

Evaluating the efficiency of urban service distribution in existing cities to support strategic plans through statistical analysis of Central Agency for Public Mobilization and Statistics data and sustainable development indicators

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Abstract

Urban planning authorities prepare successive strategic plans intending to achieve development in targeted areas and improve the quality of life there. In existing cities, numerous issues persist related to poor services, despite the Central Organization for Public Mobilization's continuous efforts, which are not fully utilized. This requires analyzing the data in a different way to make the best use of the results to develop and propose solutions based on feasibility studies that can be implemented. We find that rapid urbanization has led to inequality in access to urban services that achieve the necessary efficiency for citizens. This results from the lack of coverage of education, healthcare, and many other services for all levels of the population, leading to service gaps at the city level. better served than others. This is a result of the unplanned and random expansion of existing old cities, which has allowed increasing service gaps. At the same time, there is an increase in population density. This has led to duality, as the same population density has made a difference between the levels of services from one region to another, with some areas benefiting exceptionally, while others do not benefit at all due to various factors, such as spatial distance or difficulty in access.

Keywords

Urban Services,
Sustainable
Development,
Quality of Life,
Service Distribution,
Strategic Urban
Planning

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Introduction:

Countries around the world are now striving to achieve the highest levels of quality of life by implementing the most important pillars of sustainable development, which focus on achieving quality services, which in turn lead to quality of life. Development of cities is necessary in light of the rapid unplanned urban expansion of existing old cities, which necessitates re-evaluating service distribution patterns (health, education, etc.). Especially in urban areas suffering from unplanned expansion, because of randomness and lack of research, this has led to an unequal distribution of services across cities. Since we are always trying to take the path of improving the quality of life to achieve the state's 2030 and 2050 plans, this must be linked to sustainable development indicators as a vital marker, as the Making strides quality of life in cities could be a key component of feasible improvement To supply the essential quality of life for future inhabitants. This requires developing a service evaluation model that can be used to identify shortcomings and find a mechanism for improvement.

Aims of research

- Evaluating the current status of the proportions and distribution of urban services in existing Egyptian cities.
- Analyzing the extent to which this distribution is consistent with the Sustainable Development Goals (SDGs) which ,includethe third, fourth, and eleventh goals, through the planning rates .for services
- Using Central Agency for Public Mobilization and Statistics reports for comparison, analysis, and determining the extent to which services achieve their intended targets.
- Extracting results and recommendations to benefit from this analysis in future strategic plans to achieve sustainable development in these cities by improving the quality of life in them.

Importance of research

- Get a quantitative evaluation instrument for planners and designers to define choices based on dependable information.
- Experiencing the improvement of specific foundations and steps to accomplish improvement esteem among various cities.

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- Supporting the achievement of the Egyptian state's goals and Vision 2030 in the field of sustainable urban development.

Research methodology

- Determine the theoretical base, first decide on sustainable development and ash.
- Study of services, importance, effects, and sustainable development.
- Implementation through determining the number of services needed to achieve efficiency by connecting and connecting the current population and the available resources by using and using central services and statistics.



Figure 1: Main axes of development (1)

1- Sustainable development in architecture and planning

The need to cover current necessities without influencing future eras. (1) This concept is decoded into urban terms by completing and facilitating life through organizing and building urban life that takes into account the balance between the natural, economic, and social elements, which are the three basic goals of sustainable development. The main dimensions of sustainable development are divided into environmental, economic, and social dimensions, which are among the most important axes of the sustainable development index to improve the quality of life for current and future generations. (2) This can be accomplished through a few methods, including (1)

- The integration with the environment: the construction of the local climate and the natural environment.
- Flexibility and adaptation: vacant design that can be adapted to future changes under environmental or environmental conditions.
- Effect of resources: Construction methods that reduce resources and promote resource processing.
- Permanent mobility: Urban planning that promotes mobility using non-polluting means such as bicycles.
- The correct distribution of the service by

ensuring the provision of the urban area proportional in proportion to the effectiveness of the activity.

