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Assessment of the Role of Decentralization Councils in Sustainable Urban Development in Jordanian Cities

Narjis Mohammad Al Omush^{1*}, Shaher Moh'd Rababeh¹, Safa A. Al Husban²

¹Architectural Department, Faculty of Engineering, The Hashemite University, Al-Zarqa, Jordan

²Architectural Department, Faculty of Engineering, Al Albayt University, Al-Mafraq, Jordan

E-mail: safaalhusban@yahoo.com

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Abstract: Decentralization has become one of the most significant issues in urban planning. In Jordan, the decentralization law was established in 2015 and implemented in 2017. However, various reports indicated that the role of the decentralization councils in sustainable urban development in Jordan is still unclear. This study aimed to investigate the role of decentralization councils in sustainable urban development in Jordanian cities by examining and exploring the development of open spaces and projects in three cities (Al-Mafraq, Al-Zarqa, and Al-Karak) after establishing the decentralization councils. A mixed-methods approach was followed, both qualitative and quantitative. The qualitative data was collected through a literature review and semi-structured interviews with experts, chairpersons, and members of decentralization councils for each city and analyzed by content analysis. The quantitative data were collected by a questionnaire distributed to 200 citizens in each of the three cities and official records obtained from the decentralization councils. They were then analyzed statistically. The study results indicated that the role of the decentralization councils for sustainable urban development in Jordan is low, with minimal contribution to developing open spaces and projects. Additionally, this research found that the barriers to the role of the decentralization councils were related to various factors, including defects in the law itself, a lack of support from the government, and the council members' lack of knowledge of sustainable urban development. Various recommendations were provided, such as modifying the decentralization law and its implementation to be more efficient in sustainable urban planning and increasing the budget for developing public spaces and projects in all Jordanian cities. Finally, the author calls for further research regarding the role of decentralization councils in developing urban areas in and out of Jordan.

Keywords: decentralization, decentralization councils, sustainable development, sustainable urban development, sustainable development indicators

1. Introduction

Natural resource scarcity, environmental pollution, and population growth are modern problems that affect human lives; it is crucial to look for solutions to those problems to reduce pollution and sustainably enhance people's lives. The concept of sustainable development appeared in the 1970s [1], based on three main pillars: social, economic, and environmental sustainability [2, 3]. Those three pillars achieve social progress, environmental equilibrium, and economic growth [4, 5]. Environmental sustainability means using the environment to preserve it and its resources for

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the future without causing severe damage to them. Environmental sustainability relates to ecosystem integrity and the carrying capacity of the natural environment [6].

Decentralization means dividing responsibility, authority, and decision-making regarding some issues and transferring them to local administrations [7]. These local administrations would have the authority to plan, make, and implement these decisions without consulting with the central government, within certain limits, and following specific rules.

Decentralization increases the effectiveness of the tasks of the government since it narrows the range of geographical coverage of the process, making it easier to manage and measure performance. In general, “the concept of decentralization was suggested to contribute to enhancing transparency and accountability as well as promoting sustainable urban development” [8].

The concept of decentralization was established in Jordan in 2017 with the establishment of the decentralization law. One of the most important goals of the decentralization law is to improve the level of services and create projects that aim to achieve sustainable urban development.

1.1 Research problem and justifications

The report [9] mentioned that it was found that only 21.4% of the budget that was dedicated to new projects of sustainable development was spent, with the remaining being for old uncompleted projects. Additionally, the report of the Ministerial Committee on Decentralization, which was submitted to the meeting of the Council of Ministers on May 20, 2018, pointed out the slow procedures to activate the work of provincial councils, indicating that Jordanians did not notice any services or development projects on the ground. The report indicates that people are not very satisfied with the current achievements of the projects in various Jordanian cities. The reports of the 18th, 19th, 33rd, and 34th meetings of Al-Mafraq Governorate Council on July 11 and 29, 2018 showed that some tenders were not submitted and were delayed, which led to the failure to implement various proposed projects. However, the role and contribution of decentralization councils in promoting sustainable urban development in Jordanian cities are still unclear.

In a press article published in Al-Dustour newspaper on July 31, 2019, the researcher Nidal Al-Lewis stated that the decentralization councils did not achieve the goals for which they were found. Also, in a report that was published in Al-Rai newspaper on September 26, 2018, the head of Al-Karak Governorate Decentralization Council, Sayel Al-Majali, said that the percentage of achievement in the projects that were proposed in the framework of the governorate’s budget for the year 2018 amounting to 14.5 million Jordanian Dinar (JD) is not more than 12%. He indicated that it was insufficient to meet 5% of the government’s service needs.

1.2 Research purposes

This research aimed to define sustainable urban development, its goals, dimensions, principles, factors, and indicators, and to identify centralization and its role in sustainable development. Additionally, this study explores and examines the decentralization councils’ role in sustainable urban development in Jordan, measures the sustainable development factors in three Jordanian cities (specifically in the built environment aspect), defines the barriers that may affect the decentralization councils’ ability to promote sustainable urban development in Jordan, and establishes a set of recommendations that can improve the role of decentralization councils in promoting sustainable development.

1.3 Research contexts

The research context was in three Jordanian governorates: Al-Mafraq, Al-Zarqa, and Al-Karak governorates. The three cities were selected due to their relatively large sizes, dense populations, and geographic locations covering the different parts of Jordan (north, middle, and south).

1.4 Research questions

- a. What does “sustainable development” mean?
- b. What are sustainable urban development goals, principles, factors, and indicators?

- c. What are the main indicators to measure the sustainable development of the urban built environment?
- d. What does “decentralization” mean?
- e. What are the decentralization roles in sustainable development?
- f. To what extent did the decentralization councils promote sustainable urban development in Jordan between 2017 and 2020?
- g. What are the most essential sustainable urban built environment development indicators relevant to the study’s Jordanian cities?
- h. What are the barriers that affect the advancement of urban development in light of decentralization?
- i. How can the decentralization council’s role be improved to give better results in the urban development process?

