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Comparison of Economic Indicators for the Cities of Baghdad and Amman According to ISO 37120: 2014

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Abstract: *The reason for choosing the title of the research is the low economic reality in the city of Baghdad. The research problem lies in the poor standard of living and lack of job opportunities. The importance of the research stems from the fact that it will contribute to providing accurate data for the numbers of plans needed to advance economic reality. The research aims to improve the quality of life of citizens in the capital, Baghdad. The researchers used the case study approach in line with the nature of the research. The data were collected through the checklist attached to the ISO standard (Economy field). The field of the research was chosen to include institutions concerned with economic indicators. As for the research sample, it included the Ministry of Planning and the Ministry of Trade, (the urban observatory department in the Greater Amman Municipality). Research data was collected through official reports. The first part of the study focused on measuring the percentage of implementation of the standard with respect to the selected areas, and found that the compliance rates for those areas reached (100%), meaning that the gap in implementation and documentation is (0%). The second part of the study focused on evaluating and comparing each indicator for the city of Baghdad with its counterpart in the city of Amman, as the city of Amman surpassed the city of Baghdad in terms of evaluating the indicators of the selected services. The city of Baghdad got (5,601) points, while the city of Amman got (3,512) points in evaluating the selected fields.*

Key Words: Keywords: Services, Economic Indicators, Quality Of Life, International Standard ISO 37120: 2014, Sustainable Development Of Communities.

مقارنة المؤشرات الاقتصادية لمدينتي بغداد وعمان على وفق المواصفة القياسية ISO 37120: 2014

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المستخلص

يعزى سبب اختيار عنوان البحث إلى تدني الواقع الاقتصادي في مدينة بغداد. إذ تكمن مشكلة البحث في ضعف مستوى المعيشة وقلة فرص العمل. وتنبع أهمية البحث من حقيقة أنه سيساهم في توفير بيانات دقيقة لأعداد الخطط اللازمة للنهوض بالواقع

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الاقتصادي. يهدف البحث إلى تحسين نوعية الحياة للمواطنين في العاصمة بغداد. استخدم الباحثان نهج دراسة الحالة بما يتماشى مع طبيعة البحث. تم جمع البيانات من خلال قائمة الفحص المرفقة بمعيار ISO (مجال الاقتصاد). تم اختيار مجال البحث ليشمل المؤسسات المعنية بالمؤشرات الاقتصادية. أما عينة البحث فقد اشتملت على وزارتي (التخطيط والتجارة) (دائرة المرصد الحضري في أمانة عمان الكبرى). وتم جمع بيانات البحث من خلال التقارير الرسمية. ركز الجزء الأول من الدراسة على قياس نسبة تنفيذ المواصفة القياسية فيما يتعلق بمجال الاقتصاد، ووجد أن معدل المطابقة لمؤشرات مجال الاقتصاد بلغت (100%)، أي أن الفجوة في التنفيذ والتوثيق كانت (0%). وركز الجزء الثاني من الدراسة على تقييم ومقارنة كل مؤشر لمدينة بغداد مع نظيره في مدينة عمان، حيث تفوقت مدينة بغداد على مدينة عمان من حيث تقييم المؤشرات. إذ حصلت مدينة بغداد على (5،601) نقطة، بينما حصلت مدينة عمان على (3،512) نقطة في تقييم الحقول المختارة.
الكلمات المفتاحية: الكلمات المفتاحية: الخدمات، المؤشرات الاقتصادية، جودة الحياة، المعيار الدولي ISO 37120: 2014، التنمية المستدامة للمجتمعات.