From the above, we find that sustainable urban development is the development that takes into account the distribution of land uses. And the dissemination of population density and street arrangement, and at the same time, this dissemination is passable and maintainable in the long term. Long, so social justice must be taken into account and nature must be respected, and economic efficiency must be sought, meaning that it requires integration between integrated needs, as it is not a fixed situation but rather a process of change where the use Resources and the use of natural resources and technological development, and this institutional change You must be able to manage the long term well and achieve present and future aspirations.

These are procedures that, in order to achieve them, we must find what will achieve them, and they are the services provided to the residents of the cities to achieve the previous procedures.

2- Urban services

Urban services are exercises given by open teach that advantage society. These services are fundamental to way of life and incorporate numerous offices that bolster wants of urban inhabitants. They are regularly overseen by open specialists, but can too incorporate private segment support in a few of them, as an included advantage to extend effectiveness (3).

Quality of life is closely linked to the quality of urban and urban services, which include basic services such as health, safety, and education, along with additional services such as Rest, sports and culture. On the other hand, the objective of the leaders of sustainable development is the objective of changing social changes due to economic changes. Therefore, environmental quality is the main common denominator between sustainable development and quality of life. Hence, it is important to study how to enhance issues related to sustainable development to achieve them. One way to enhance urban environmental quality is to provide and efficiently cover appropriate urban services in urban areas at various levels, both in terms of population size and economic standards of living. The distribution and accessibility of urban services play an important role in population mobility, shaping the size, shape, density, and, most importantly, quality of life within a city. Commuting to work, shopping centers, schools, recreational activities, parks, and other public services affects community well-being, social

justice, and the environment in which we live. Urban services can have both subjective and objective impacts on the living conditions of residents. (4)

2.1 Types of urban services:



Figure 2: Urban Services (5)

Economically, services contribute to a robust and reliable economy, enabling the financial requirements of any social, environmental, and economic improvements to the city to be managed. Services can also have social impacts on quality of life and sustainable development by providing equal access to residents and achieving equality among all users across income groups. They help people participate in society and strengthen their social relationships. They also enhance knowledge and understanding in various areas of life. They provide places for entertainment, recreation, and sports, promote community hygiene and health, and enhance life expectancy. The service also has the opportunity to introduce and present the culture, values, and confidence of the community, including the culture, beliefs, and values of other nationalities. (5)

Urban services include a wide range of facilities, including:

- Education: Schools and educational institutions that provide learning opportunities.
- Health services: Health centers and various hospitals.

Various means of public transportation: These include trains, buses, etc.

- Recreational facilities include parks, sports complexes, and cultural centers that promote recreation and community engagement.
- Safety Services: Fire and police services that ensure the safety and security of residents.
- Utilities: water supply, waste management, and electricity services that are essential for daily life.

2.2 Importance of urban services:

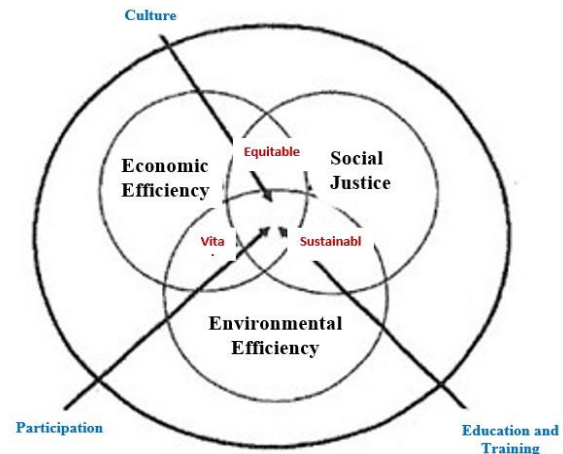


Figure 3: The Three Pillars of Sustainable Development Strategies (6)

Urban services play a vital role in improving the quality of life for a city. Urban services play an important role in the future to improve the quality of life of the city in the future. They offer important tools and improve this part of quality education and health, such as health and economic opportunities for people and families.