1.5 Research significance

The significance of this research stems from the lack of research that combines decentralization and sustainable urban development concepts and the lack of research that discusses the role of decentralization councils in promoting sustainable urban development in Jordan. Therefore, it is essential to shed light on the role and importance of decentralization in establishing sustainability [10].

2. Literature review

2.1 Sustainable development

Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their needs [11]. In addition, sustainable development improves the quality of human life without exceeding the carrying capacity of the ecosystems that support it [11]. Sustainable development has many advantages, such as enabling urban sustainability, approaching the concept of sustainability in a way that helps decision-makers, and reorganizing the standards for sustainability to crystalize them in a concise, applicable framework [12].

2.2 Goals of sustainable development

The United Nations identified several goals for sustainable development at the Sustainable Development Summit in September 2015. 17 main goals were identified. Some of these are: ending poverty and hunger; ensuring healthy lives and equal opportunities; ensuring the sustainable availability of water and energy; promoting sustainable economic growth as well as infrastructure and industrialization; conserving the environment; solving the problem of climate change; strengthening the partnership between the different countries; and promoting peace sustainably and permanently [1].

2.3 Sustainable development in the world

Various studies were conducted on the concept of sustainable development worldwide, including Hansson et al. [13], which studied the agenda for sustainable development for the upcoming ten years (until 2030) in Sweden. Different goals and measuring indicators were established in that study; the main goal was to make cities and human settlements inclusive, safe, resilient, and sustainable. Furthermore, the Global Sustainable Development Report (GSDR) published by the United Nations [1] emphasized the significance of sustainable development worldwide.

The GSDR report provides a framework for categorizing sustainable development issues. The first category was implementing the sustainable development agenda for the year 2030, which is aimed at establishing governmental agreements to recognize the importance of science for the decision-making process. The second category was the fundamental values that need to be protected and enhanced with sustainable development, including the value of sustainability itself. The third category was the social, economic, and environmental processes threatening sustainable development. The fourth and final category was the new opportunities, technologies, and policies that can help promote sustainable development.

2.4 Social sustainability

The term “social sustainability” covers the problems of the well-being of humans, such as the rapid growth of population densities, which creates a challenge for establishing a sustainable, high-quality life for the people. Social sustainability is concerned with providing proper health and educational systems, ensuring peace and equality, protecting human rights, meeting the people’s needs, ensuring the availability of jobs, gender equality, and other aspects of the quality of human life [14]. In other words, social sustainability is about people [15]. Perhaps the most important goal of social sustainability is to “connote a social organization system that alleviates poverty” [16].

2.5 Economic sustainability

Economic sustainability is related to managing consumption, production, and distribution sustainably. Economic sustainability means creating a system of production that satisfies current needs without compromising future needs [3]. Economic sustainability ensures the correct use of resources, and there will be no scarcity of these resources in the future.

2.6 Environmental sustainability

The rapid development of humans in modern times creates environmental problems such as pollution of the air and seas, excessive use of resources, deforestation, and various other problems that put the earth at various risks in the future. Therefore, preserving the environment through the development process of environmental sustainability became essential. Environmental sustainability means using the environment and its resources to preserve them for the future. “Environmental sustainability relates to ecosystem integrity and the carrying capacity of the natural environment” [6]. “Sustainability of the environment is driven by proper physical planning and land use as well as conservation of ecology or biodiversity” [3].

2.7 Sustainable urban development

The main goals of sustainable urban development were identified as eliminating human hardships such as poverty and hunger [17]. Furthermore, the World Urban Forum addressed the fact that it is impossible to achieve sustainable development without creating sustainable cities [18]. Furthermore, sustainable urban development provides for the needs of the present without risking the rights of future generations. The current practices of sustainability are leading many cities towards sustainability and sustainable development. There are three main dimensions of sustainable urban development: environmental quality and carrying capacity; environmental management and development strategy; and sustainability lifestyle [12].

2.8 Principles of sustainable urban development

There are four main principles for sustainable development [19, 20]: (a) The planet has a biophysical limit, and the different activities of urban areas use resources and products that are produced in non-urban areas; (b) Human and natural systems are tightly intertwined and come together in cities, and there is a strong relationship between the health of people and the health of the environment surrounding humans in a way that directly affects sustainability; (c) Urban inequality undermines sustainability efforts due to severe inequalities within cities, whether economic, political, or class inequalities, putting efforts to achieve urban sustainability at risk of failure; (d) Cities are highly interconnected: This principle states that cities are connected in a complex network of interdependent subsystems [20].

2.9 Goals of sustainable urban development

The United Nations set a plan in 2015 to establish sustainable cities that would be implemented over the next 15 years. 12 targets were set to be achieved by 2030 [1]. These targets are as follows:

- a. Providing houses to people that are suitable, safe, and affordable.
- b. Providing suitable transportation systems, improving the roads’ safety, and paying attention to people with

- special needs.
- c. Controlling the capacity of urbanization through proper planning and management of urban areas.
 - d. The protection of the cultural and natural heritage of the world.
 - e. Protecting the people and the economies from natural disasters, especially the poor and vulnerable.
 - f. Enhancing the air quality of cities and urban areas and managing waste in a way that causes no harm to people or the environment.
 - g. Ensuring adequate, suitable, safe, and easily accessible green and public spaces. In addition to paying attention to the needs of women, children, and disabled people in these green and public spaces.
 - h. Strengthening the economic, environmental, and social links between peri-urban and rural areas through development planning.
 - i. Increasing the number of urban areas and settlements to reduce the population densities in these urban areas.
 - j. Providing financial and technical support and assistance for the least developed countries to establish sustainable development in these countries.
 - k. Ensuring equality for all men and women regarding the rights to access to economic resources and essential services.
 - l. Enhancing environmental conditions by improving water quality, significantly reducing air and water pollution, controlling dangerous substances and chemicals, and reducing burning waste and replacing it with recycling.