Introduction

Economic indicators are closely related to basic human needs, which are among the basic requirements of human life and development. The concept of (quality of life) emerged as a desirable result of providing services in all fields, the most important of which are (economic, industrial and commercial fields). The quality of life is an essential component of economic and social planning that aims to improve the quality of life of individuals by providing the basic requirements for the development and sustainability of society, and has become an important part of the Millennium Development Goals that concern all countries. With regard to achieving its goals in environmental development, the International Standardization Organization (ISO) has been concerned with preparing specifications that define a set of indicators for cities in terms of providing services and achieving quality of life according to a global standard character. The international standard (ISO 37120: 2014) is concerned with measuring the sustainable development of societies according to the indicators of city services and quality of life. It includes (7) indicators related to the economic field. This research seeks to evaluate the economic indicators in the city of Baghdad according to the indicators of the international standard (ISO 37120: 2014) by applying the requirements of the standard and comparing the indicators of Baghdad with the indicators of the city of Amman.

Research Methodology

This topic deals with the research problem and its importance, in addition to the objectives of the research, as well as explaining the limits of the research and the methods used in collecting information and explaining the community and the research sample.

- **First: Research problem**

The economy plays a pivotal role in the development of society and is considered one of the most important factors of population attraction, especially if it is provided in the appropriate size and level, designed, implemented and managed efficiently, and the problem of research lies in the low economic indicators in the capital Baghdad and their contrast with what other cities offer to their societies, whether in other global and regional cities, There is no doubt that the discrepancy in these indicators results in negative effects on the citizens' conditions, which can be identified through many phenomena, including (poverty, immigration, unemployment, and others), especially since the lack of data for service organizations is a problem in itself, since the lack of data and indicators Those concerned with services lead to the adoption of unclear policies and plans that result in projects and services inconsistent with the city's need. The research problem stems from the following questions:

1. What are the available or approved indicators to measure the economic reality in the city?
2. What is the percentage of indicators conforming to the articles of the standard, and what is the gap between the required indicators and the measured indicators?
3. What is the level of services and general indicators of quality of life in Baghdad compared to the indicators of Amman?

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- **Second: Research significance:**

The importance of the research lies in the fact that it draws attention to a number of important concepts that focus on the modern approach of states towards society and its optimal service, and adopting sustainable development initiatives that seek to develop societies through community improvement. The lives of individuals, and the importance of this research can be summarized in the following points:

1. Adopting standard indicators (ISO 37120: 2014) as a basis for starting research towards applying the principles of sustainable development for societies, as it contains indicators related to the field of economics.
2. The possibility of benefiting from current research and joining the World Council for City Data and promoting the city of Baghdad internationally to attract investments and inform the world about what the city offers to residents, visitors and investors.

- **Third: Research objectives**

1. Reviewing economic indicators that greatly affect the citizens' quality of life.
2. Measurement and evaluation of economic indicators over time according to ISO: 37120:2014.
3. Learning from cities through comparison across a wide range of indicators, and comparing the city indicators with the indicators of one of the regional cities (Amman) with the aim of enhancing and improving the positive aspects of the city and correcting and correcting the negative aspects that suffer from neglect.
4. Supporting and developing policies and setting priorities.

- **Fourth: Research sources**

1. Arabic and foreign books.
2. Arab and foreign research and periodicals.
3. The Internet.
4. Governmental reports

- **Fifth: Research sample and population**

The research community and sample are represented by the institutions concerned with the economic indicators mentioned in the standard ISO 37120: 2014, and they are represented by the ministries of (planning, trade).

- **Sixthly: Research Metrics:**

1. With regard to the analysis of gaps and measuring the percentage of application of the standard:

The two researchers have adopted the classification adopted by the standard, as the verification rate of the international standard is measured and the gap is calculated for the basic fields by placing a mark (√) for the indicator in the event that the index is available, and in the event that it is not available, then it is indicated with a sign (×) then the percentage is measured. For each field, by dividing the value of the available indicators on the overall indicators, then the gap is measured by the remaining 100%.

2. With regard to evaluating the indicators and comparing them with the indicators of Amman:

The two researchers relied on an innovative proportional scale for comparing the indicators of the cities of Baghdad and Amman, which is based on dividing the value of a city index by the index of the other city, according to what will be clarified in the Methods of data analysis.