Social Justice: Well-distributed urban services help reduce inequality within a city. When all inhabitants have access to fundamental services, it cultivates a sense of community and having a place, which is fundamental for social cohesion.. Conversely, unequal access can lead to disappointment and struggle between distinctive groups, increased wrongdoing rates, and a wave of other negative behaviors that contrarily affect society.

The financial development of urban services is the basis for the development of the economy. It creates an environment in which businesses can thrive, attract investment, create jobs for current and future generations, foster a sense of belonging, and thus achieve social justice. The dependable and redressal improvement of open transport and offices is exceptionally critical (6).

Consequently, we discover that a key component of maintainable urban improvement is the arrangement of urban administrations, which are key to accomplishing the Feasible Advancement Objectives. By ensuring access to Services can perform guidelines for progress and progress that reduce depression and progress and all are necessary for urban arrangement. Then we know urban service are essential to the functioning of cities, impacting the quality of life for residents, social justice, economic development, and sustainability.

2.3 Urban services axes

There are many divisions of services, including dividing services into axes based on their orientation, as follows:

- public facilities: such as water, power, and sewage.
- Social services: such as instruction, wellbeing care, and open offices.
- Natural services: such as ecologically related administrations such as open parks, squander administration, and discuss quality.

2.4 Urban services and their role in sustainable development

Urban services are an essential element in achieving sustainable development for communities as they play a major role in meeting the needs of the population, which is considered the most important goal of the development process. Hence, the accessibility or scope of administrations contributes altogether to the improvement and administration of communities and the degree to which they accomplish a tasteful standard of living for their citizens. The regions of services and their tomahawks are numerous, and their levels and sorts shift concurring to the level of the urban agglomeration in terms of size and economy

3. Indicators and their role in measuring development

Pointers are one of the successful instruments for measuring the degree of focused on advance of urban communities at their different levels towards the required improvement comes about. On the other hand, a marker is the basis of the general starting point and is a way to achieve qualified progress. In measuring development, It provides a standard concept. It is combined with other calculations and rates and offers specific reviews compared to international or planned standards. and in terms of effectiveness, the decision-making handle requires a database to judge the degree of advance or delay of different development programmed.(7)

Development indicators serve many purposes. They degree and screen the rate of accomplishment in executing development methodologies and programmes at the level of cities and districts They give decision-makers with comprehensive data about and By analyzing and evaluating the current situation, you can improve the following views.

3.1 The purpose of indicators in urban development

The pace of urbanization in countries is accelerating significantly due to the increasing population in cities through migration or the recruitment of workers. With rapid development

and growth, cities require strategic urban development plans based on accurate urban information and indicators. A number of Arab cities have prepared strategic and urban plans and established urban observatories to support development decisions (8). In Egypt, the Central Agency for Public Mobilization and Statistics usually releases reports that help track the population and see how people use various services, along with many other reports on different subjects. Therefore, these reports must be utilized through comparative and quantitative analysis to determine the coverage rates of various services and the extent to which they achieve the goals and indicators of sustainable development and Egypt's Vision 2030.

3-2 The role and impact of urban services on sustainable development indicators

Indicators are statistics directed at specific issues and point to results and conclusions that should be useful in future policies, as the axes and issues of sustainable development overlap with each other and eventually point to progress the quality of life, given that the primary step to progressing the quality of life is to cover administrations for the fundamental needs of the populace.

And typically, what he ought to know Choice producers are mindful of the inadequacies and issues in arrange to create suitable arrangements for advancement and dispensing with the issue. Understanding and analyzing the subtle elements of the inadequacies gives a higher opportunity to create fitting options. Hence, this requires nitty abrasive and specific information and reports with numbers and based on specific foundations and rules so that the proper steps can be chosen inside the long term (9).

Urban services are one of the most important indicators of sustainable development, which is determine the quality of life in each urban community is determined.

Urban services are one of the basic pillars for achieving sustainable development through their occupation of many sustainable development indicators, as they contribute directly to improving the quality of life, enhancing economic efficiency, and preserving the environment. Environmental impact: Analysis of how urban services affect the environment and contribute to sustainable development. There are many axes through which services affect sustainable development indicators, including (9):

Economic impacts of urban services

Urban services play a vital part in advancing economic improvement from several viewpoints:

Making transportation system: Moving forward, transportation frameworks energize the advancement of people and items, strengthening economic development and extending productivity.