2.10 Sustainable urban development in Jordan

The United Nations Voluntary National Review Report on Jordan [21] aimed to analyze the 2030 Jordanian agenda for sustainable development. First, the report mentions the most significant challenges the country faces, which result from the surrounding countries' conditions and the high flow of refugees into the country, significantly increasing its population. The report mentions the four main development areas considered critical for Jordanians: strengthening the link between education and the labor market, combating stereotypes to achieve gender equality, respecting human rights, and enhancing awareness of environmental issues. Finally, Jordan set out the 2030 agenda for sustainable development based on these needs, a roadmap that will be adopted until 2030 to achieve these needs.

2.11 Decentralization

Centralization is the concentration of administrative power in the hands of a central authority [21]. On the other hand, decentralization means decentralizing the administrative structure and distributing the power into districts with four main types of decentralization: fiscal, administrative, federalism, and aggregate decentralization [22, 23]. Decentralization promotes sustainable development, specifically regarding service delivery to rural areas, such as health care services, educational projects, transportation, and drinking water sources [24]. Decentralization has a clear contribution to make in achieving sustainability goals; additionally, it has a role at the economic, political, social, and environmental levels within the local community.

2.12 Role of decentralization for sustainable development

The proper implementation of the decentralization concept promotes sustainable development in the country at the various levels of the community. For example, decentralization promoted sustainable development in India because the concept was well understood and implemented [25]. On the other hand, the decentralization concept was adopted in Indonesia to enhance sustainable development and succeeded at a lower level than in India because there was fear that such a practice would compromise the state's national unity and cause disturbance to the centrally defined plans and priorities of the nation [26]. In Iran, the role of decentralization in promoting sustainable development is high [27]. Egypt suffers from overpopulation; however, the involvement of local communities in decision-making and responsibilities affects the sustainable development process positively [28].

2.13 The need for the decentralization concept in Jordan

The executive development program (EDP) was established with a multi-year plan that includes the decentralization concept based on a participatory, bottom-up consultative approach. This was due to the need to address the problems and needs of local communities. Due to the cultural, geographical, environmental, and social differences between Jordanian regions, it would be difficult for a centralized government alone to efficiently capture these needs and challenges. Sustainable development in Jordan concerns infrastructure, financial, human, and information resources [29]. Decentralization in Jordan was required because the centralized situation made the capital, Amman, the center of attention of the government economically, educationally, and in terms of health conditions compared to other governorates.

2.14 Decentralization councils in Jordan

The decentralization and municipality laws were established in Jordan in 2015. The purpose of the law was to bring decision-making closer to citizens and make them more involved in the process. This was done by transferring the authorities from the central government to local authorities for each geographical location [9]. The report on decentralization in Jordan aimed to assess the situation of decentralization in Jordan in its first year after the law had been established [9]. The report explains how the decentralization law came into action in Jordan. It is mentioned that, based on the instructions of His Majesty King Abdullah II, commissions of experts have been established to study the situation in Jordan and establish realistic and applicable visions of the decentralization law that would be suitable for the conditions of Jordan, especially the fiscal conditions.

The report mentions the main objectives of these commissions, which were: the fair distribution of resources of the country on various provinces of the country; providing services for citizens of all provinces in a more efficient manner; providing work opportunities for locals of these provinces in the locations of their residence; and decreasing the numbers of people who move to the capital Amman and other provinces with more vital economic situations. In addition, the decentralization law in Jordan defined decentralization as transferring powers and responsibilities regarding developmental projects and budgets from the centralized government to the local authorities in the provinces since they are close to the people and more aware of their priorities and needs, which may enhance sustainable development [9].

The research [30] was conducted to review the law of decentralization, the advantages and disadvantages of the law, the difficulties the decentralization councils meet when implementing their tasks, as well as the level of implementation of the law. The researchers conducted two sets of research that involved 98 male and 32 female members of the decentralization councils in Jordan. Additionally, experts in decentralization from Jordan, Morocco, and Tunisia were involved in the research to understand the good aspects of decentralization implementation in Morocco and Tunisia. The research found that the performance of the councils did not reach the expected level of the planned objectives, and the tools and resources provided by the government to these councils were not sufficient.

The study [31] evaluated the decentralization experience in Jordan and found that the implementation of decentralization in Jordan is moderate. Additionally, the study found that the Jordanian decentralization councils mainly depend on the local extensions of the centralized government. On the other hand, Khlaifat et al. [10] focused on the role of municipalities in the decentralization process and sustainable urban development.

2.15 Factors or indicators of sustainable urban development

There are various factors that contribute to sustainable development. Some of these factors are the sustainability of open spaces [32], the sustainability of transportation [33], the sustainability of infrastructure [34], the sustainability of housing [35], and sustainable development projects [36].

This research deals with two factors based on relevance to the situation in Jordan and the availability of data:

- a. The sustainability of open spaces refers to the conditions of the public spaces that people use for various activities, such as streets, public parks, vegetation, etc. [37]. The open space plan integrates a land and water resource system and should be supported by a rational basis for land use decision-making [38]. Open space is created by a framework to define or deduct part of the endless, extended nature [39]. Open space for regional areas includes timber, rivers, small farms, and historic sites [40]. Open spaces should meet specific

requirements that would make the public satisfied with them [41]. Open spaces should be compatible with the needs of the people, making them useful for their different activities [42]. There are four main functions that successful open spaces should perform. These functions are access, purpose, comfort, and sociability [43].