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- **Seventh: Methods of data analysis:**

The accompanying checklist was approved for ISO 37120: 2014, the tools used to analyze the checklist data are:

1- Percentage of match = $\frac{\text{domains for all available indicators count}}{\text{domains for all required indicators count}}$ x 100% (1)

2- Gap size for each axis = (1- $\frac{\text{domains for all available indicators count}}{\text{domains for all required indicators count}}$) x 100% (2)

3- Evaluate positive indicators:

A- For the city with the highest value, it is awarded 1 point.

B- For the city that has a lower index value, the evaluation amount is deduced by dividing the index value for the city that has a lower index divided by the index of the city that has a higher index, resulting in a decimal value ranging between (0-1).

4- Evaluate negative indicators:

A- For the city with the lowest value, it is awarded 1 point.

B- For the city that has a higher index value, the evaluation amount is deduced by dividing the index value for the city that has a lower index divided by the index of the city that has a higher index, resulting in a decimal value ranging between (0-1).

Theoretical Background

- **First: Commercial and financial services:**

1. Concept of services

The concept of economic and financial services has received great attention in recent times as a result of the increasing human need to obtain these services, especially after the development of technologies and methods used in providing these services (Al-Dulaimi, 2015: 27). The European Union described them through using the term Services of General Economic Interest. (SGEI) Services of the General Economic Interest to refer to the service sector that is concerned with services that are economically beneficial to the country (Wollmann, et al., 2016: 2), and it is certain that economic activity begins with the infrastructure and thrives with the provision of that structure (Samli, 2010: 13-14). From this, the great importance of these services becomes evident (Al-Shahwan, 2013: 113), given that the services related to the field of economics and finance control most aspects of city life, so the city's development plans and planning projects must include a large part of this type of services and within the standard specifications of the service. In line with the expected population and urban growth rates for the cities (Al-Jumaili & Kanani, 2012: 14).

2. Commercial services

We use the term "services" to refer to trade as satisfying one of the most important needs of the population, which is food, in addition to a number of other goods such as clothes, furniture, etc. And stronger visibility, as it tries to achieve the highest possible satisfaction for the region's visitors from the required needs, and consequently the commercial services converge and may all converge in one multi-commodity store (Farag, 2012: 15-16):

A. High frequency services:

- Bakery, vegetables and fruits, groceries and more.
- Pharmacies, library, laundry, and more.

B. Low / medium frequency services:

- Meat and fish stores.

- Barbershop, home services, post office, car workshops, craft shops, etc.

C. Seasonal frequency services:

- Shops selling clothes, shoes, and more.

3. Financial services

Financial services include the following organizations (Ravindran et al., 2018: 6):

A. Banks
B. Mediation services.
C. Investment companies, including investment funds.
D. Credit card companies (Master Card, Visa Card)
E. Mortgage services.

- **Second: Quality of Life**

1. The concept of quality of life

The quality of life has garnered increasing attention from policy makers aiming to make cities better places to live (Michelangeli, 2015: 1). The term quality of life refers to being a general term used to refer to satisfaction with daily life (Nistor, 2011: 16-17). The term quality of life is associated with the idea of sustainability in most developed countries. As a result, most developing countries depend on economic growth while developed countries focus on Environmental quality (Muhanna et al., 2018: 3), and quality of life refers to a person's general sense of well-being, including all aspects that contribute to his personal satisfaction with life (Ng et al., 2018: 2).

2. Dimensions of quality of life

(Barimani & Karsami, 2018: 42) describe four dimensions related to quality of life as follows:

1. Economic dimensions: include (income and consumption, the labor market, the housing market).
2. Social dimensions: include (population, education, health, safety, and social issues).
3. Environmental dimensions: include (green space, climate, noise, air quality, water quality, and infrastructure).
4. Organizational dimensions: includes (cultural and sports forums, educational, health and social facilities).

3. Concepts related to quality of life

Two concepts that are directly related to the quality of life can be identified as follows (Quality of Life Program 2020 Document - Implementation Plan, 2019: 10):

1. Livability: creating living conditions for a satisfactory life.
2. Lifestyle: providing options for people to have an enjoyable and comfortable life.

