

A noteworthy aspect of these policies is their focus not only on nuclear families but also on extended families, ensuring that the well-being of all citizens is taken into consideration. The proactive nature of these policies is evident through their emphasis on fostering family unity, supporting marriages, and facilitating access to essential services such as healthcare, education, public participation, and elderly care.

Dubai's remarkable social progress within a relatively short span of time can be attributed to its ability to strike a fine balance between the needs of its citizens and residents. This concerted effort has played a pivotal role in creating a socially successful environment, wherein the welfare of individuals and communities is effectively nurtured.

In the UAE, particularly in Dubai, there exists a unique challenge for Emirati citizens as they are required to embrace international values and welcome individuals from diverse backgrounds, rather than expecting the opposite to occur. However, the Dubai government has demonstrated astuteness in managing this transition from a traditional city to a technologically advanced metropolis. It has successfully accommodated and enriched the lives of expatriates by providing not only long-term residency benefits but also enhanced career opportunities and access to important social benefits such as easier family unity and exposure to a more cosmopolitan society. These efforts have been facilitated through the implementation of various policies, including the introduction of the Golden visa program. By adopting such policies, the government has effectively conveyed to its Emirati citizens the importance of embracing diversity and fostering a welcoming environment that caters to the needs of all individuals, ultimately benefiting the entire community. This approach has played a significant role in positioning Dubai as a city that thrives on inclusivity and mutual prosperity.

Dubai, as a research subject, stands out due to its distinctive characteristics. Being a relatively young city, it has experienced rapid demographic shifts, infrastructure development, and urban transformations, all of which have fueled its strong drive for economic growth. The city's pursuit of economic development has been amplified by the allure of the free market, enabling it to establish a robust economic framework. However, what sets Dubai apart is its simultaneous commitment to implementing social policies that ensure a harmonious convergence of economic prosperity and social well-being. These policies play a vital role in nurturing the city's growth towards achieving social sustainability and upholding socioeconomic standards. By striking a careful balance between economic advancement and the implementation of inclusive social measures, Dubai has fostered an environment that allows both its citizens and residents to flourish alike.

That being said, Dubai is on the path to being socially sustainable and has sought to address the challenges, prescriptions, and theories that would put environmental, social, economic, and cultural recovery at risk as the economy benefits positively: from taking into account previous factors to proactive policies in general and social policies in particular. However, further examination is needed to determine whether Dubai has embraced policies that address the other four dimensions of comprehensive development, namely economic, cultural, technological, and environmental sustainability. Such policies are essential to achieve a more comprehensive development and improve overall sustainability in Dubai.

## 9 Recommendations

- 1- Dubai should seize the opportunity to develop targeted programs that harness the expertise of individuals aged 35 and above, as the majority of creative initiatives tend to focus on younger demographics. Currently, there is a lack of clear policies that leverage the potential of individuals in the 35-50 age group. It is crucial to establish a dedicated bureau that studies and implements social policies, recognizing that this age group possesses valuable expertise and knowledge to effectively address emerging social phenomena.
- 2- There is a growing need for an authority that collects social data and sets key indicators for social challenges that the society is facing while conducting further research on the social dimension and how to improve its standing in various national agendas and milestones.

### *Conflicts of Interest Statement*

*We are the authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.*

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