Attracting investment: Providing integrated urban services encourages investors to establish new projects, contributing to job creation and enhancing local economic growth.

Increased property value: Improving services positively impacts the value of land and property, supporting wealth accumulation in communities.

In this way, sharp urban organizing plays a major role in achieving these goals by integrating private, commercial, and mechanical spaces in an adjusted way, while taking into consideration the conservation of natural resources to achieve long-term sustainability

Social impacts of urban services

Urban services are a key calculate in advancing social equity through a few tomahawks:

Giving equal opportunities: services accessible to all, such as instruction and well-being care, contribute to guaranteeing access to opportunities for impartial improvement for all people.

Strengthening social ties: Public spaces and community. The center strengthens social interactions and cooperation between the members of the community.

Moving forward, quality of life: Fundamental services play a crucial role in making strides in the standard of living and reducing social aberrations.

Thus, we discover that maintainable urban planning ought to take into consideration social has to guarantee adjusted and comprehensive development.

Environmental impacts of urban services

Urban services contribute to natural preservation in numerous ways, including:

Common asset administration: Water and wastewater systems empower the proficient utilization of assets, decreasing contamination rates.

Reducing emissions: By promoting the use of public transportation and reducing reliance on private vehicles, harmful emissions are reduced.

Preserving green spaces: Creating parks and open spaces contributes to improving air quality and supporting biodiversity.

In this way, we arrive at the significance of including environmental aspects in maintainable urban arranging forms to guarantee the perfect plan and dissemination of urban services.

4- Challenges of providing urban services

Even though cities offer many helpful services, they still run into problems that stop them from growing in a way that's good for the environment and future generations, especially when it comes to (10).

- **Rapid population growth in urban areas:** This increases pressure on existing infrastructure and requires the continued expansion of these services.
- **Economic growth without job creation:** While urban areas may experience economic growth, this does not necessarily translate into job creation. many citizens remain unemployed or underemployed, exacerbating poverty and inequality, complicating the provision of basic services.
- **Widening inequalities:** Disparities in income and access to services are increasing, making it difficult for local governments to meet the needs of all citizens equitably. This inequality can lead to social unrest and dissatisfaction with public services.
- **Climate change and environmental stress:** Urban areas face unprecedented challenges related to climate change, such as extreme weather events and resource scarcity. These environmental pressures make it harder for cities to plan and provide services because they have to adjust to new conditions while still taking care of their people's needs.
- **Global Pandemics and Health Crises:** The emergence of global health crises, such as pandemics, places additional pressure on urban services, particularly in healthcare. Local governments must respond quickly to protect public health while managing other essential services.
- **Security Threats and Migration Flows:** Increased security threats and migration can destabilize urban areas, creating challenges in governance and service delivery. Local governments may struggle to manage the influx of migrants and ensure their integration into urban services.
- **Local governments often struggle to provide good public services,** which shows that there is a big need to improve how cities are managed. Better governance systems and policies are necessary to make services work better and involve citizens more in decision-making.
- **Limited financial resources,** which hinder the implementation of vital infrastructure development projects.
- **Lack of integrated planning,** which results in unequal service distribution and deepens social disparities.
- **Hence, we find that the challenges of providing urban services in Africa are multifaceted,** including rapid population growth, economic issues, environmental pressures, and governance challenges. Addressing these issues is crucial to improving the quality of life for urban citizens.

5- Strategies for improving the distribution of urban services

Making strides in the transport of urban services is considered one of the basic components for fulfilling sustainable development in cities and urban communities. This progress depends on getting a handle on orchestrating methodologies that consider financial, social, and typical focuses of see in an adjusted way. Subsequently, to perform a service, you must recommend a few methods (11).

a) Use of Geographic Information Systems (GIS)

Geographic information systems are viable devices for analyzing and planning the dispersion of urban services. This system is provided to the planner.