As both concepts are important to reach the goal of enhancing the quality of life, for example, large cities may provide citizens with a wide range of lifestyle options, but they do not do so when it comes to the availability of good living conditions, such as the high cost of housing and transportation, and in return there are cities It provides very high standards of living, but its lifestyle options are limited. Quality of life has been classified into ten sub-categories, divided equally between the concepts of lifestyle and viability, as five categories have been defined within the concept of livability covering the main aspects of life, namely (health care, infrastructure Transport, security and social environment, economic and educational opportunities, housing, urban design and the environment). Five main categories have been identified within the concept of (lifestyle) with a focus on appropriate options and offers available to citizens and residents to spend their free time, including (entertainment, sports, recreation, culture and arts, Community participation). Figure (1) illustrates all the groups concerned with the concepts of lifestyle and viability.

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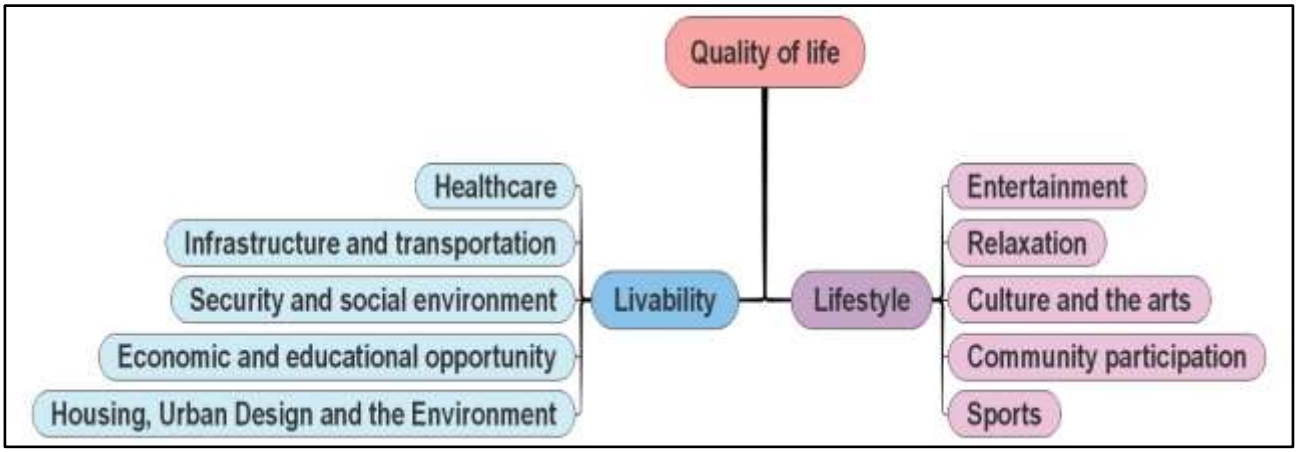

Figure (1): Illustrates all the groups concerned with the concepts of lifestyle and viability
Source: (Quality of Life Program 2020 Document - Implementation Plan. (2019) Saudi Arabia: 11).

- **Third: Sustainable Development**

1. Concept of sustainable development

Several authors (such as Olsson et al., 2014) describe sustainable development with the term (sustainability shifts), because they are closely linked together, and sustainability can be considered a general societal vision if it is embodied in the Sustainable Development Goals (SDGs) to encourage concrete actions based Accordingly, urban transformations are a response to global trends that affect cities and include climate change, scarcity of resources, economic globalization, demographic change, social polarization, or increased migration flows, however, urban shifts towards sustainability represent processes It is not an endpoint, as stakeholders and decision-makers develop and implement innovative solutions in line with the SDGs in their local context (Kabisch et al., 2018: 19).