- b. Sustainable development projects: this factor refers to establishing projects that enhance the urban areas' conditions and the lives of the people in these areas [44].

The indicators of the two factors (sustainability of open spaces and sustainable development projects) are concluded from different literature reviews [45-50], as shown in Table 1.

Table 1. The selected indicators for the assessment

Factors	Indicators
Open spaces	<p>The number of open spaces before and after the decentralization law.</p> <p>Accessibility and well-located open spaces, closeness to a community connection with other transport modes, easy movement between places, accessible entrances in the right places, and easy access to gates. Moreover, they are close to public transport and taxi services after establishing the decentralization law.</p> <p>The level of safety and security in open areas after decentralization councils' establishment.</p> <p>The level of crowds and noise in open spaces before and after decentralization councils' establishment.</p> <p>The quality of open spaces.</p>
Built environment dimension	<p>The supply of social facilities after the establishment of the decentralization law.</p> <p>The supply of educational facilities before and after the establishment of the decentralization law.</p> <p>The level of quality of building development before and after councils' establishment.</p>
Projects	<p>The number of green areas after councils' establishment.</p> <p>The number of streets that can be fully pedestrianized.</p> <p>Infrastructure and transportation projects.</p> <p>Educational sector projects.</p> <p>Health sector projects.</p>

The indicators to be measured by the questionnaire were as follows:

- The number of open spaces before and after the decentralization law.
- Accessibility and how well located and close communities' open spaces are to other transport modes, thereby allowing easy movement in and between places, have accessible entrances in the right places, are easy to get to and around, have good access to gates, and are close to public transport and taxi services.
- The safety and security in open areas.
- The crowds and noise in open spaces.
- The quality of parks and open spaces includes car parking, flowers and shrubs, pavilions, cafés, community halls, sports pavilions, toilet facilities, playground facilities, services, convenience, benches and seats, quiet, sports facilities (football, rugby, etc.), playing facilities and equipment, cleanliness, good design parking, sports facilities (walking, cycling, tennis, bowls, and running), shelter for bad weather, night lighting, events and activities, landscape or water or green areas, etc.
- The supply of social facilities.
- The supply of cultural and educational facilities.
- The quality of building development.

3. Research methodology

Different research methods were used to answer the research questions: a literature review, a semi-structured

interview, and a questionnaire. A literature review was used to answer the first five research questions.

Semi-structured interviews with a focus group were used to answer research questions 8 and 9 and define the barriers that may affect the ability of the decentralization councils to promote sustainable urban development in Jordan. Additionally, the interviews are important to establish a set of recommendations that can improve the role of decentralization councils in promoting sustainable development in Jordan.

The semi-structured interview consisted of three experts in decentralization and urban planning in Jordan, a chairperson, and two decentralization council members from each Jordan region: Al-Mafraq City from the northern region, Al-Zarqa City from the central region, and Al-Karak City from the southern region (in total, three chairpersons and six council members).

The interviewees were asked about the philosophy, vision, objectives, barriers, and challenges of the decentralization law in Jordan and the level at which its implementation was compatible with these objectives in reality. In the semi-structured interviews, formal language was used, and interviewees were asked for consent to mention their names and the recording of the interviews.

Semi-structured interviews were recorded and then written down in text. Then, the texts were subjected to content-thematic analysis and thick descriptions. Finally, the key points were tabulated for each interview concerning each research question.

3.1 Questionnaire design

A questionnaire is the best and most effective tool to collect data and information about respondents' satisfaction, behaviors, attitudes, experiences, preferences, opinions, intentions, needs, and causes for any action about the specific topics under discussion [51]. The questionnaire was designed with respondents in mind to answer the third, fourth, and fifth research questions. The questionnaire was designed to be friendly and easy to understand, and the purpose of the research was indicated directly to respondents. Questions were both close-ended and open-ended; they were formatted in such a way as to make it easy for respondents to answer [52].

A questionnaire was designed to collect data from Jordanian citizens in the three cities (Al-Mafraq, Al-Zarqa, and Al-Karak). Section 1 asked for the background information of each respondent to develop a general overview and describe the sample size and demographic background. For example, they were asked about their age, education level, and gender.

Sections 2, 3, and 4 were designed to answer research questions 6 and 7. They asked about the number, accessibility, quality, safety, and security of open spaces; social, cultural, and educational facility projects; and the quality of buildings. The total number of questions was 43: 23 questions about open spaces, 9 questions about the supply of social, cultural, and educational facilities, and 11 questions about the quality of buildings. A five-point Likert scale was used, with five being strongly agree and one being strongly disagree. The questionnaire was designed to be completed in about 15 minutes.

3.2 Pilot study

A pilot study was carried out before the actual study. The pilot study's purpose was to check the clarity of instruments, check for unclear ideas or ambiguous items, compute the internal reliability of using the scale, and find any managerial and technical difficulties that could be solved before conducting the research. The questionnaire was distributed to 12 selected respondents, four from each city. As a result, the questionnaire length was reduced, and some questions were rephrased accordingly. The Cronbach's alpha for the pilot study was 0.942, which means a high level of reliability.

3.3 Research validity

There are different types of validity: content validity, internal validity, and face validity. Content and internal validity were achieved when the literature was reviewed comprehensively. Then, a pilot study was conducted to check the feasibility, clarity, reliability, and validity of the questionnaire. Face validity was achieved when different expert architectural professors in architectural education presented and reviewed the research idea, topic, and final

questionnaire.