- Analysis of the space distribution of the current service.
- Identify areas that are affected by the lack of service.
- Development planning to expand the service based on space data.

b) Involving the local community in planning by promoting community participation (12)

Community participation inside the organizing plan is basic to ensure that services meet the genuine needs of the masses.. Studies indicate that involving citizens in decision-making enhances the effectiveness of planning and reduces resistance to change. The Sustainable Urban Planning Strategy emphasizes the significance of community cooperation in accomplishing successful urban planning.

c) Integration between urban planning and urban economy

In urban advancement, it is imperative to present the urban concept of the urban economy. This integration is as follows:

- Economic efficiency of services.
- Priority for investments in infrastructure.
- Promoting the growth of the local economy.

The use of urban economic instruments will increase the efficiency of urban planning and improve the population.

d) Equity-based planning through the development of modern planning standards.

Planning standards contribute to directing the distribution of urban services in a manner that achieves justice and efficiency. These standards include:

- Identify the ratio of space assigned to Different services.
- Identify the distance standard between the service site and the house.
- Determine appropriate population densities to

ensure efficient services.

e) Promoting decentralization in service provision

Decentralization of service delivery is an effective way to improve service distribution allowing local authorities greater flexibility in meeting the needs of their communities.

Gap analysis and service redistribution (12) Analyzing the hole between supply and request for administrations in each locale, with results and suggestions that serve as a marker for closing or opening unused offices to realize the specified quality of life, which is accomplished through:

- Analyzing information on the use of service.
- Analyzing data to identify needs and improve efficiency.
- Providing digital services that facilitate citizens' access to information and services.



Figure 4: Sustainable Development Goals in Egypt (13)

6- Evaluation of the distribution and proportion of services in existing cities- a practical example

Through intermittent reports arranged by the Central Organization for Open Mobilization and Insights (CAPMAS) up to the 2022 insights, and in comparison, with the arranging rates guides for different administrations issued by the General Authority for Urban Planning, and visits to some administrative bodies, a comparative analysis was used between population size and service requirements. The current available services in the governorates, which were listed in the CAPMAS report, were compared with the services that must be available, which were determined based on population density and according to the planning rates and standards guide for services prepared by the General Authority for Urban Planning. The examination was moreover conducted based on the third objective, which is concerned with wellbeing and stipulates guaranteeing that everybody appreciates sound ways of life and well-being at all

ages through comprehensive wellbeing scope, whether preventive or restorative. The fourth focuses on education, ensuring that everyone has equal access to quality education and enhancing lifelong learning opportunities. These are two important indicators that affect the quality of life. This is in addition to sports and youth services, which reinforce the sustainable development goals that focus on establishing societies and cities that achieve equality for all and peaceful societies in which no one is marginalized. This is achieved by

ensuring that all citizens have equal opportunities in every service. Hence, the decision to conduct a thorough analysis of health and education services, in addition to youth and sports services, to arrive at service quality ratios in each governorate, and subsequently combine them in a comprehensive analysis to arrive at service coverage rates and, consequently, the extent to which quality of life rates are achieved in each governorate across the Arab Republic of Egypt, as follows:

Educational Services	Primary	Preparatory	Basic Education	Preparatory and Secondary	Basic and Secondary
Service	Local	Local	Local	Local	Local
Minimum number of population served (persons)	2000	3200	3200	7000	10000
Location relative to roads	Subsidiary	Subsidiary	Subsidiary	Main	Main
School type	Subscriber/Boys/Girls	Subscriber/Boys/Girls	Subscriber/Boys/Girls	Boys or Girls	Basic Subscriber (Boys or Girls)
Percentage of student per site(m ²)					
Minimum	4	4	4	5	5
Preferred and desired	6	6	6	7	7
Maximum	40	40	40	40	40
Percentage of built-up area					
Minimum	1	1	1	1.5	1.5
Preferred and desired	3	3	3	4	4
Maximum	1.5	1.5	1.5	2	2
Class density (student/class)					
Minimum	25	25	25	25	25
Preferred and desired	30	30	30	30	30
Maximum	40	40	40	36	36
Number of classes in the school					
Minimum	8	9	11	12	14
Preferred and desired	40	30	55	60	70
Maximum	24	24	33	36	42
Number of students in the school					
Minimum	320	360	440	432	504
Preferred and desired	1600	1200	2200	2160	2520
Maximum	720	720	990	1080	1260