2. Relationship between ISO 37120: 2014 and sustainable development

There are three aspects of sustainable development: economic, social and environmental, as the economic dimension is related to the use of scarce resources, stakeholders in the economic system and the implemented economic policies and the evaluation of their effects on the environment within this dimension, while the social dimension is related to pluralism, ensuring the continuity of sociocultural systems and preserving cultural diversity. Moreover, the environmental dimension is related to preserving biological diversity, a balanced ecosystem, and preventing dangerous environmental pollution (Gurluk, 2010: 86-87).

When the ISO 37120: 2014 indicators are evaluated within the framework of these dimensions of sustainable development, it can be observed that they contain city indicators that represent all three dimensions of sustainable development, as the economic dimension is represented by the field of economy, one of the seventeen key performance indicators listed in Article 5 of the standard On the other hand, it can be said that the finance field indicators and other sub-indicators under other headings are related to the economic dimension of sustainable development (Akdamar, 2018: 424-425).

3. World City Data Council (WCCD)

(WCCD) is the World City Data Council, a network of cities committed to improving services and quality of life and providing a coherent and comprehensive platform for standardized city standards. WCCD is a global hub for creative learning partnerships across cities, international organizations, companies and academia to continue innovation and envision an alternative future, and build better and more resilient cities. To live, and as a leading global organization in the field of standardized standards, WCCD adopts the application of ISO 37120: 2014 for indicators of city

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services and quality of life and classifies the registered cities belonging to the Council in terms of the level of services and quality of life, in addition to the registrar awarding certificates of recognition to cities according to the indicators that are provided by cities (www.dataforcities, 2020).

The Practical Side Of Research

- **First: Analyzing the data for the selected fields of the standard (ISO 37120: 2014):**

This section deals with the data related to the fields (solid waste, wastewater, water and wastewater) and to measure the verification rate of the International Standard and calculate the gap for the basic fields by putting a mark (√) towards it. If the indicator is available and if it is not available it is indicated with a sign (x) Then the percentage of each field is measured by dividing the value of available indicators on the overall indicators, and then the gap is measured by the remaining 100%.

- **Economic field indicators:** Indicators of the field of economics: The field of economics is the first field covered by the standard. This field includes seven indicators, three of which are basic, including (the unemployment rate, the estimated value of commercial and industrial property, the percentage of the population living in slums) in addition to four supporting indicators that include (the percentage of people Full-time workers, youth unemployment rate, number of operating firms in relation to population, The number of new patents). And according to what is shown in Table (1).

Table 1: Results of matching the requirements of the standard specification with the indicators of the economic field of the city of Baghdad.

The main field	Sub-index	Available basic indicators	Available supporting indicators	Percentage achieved for the main domain	The gap ratio for the main domain
Economics field	1- The unemployment rate in the city.	√		100%	0%
	2- The appraised value of commercial and industrial properties as a percentage of the total appraised value of all the property.	√			
	3- The percentage of urban dwellers living in slums.	√			
	4- Percentage of people employed full time.		√		
	5- Youth unemployment rate.		√		
	6- Number of operating companies per 100,000 people.		√		
	7- Number of new patents per 100,000 inhabitants.		√		
Total available indicators		3	4	7	
Sum of unavailable indicators		0	0	0	
Total of required indicators		3	4	7	

Source: Prepared by the researchers.

1- Percentage of match = $\frac{\text{domains for all available indicators count}}{\text{domains for all required indicators count}}$ x 100%

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Percentage of match = $\frac{7}{7}$ x 100% = 100%

2- Gap size for each axis = (1- $\frac{\text{domains for all available indicators count}}{\text{domains for all required indicators count}}$) x 100%

Gap size for each axis = (1 – $\frac{7}{7}$) x 100% = (1 – 1) x 100% = 0%

Second: Evaluating the indicators of selected fields from the standard (ISO 37120: 2014) in relation to the cities of Baghdad and Amman.