3.4 Research reliability

Reliability determines the results' consistency over time. Reliability examines the capacity to reproduce every time the same results from the data collected for a certain objective [51]. In this research, the Cronbach's alpha of the pilot study was 0.942, 0.938, 0.844, and 0.914 for the Al-Mafraq, Al-Zarqa, and Al-Karak questionnaires, respectively. This means that the study has excellent and high internal reliability, and the instrument was understandable and clear.

3.5 Distribution of the questionnaire

The questionnaire was distributed and conducted online through Google Forms as a platform. Google Forms is an online survey tool that is free, easy, and convenient for data collection. It can be quickly created and distributed in an emergency, such as in the current context of the coronavirus disease (COVID-19) pandemic. It aims to increase the response rate by reaching respondents very quickly. The responses were stored, scaled, and scored in cloud databases. The researchers can download them in multiple formats, including Microsoft Excel, and use and analyze them in different statistical software.

The research topic, cover letter, purpose, questions, benefits, respondents' rights, and Google Forms questionnaire link were posted on different social media platforms. The questionnaire was distributed electronically between January 16 and March 25, 2021.

3.6 Population and sampling

The research population of the survey is the citizens of the three cities of the study (Al-Mafraq, Al-Zarqa, and Al-Karak). The three cities were selected due to their relatively large sizes, dense populations, and geographic locations covering the different parts of Jordan (north, middle, and south).

The populations of these three cities are 622,500, 1,545,100, and 358,400, respectively. The sample size for each city is about 200 respondents: 100 females and 100 males. One difficulty encountered was the long time it took to achieve the required sample size during the COVID-19 pandemic. Therefore, random sampling was used to ensure the involvement of people from different backgrounds, social statuses, and educational levels.

3.7 Data processing and analysis plan

The scale data were treated as interval data (the difference between strongly agree and agree is the same as between agree and neutral, etc.). Each option was given a rank (from 5 to 1, with 5 being strongly agree). Descriptive statistics were conducted, and each question's final values, the average score or mean, were determined to reach an overall conclusion for each indicator. The mean score for each indicator was given a number ranging from 1 to 5.

To make an easy comparison and description between the performance levels of the three cities' decentralization councils for each indicator, the mean score was transformed into three equal intervals: low, moderate, and high. The low represented the average score between 0.00 and 1.667, the moderate presented the average score between 1.668 and 3.334, and the high presented the average score between 3.335 and 5.00. The frequencies of the answers to the averages for each indicator falling under these three categories were then calculated and presented tabularly and graphically.

3.8 Ethical consideration

The research information, including purposes, objectives, procedures, and possible benefits, was provided to participants. They were asked to agree, join voluntarily in the research, and give permission for the researcher to use and share the gathered information for research purposes. Each participant was informed that he or she could withdraw or quit the study without bearing responsibility. Also, the confidentiality of each participant was guaranteed by protecting their names and any other personal information and by assigning them numbers to maintain their anonymity. Finally, upon completing the online questionnaire, the researcher thanked each participant for their outstanding effort and contribution.

4. Research results

4.1 Results from the semi-structured interviews

The results of the semi-structured interviews that were conducted with three experts in decentralization and urban planners in Jordan are summarized in Table 2.

Table 2. The answers to the questions in the semi-structured interviews

The question	First interviewee	Second interviewee	Third interviewee
What are the motives for the establishment of the decentralization councils in Jordan?	The law was suggested and ready in 2009. However, the revolutions in the “Arabic Spring” caused the delay.	It was essential to establish administrative decentralization in Jordan and increase awareness regarding its meaning.	It was required to establish the councils to activate the role of the people in managing their affairs, to set the priorities for the different areas in Jordan, and to redefine the local urban planning of the different Jordanian areas.
What was the plan for implementing the decentralization law?	The plan was to gradually implement the law by geographic location and sector.	The frequent government changes caused inconsistent plans, and the implementation focused on the elections rather than urban development.	The implementation demanded a long process and high effort.
How do you assess the performance of the decentralization councils?	There is confusion regarding the roles of the decentralization councils, as they have two roles: the role of a parliament member and the role of a mayor. Additionally, they are not accepting training regarding their roles, causing their performance to be below expectations.	The process was correctly applied. However, the performance could be better.	Various problems are causing that performance, such as the lack of independent offices and facilities for the councils, the lack of proper coordination between the different parties involved, and the lack of sufficient funding for the councils.
What are the reasons for people’s dissatisfaction with the roles of the decentralization councils?	People are expecting unrealistic immediate results and development, and the decentralization councils do not understand their roles well.	The council did not use the budget according to priority but instead tried to benefit the areas where they received votes.	The main problem is with the law itself. This is because it is inconsistent with the law of municipalities and makes the roles of the different parties unclear. Additionally, the problem is with the government for the lack of proper support to the councils.
What obstacles may prevent the decentralization councils from performing their roles fully?	The members of the councils did not receive proper training regarding their roles, and the relationship between the councils and the municipalities was unclear.	The councils refer directly to the ministries instead of the governorates, which contradicts the main idea behind decentralization.	The councils refer directly to the ministries instead of the governorates, which contradicts the main idea behind decentralization.
Recommendations that can promote the role of decentralization councils in sustainable urban development.	Reviewing the law of decentralization by making it consistent with the law of municipalities.	Providing more support for the councils by the government and reforming some of the roles of the municipalities.	Establishing comprehensive plans for the development of urban areas, monitoring the performance of the councils, and benefiting from the feedback to enhance their performance.

Table 3 summarizes the results of the semi-structured interview conducted with the chairman and two members, the head of the finance committee of the council, and appointed members (not elected) of each decentralization council (Al-Mafraq, Al-Zarqa, and Al-Karak).