Figure 6: Standards and guiding planning requirements for primary schools (14)

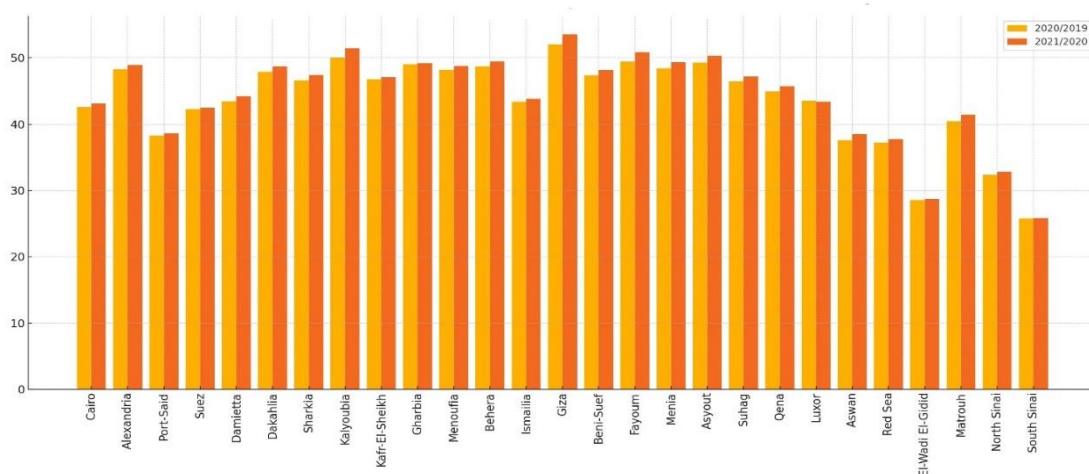


Figure 7: Graph showing the average number of students per classroom - Source: Researcher

6.1 Educational services:

First, the Educational Services Planning Rates Guide, which specifies the ratios for various

educational services, was reviewed. The table for the required number of classrooms was analyzed based on the average number of students (Figure 5),

التعليم						
المدارس والفصول والتلاميذ في التعليم قبل الجامعي طبقاً للمحافظات						
(1) 2021/20 - 2020/2019						
Schools, Classes & Pupils of Pre-University Education						
By Governorate (2019/2020 - 20/2021 ⁽¹⁾)						
الوحدة : بالعدد						
Governorate	2021/2020			2020/2019		
	تلاميذ	فصول	مدارس	تلاميذ	فصول	مدارس
	Students	Rooms	Schools	Students	Rooms	Schools
Cairo	2452775	56895	5290	2378585	55867	5118
Alexandria	1344918	27497	2576	1292753	26771	2476
Port-Said	179249	4640	472	173883	4543	461
Suez	189956	4471	427	185568	4390	415
Damietta	404487	9146	956	391786	9024	946
Dakahlia	1525346	31297	3369	1483088	30968	3313
Sharkia	1761373	37141	4142	1703182	36527	4041
Kalyoubia	1504447	29239	2447	1443154	28841	2357
Kafr-El-Sheikh	832461	17687	2057	813905	17403	2036
Gharbia	1187793	24151	2386	1161825	23692	2323
Menoufia	1118062	22933	2398	1080599	22425	2334
Behera	1583004	31999	3626	1527649	31356	3556
Ismailia	359794	8208	905	348103	8021	909
Giza	2409400	44963	3633	2290599	44013	3482
Beni-Suef	802272	16661	1782	772461	16301	1760
Fayoum	872788	17153	1506	831297	16817	1487
Menia	1391513	28202	2685	1357198	28030	2640
Asyout	1130589	22460	2270	1090133	22114	2213
Suhag	1212387	25684	2567	1168343	25155	2503
Qena	800460	17500	1822	773685	17213	1805
Luxor	289520	6672	838	283732	6520	827
Aswan	374526	9723	1274	361357	9610	1268
Red Sea	120543	3196	412	114127	3066	400
El-Wadi El-Gidid	69721	2429	442	67982	2379	436
Matrouh	148063	3573	524	141832	3506	518
North Sinai	116212	3547	562	114349	3534	561
South Sinai	42274	1638	323	39938	1549	311
Total	24223 933	508 705	51 691	23391 113	499 635	50 496

(1) Excludes (single Class, Handicapped Schools لا تشمل مدارس الفصل الواحد - قربية خاصة - Al-Azhar & Experimental Education).