The indicators of each city are evaluated by giving the city that has a positive index such as the number of companies operating in the city one point for each indicator, while the evaluation of the second city is extracted by dividing the value of the smaller index (the second city) by the value of the largest index (the city that I got a point), but for unavailable indicators, their value is considered zero. The percentage of the index is calculated for the other city, considering that the city that has a negative index whose value is zero treats the same as the city that has a positive index of 100%. The highest rated, empty fields on the charts represent data that is not available due to poor authentication., as shown in Tables (2) and Figure (1) below:

Table No. (2) shows the superiority of the city of Baghdad over the city of Amman in the field of water and sanitation. The total values of this field for the city of Baghdad reached (5.998) points, while the city of Amman got (5151) points. This superiority is attributed to several factors, including the importance of the commercial and economic city of Baghdad to the rest of the governorates in Iraq, as it is the most important commercial center for all governorates and a destination for workers and companies alike, in addition to the technological and innovation excellence of Baghdad compared to its counterpart, Amman.

Assessment of the unemployment rate in the city of Baghdad = 1 point

Assessment of the unemployment rate in the city of Amman = $\frac{\text{Amman City Index value}}{\text{Baghdad City Index value}}$	(3)

= $\frac{13.8}{17.4}$ = 0.793 point

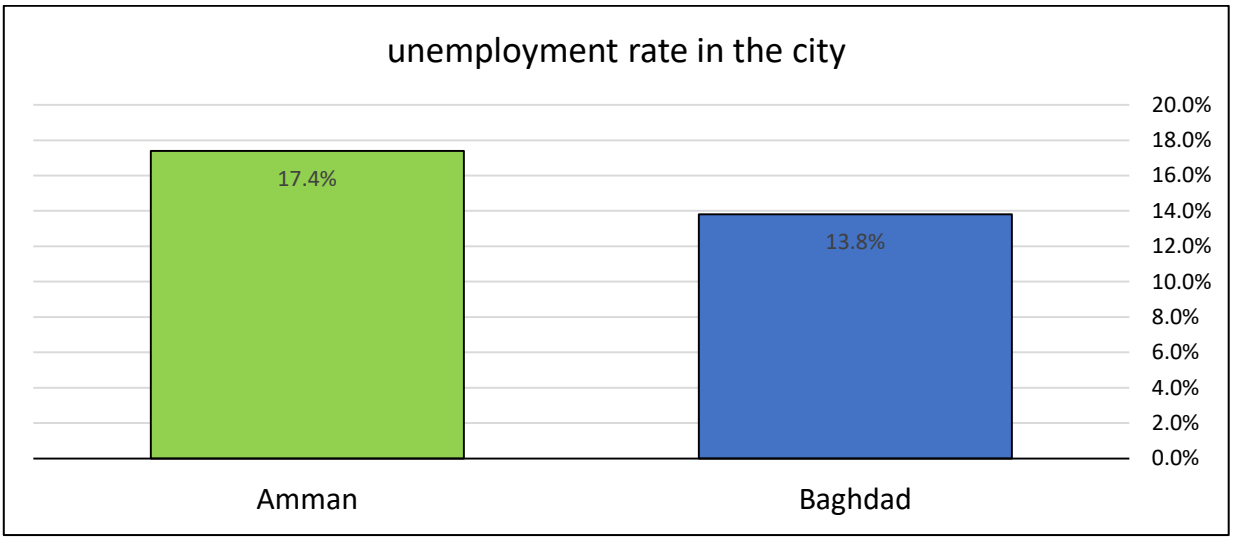

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Fig 2: Evaluating the unemployment rate in the two cities of Baghdad and Amman.

Table 2: Evaluating the economic field indicators for the cities of Baghdad and Amman.

sec	Water and sanitation field	Evaluate cities using accurate ratios	
		Baghdad	Amman
1	The unemployment rate in the city.	1	0.793
2	The appraised value of commercial and industrial properties as a percentage of the total appraised value of all the property.	1	0.143
3	The percentage of the urban population living in poverty.	1	0
4	Percentage of people employed full time.	0.336	1
5	Youth unemployment rate.	0.265	1
6	Number of operating companies per 100,000 people.	1	0.268
7	Number of new patents per 100,000 population per year.	1	0.41
Total points		5.601	3.512

Source: Prepared by the researchers.