Table 3. The answers to the questions of the structured interview

The question	Al-Mafraq interviewees	Al-Zarqa interviewees	Al-Karak interviewees
How do you evaluate the role of the government in providing for the needs of the councils?	There is neither logistical nor administrative governmental support; instead, there are obstacles from the government toward achieving the council's objectives.	The government was not ready to provide the proper support because the idea was rushed.	The government does not provide any support.
What are the obstacles that prevent the council from performing their roles?	There is no real independence or power for the councils, and the funds that remain at the end of the year are taken by the government instead of being credited.	There is not enough power, no offices, and no experience in implementing the law.	There is a lack of administrative, logistical, and fiscal support.
Do you think the decentralization law can achieve the council's goals?	It is not sufficient because the power is still in the hands of the ministries, and the law itself needs some modifications to be implemented in a better way.	Administrative decentralization is not enough. It should be fiscal decentralization.	The law is incomplete and creates confusion regarding the roles of the different parties involved.
Do you have any recommendations they can make to enhance the role of the decentralization councils?	There is a real need to promote the independence, power, and funding of the council to make it more effective.	There is a real need to spread awareness regarding decentralization and establish conditions for the qualifications of candidates.	There is a real need to give the councils more power and budget.

4.2 Results from the questionnaire that was distributed to 200 participants in each city

The results of the questionnaire analysis show the percentages of people in each city who evaluate the level of the selected indicator as low, medium, or high, as shown in Table 4.

Table 4. Results of the analysis of the survey

Indicator	Al-Mafraq (N=200)			Al-Zarqa (N=200)			Al-Karak (N=200)		
	Low (%)	Medium (%)	High (%)	Low (%)	Medium (%)	High (%)	Low (%)	Medium (%)	High (%)
Number of open spaces	48.5	44.5	7	27	55	18	47.5	41	11.5
Accessibility of open spaces	51	46	3	49.5	47	3.5	51.5	41.5	7
Quality of open spaces	58.5	40	1.5	54.5	43.5	2	50.5	47.5	2
Safety and security of open spaces	59	35	6	52	42.5	5.5	49.5	44	6.5
Crowds and noise in open spaces	52	44.5	3.5	49	48	3	52.5	42.5	5
Supply of social facilities	54.5	40.5	5	52	45	3	51	46.5	2.5
Supply of educational facilities	47.5	54	7.5	50.5	44.5	10	47.5	49	3.5
Quality of building development	52	44	4	46.5	51.5	2	51.5	46	2.5

Note: N = sample size

In Al-Mafraq City, the results show that 48.5% of the 200 people think that the number of open spaces is low, 44.5% of them think that the number of open spaces is medium, and just 7% of them think that the number of open spaces is high. This means that most of the sample thinks that the first indicator is low. Meanwhile, in Al-Zarqa City, the results show that 27% of the 200 people think that the number of open spaces is low, 55% of them think that the number of open spaces is medium, and just 18% of them think that the number of open spaces is high. This means that most of the respondents think that the first indicator is medium. Finally, in Al-Karak City, the results show that 47.5% of the 200

people think that the number of open spaces is low, 41% of them think that the number of open spaces is medium, and just 11.5% of them think that the number of open spaces is high. This means that most of the sample thinks that the first indicator is low, as are all the other indicators and percentages, as shown in the graphs in Figures 1 through 8.

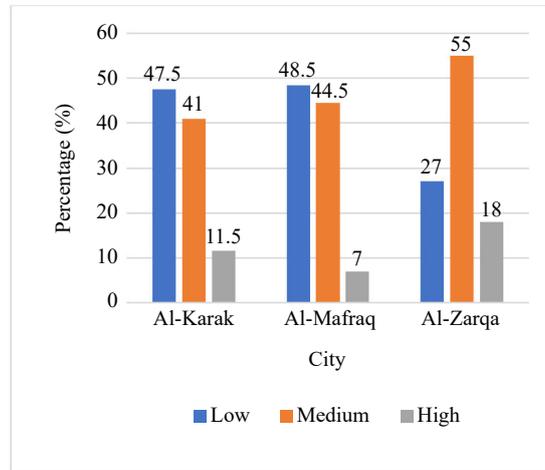


Figure 1. Percentages of the indicator of the number of open spaces for the three cities

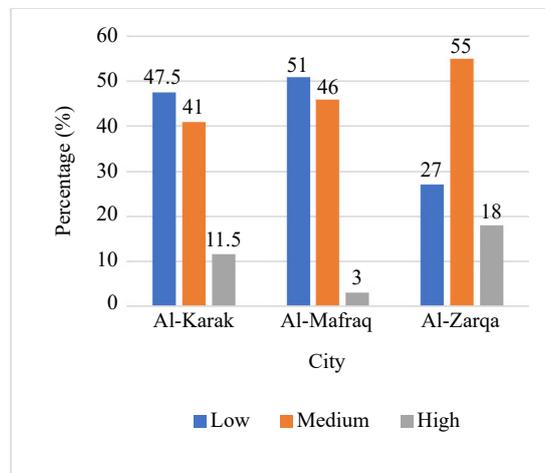


Figure 2. Percentages of the indicator of accessibility of open spaces for the three cities

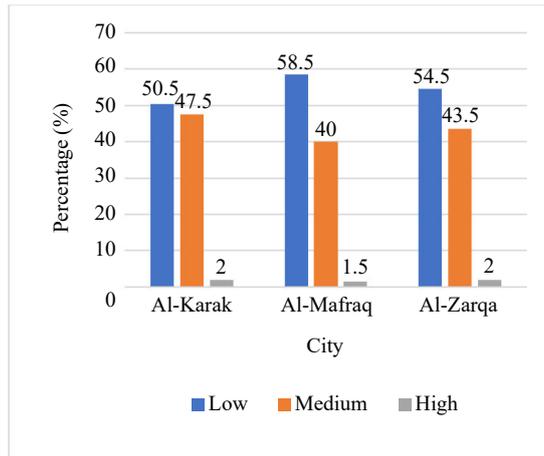


Figure 3. Percentages of the indicator of quality of open spaces for the three cities

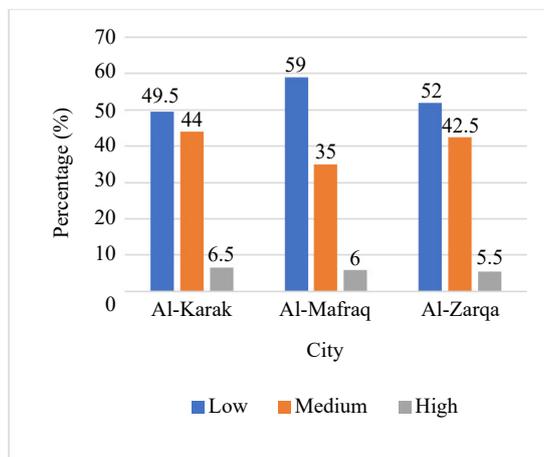


Figure 4. Percentages of the indicator of safety and security of open spaces for the three cities

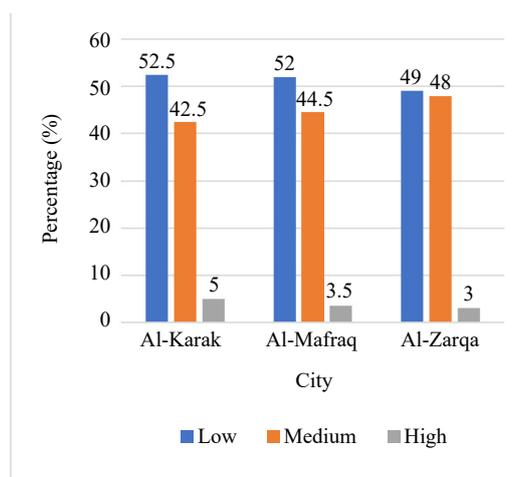


Figure 5. Percentages of the indicator of crowds and noise in open spaces for the three cities

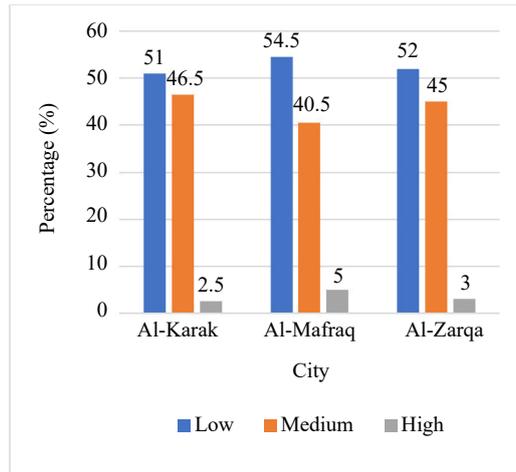


Figure 6. Percentages of the indicator of supply of social facilities for the three cities

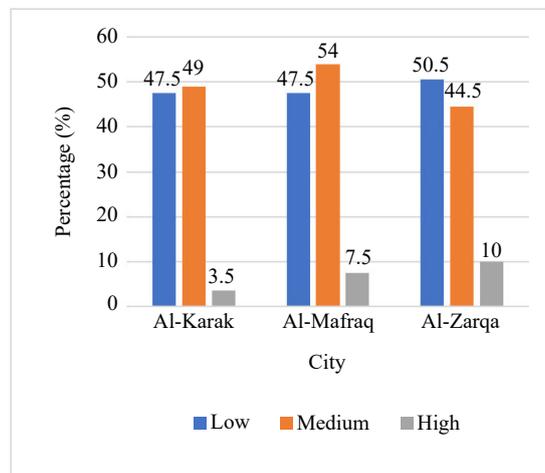


Figure 7. Percentages of the indicator of supply of educational facilities for the three cities

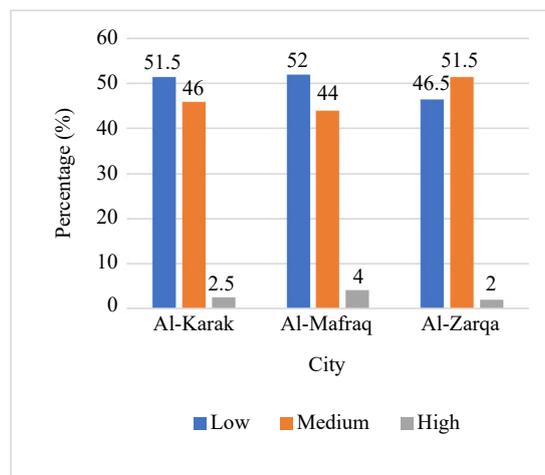


Figure 8. Percentages of the indicator of quality of building development for the three cities

This research found that the performance of the decentralization councils is unsatisfactory as they did not fully deliver the intended purpose for which they were created, with moderate to poor performance in most indicators of sustainable development and very few indicators with high performances.

The opinions of the experts interviewed also confirmed these results. This was due to various reasons related to the decentralization law, the government, and the decentralization councils. Additionally, it was found that the fact that the experience is relatively new also influenced the assessment of the performance of the councils. The cause of the delay in implementing the decentralization law was found to be the politically unstable situation in the region.

This research found a general lack of proper knowledge regarding decentralization among the council members when they were interviewed. This contributed significantly to their roles being unclear, affecting their performance negatively.