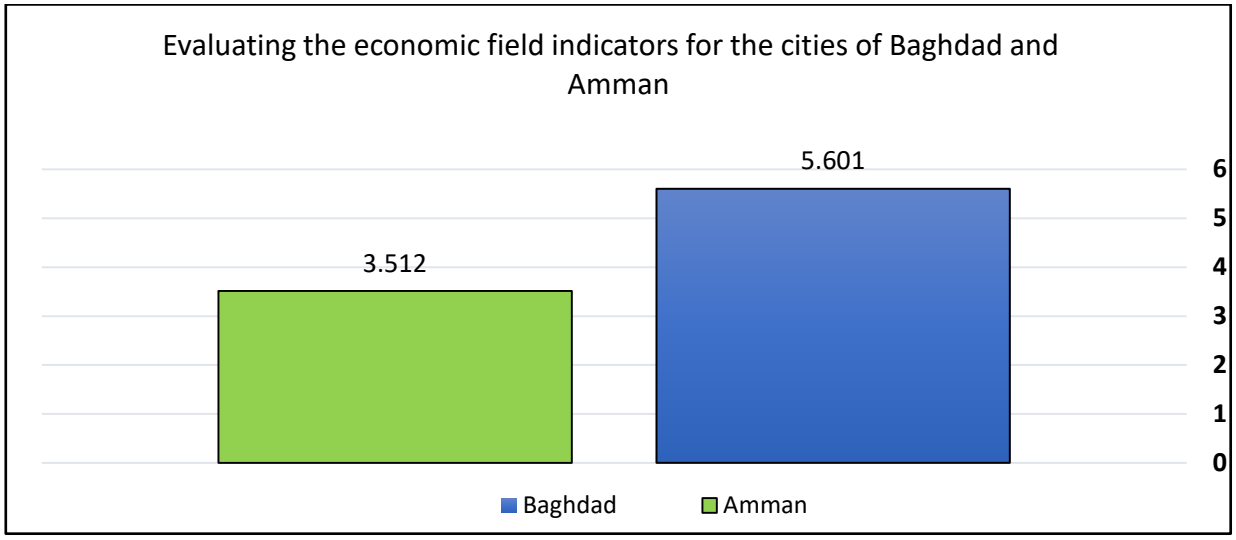

Fig 3: Evaluating the economic field indicators for the cities of Baghdad and Amman.

Conclusions and Recommendations

- **First: Conclusions**

Based on the results of the evaluation process for the requirements of the standard in the practical side of the study, a number of the following conclusions were reached:

1. The international standard (ISO 37120: 2014) is considered the basis for the cities orientation towards implementing the latest standard specifications (ISO 37122: 2019) smart cities (ISO 37123: 2019) flexible cities.
2. The standard specification, in addition to registering aphids with the World Council of City Data, enables learning and development from other systems by monitoring the indicators of advanced cities and making them targets that must be reached.
3. The results of the comparison showed the superiority of the city of Baghdad over the city of Amman in the field of economy, and the reason for the superiority of the city of Baghdad is attributed to the advantage of its indicators related to the rate of unemployment in the city and the high estimated value of commercial and industrial properties in it, as well as the rise of companies operating in the city compared to the city of Amman. The economic and commercial reality and the abundance of job opportunities in the city.

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- **Second: Recommendations**

1. The Ministry of Planning / Central Statistical Organization is required to circulate the requirements of the international standard to various governmental institutions or limit data related to the field of economy according to the standard specification (ISO 37120: 2014) and provide the Ministry of Planning with these indicators after measuring them accurately.
2. Municipal institutions must adopt the international standard for sustainable development of societies (ISO 37120: 2014) and make it among their priorities, as these specifications contribute to transforming the city into a competition at the global level.
3. The possibility of applying the international standard (ISO 37120: 2014) to any geographical area, even if those areas are parts of cities, with the aim of comparing areas at the same city level and diagnosing areas that suffer from the weakest economic indicators in order to develop them.

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