Specifically, this research found that:

- The number of open spaces in Al-Karak and Al-Mafraq cities is low, while in Al-Zarqa it is medium. This indicates that the residents' satisfaction level in Al-Zarqa is the highest. Overall, the low and medium ratings for the three cities show that the performance of the decentralization councils regarding the indicator of open spaces is unsatisfactory in all three cities.
- The accessibility of open spaces in Al-Karak and Al-Mafraq cities is low, while Al-Zarqa has a medium rating. This indicates that the residents' satisfaction level in Al-Zarqa is the highest. Overall, the low and medium ratings for the three cities show that the performance of the decentralization councils regarding the indicator of open spaces is unsatisfactory in all three cities.
- The location of the parks and open spaces is close to public transportation. This shows that the biggest problem with the accessibility of open spaces is the unavailability of public transportation to the available open spaces.
- The quality of open spaces is low, with a lack of development and a shortage of night lighting, service facilities, toilets, playgrounds, and sports facilities.
- The safety and security of open spaces are low in the three cities.
- Crowding and noise in open spaces are low in Al-Karak and Al-Mafraq cities, while in Al-Zarqa they are medium. This indicates that the residents' satisfaction level in Al-Zarqa is the highest.
- The supply of social facilities is low in the three cities. This indicates that the supply of social facilities in the three cities needs to be improved. It is recommended to create projects that establish more social facilities.
- The supply of educational facilities is medium in Al-Karak and Al-Mafraq cities, while in Al-Zarqa it is low. This indicates that the level of satisfaction of residents in Al-Zarqa had the lowest indicator regarding the supply of educational facilities. Overall, the low and medium ratings for the three cities show that the performance of the decentralization councils regarding the indicator of open spaces is unsatisfactory in all three cities.
- The quality of building development is low in Al-Karak and Al-Mafraq cities, while in Al-Zarqa it is medium.

Additionally, this research found that the decentralization council of Al-Karak has implemented significant projects to enhance open areas and greenfield sites. This means that awareness must be provided for the decentralization councils in Al-Mafraq and Al-Zarqa regarding open spaces and greenfield sites. Moreover, the decentralization councils of Al-Karak have implemented significant projects for the enhancement of the streets that can be fully pedestrianized, followed by Al-Mafraq and Al-Zarqa. Finally, the decentralization council of Al-Mafraq has implemented significant projects to enhance infrastructure and transport, followed by Al-Karak and Al-Zarqa. Educational sector projects were the highest in Al-Mafraq, followed by Al-Zarqa and Al-Karak. Health sector projects were heavily implemented in Al-Mafraq, followed by Al-Karak and Al-Zarqa.

The overall results showed variances in the performance of the decentralization councils for the different indicators. The actual implementation of projects was much lower than the original plans. This shows that the various reports indicating poor performance for the decentralization councils are realistic. The interviews investigated the reasons behind these results, which showed the reasons and barriers that prevented the decentralization councils from contributing to the promotion of sustainable urban development.

5. Conclusions and discussion

This research found the main barriers that affected the ability of decentralization councils to promote sustainable

urban development in Jordan, which appeared in the various reports submitted, were proved in the analysis of the measured indicators and were confirmed by the opinions of the interviewed experts. These barriers were divided, according to their source, into three main categories. These are the decentralization law's defects, the governments, and the decentralization councils themselves. Each part can be enhanced to improve the decentralization experience in promoting sustainable urban development in Jordan. Therefore, each of these parts will be discussed separately.

On the other hand, this research found that various modifications should be made to the decentralization law to effectively establish the idea in Jordan in a way that promotes sustainable urban development. The already-existing law promotes only administrative decentralization, with no fiscal independence for the decentralization councils. This creates various problems that affect the council's ability to achieve the plans they establish. One of the most significant of these problems is the yearly zero budgeting. This means that the budget dedicated to the councils is reset to zero every year, causing any remaining funds to go back into the government's general budget. This can be problematic since some delays might occur in the implementation of projects due to various factors, in which case the councils can lose the funds for these planned projects, causing their unsuccessful delivery.

In addition, the law must be modified in a way that makes the roles of the different parties clear and eliminates the confusion of duplication in the roles, especially between the decentralization and provincial councils. The relationship and coordination between the councils and the governorates also need to be strengthened so that the councils do not need to refer to the ministries for everything, which contradicts the main idea of decentralization. Additionally, it is essential to review the laws of municipalities in order to reform some of their roles. This is important since the decentralization councils eliminate some of these roles. Finally, the decentralization law does not have any conditions regarding the qualifications of the candidates for elections to the decentralization councils, causing the members to not necessarily be experts in urban planning, which caused the lack of building capacity.

Another factor involved in the poor performance of the councils was the councils themselves. As it was determined in the interviews, the councils can improve their performance in various ways. First, many of the councils' members do not accept training regarding the concept of decentralization and urban development, which causes them to have little knowledge of their roles and the importance of decentralization. This was evident in the interviews with the council members, as most of them provided incomplete or incorrect definitions of decentralization. Additionally, it was found that the priorities of some of the members were not related to the general sustainable urban development of the areas of their service but rather to serve the areas in which they received the most votes. This causes inconsistent plans, and the projects are random and do not follow the development priorities.

6. Recommendations

This research recommends reviewing the law of decentralization to fix the defects and shortfalls, for example, by creating qualifications for candidates, making the roles of the different involved parts clear, and ensuring coordination between these parts. It is required to create fiscal independence for the councils by making their budget independent instead of setting the remaining funds to zero at the end of each year and returning the remaining to the government's general budget. Moreover, some of the municipalities' roles should be reformed to make them more compatible with the newly introduced decentralization law. Logistic support for the councils by the government is required. Finally, clarifying the role of the councils for the public is required to extend their role in developing the built environment. This research has many diverse implications at the administrative level, as municipalities and councils can improve their performance. Additionally, the research has implications on urban and environmental levels by encouraging the design and redesigning of open spaces and parks that may promote public health.

Conflict of interest

The authors declare that there is no conflict of interest.

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