Figure 5: Schools, Classes, pupils of pre university Education (15)

which also specifies the number of students in each classroom. At that time, the reports of the Central Agency for Public Mobilization and Statistics were used and studied. The agency conducts a periodic inventory of the number of classrooms, primary schools, and students according to the administrative division of the governorates. (Figure 5), We find that the average number of students determined according to the Services Guide (Figure 6) ranges from a minimum of 30 students per classroom to a maximum of 40 students per classroom. A maximum of 30 students was determined, with 30 students being the optimal number. The number of students in each classroom was then analyzed and determined at the governorate level. The number of students in each classroom was then calculated, depending on the governorate. (Figure 7). The following conclusions were reached:

- From the previous analysis, it was concluded

that the number of students exceeds 40 in most governorates across the country.

- In some governorates, such as Qalyubia, Giza, and Fayoum, it reaches more than 50 students.
- Some governorates fall outside the scope of the excess, such as the New Valley and Red Sea governorates. Aswan, North, and South Sinai

From the above, we note that the number of governorates exceeding the maximum number specified in the services guide is greater than the number of governorates that adhere to the specified number. This may be due to the small populations of these governorates, and consequently, the small number of students compared to the number of available classes.

This means that pre-university educational services achieve approximately 75% to 100% coverage of their efficiency, as is evident from the attached graph.

Local primary (Healthcare)		Health Service	
Family Healthcare	Family Health Unit		
20-40	5-20	Number of populations served: thousand people)	Service Area
Neighborhood Local Unite	Village - residential neighborhood	Administrative Rank	
5-10	2.5-3	Distance between residence and service – km-	
20	5	Time between residence and service – minutes-	

Figure 8: Standards and guiding planning requirements for family health units and centers (16)

الصحة (Health)									
الوحدات الصحية بأسرة طبقاً للقطاع والمحافظه (*2020-2019)									
Health Units With Beds By Sector & Gov. (2019-2020*)									
الرقم : Unit : No.									
Governorate	2020				2019				المحافظة
	% القطاع الخاص الجملة	الجملة	القطاع الخاص	القطاع الحكومي (١)	% القطاع الخاص الجملة	الجملة	القطاع الخاص	القطاع الحكومي (١)	
	% Private Sector to Total	Total	Private Sector	Gov. Sector	% Private Sector to Total	Total	Private Sector	Gov. Sector	
Cairo	71.8	365	262	103	72.1	355	256	99	القاهرة
Alexandria	73.2	142	104	38	72.2	133	96	37	الإسكندرية
Port-Said	70.6	17	12	5	61.1	18	11	7	بورسعيد
Suez	60.9	23	14	9	65.4	26	17	9	السويس
Damietta	36.4	33	12	21	40.0	35	14	21	دمياط
Dakahlia	75.0	180	135	45	75.3	178	134	44	الدقهلية
Sharkia	54.8	84	46	38	53.2	77	41	36	الشرقية
Kalyoubia	58.6	70	41	29	60.6	71	43	28	القليوبية
Kafri-ElSheikh	52.9	51	27	24	51.1	47	24	23	قنا
Gharbia	61.9	97	60	37	66.3	101	67	34	الغربية
Menoufia	58.7	75	44	31	62.2	82	51	31	المنوفية
Behera	57.4	68	39	29	60.3	68	41	27	البحيرة
Ismailia	73.5	49	36	13	67.3	52	35	17	الإسماعيلية
Giza	79.9	174	139	35	78.0	159	124	35	الجيزة
Beni-Suef	55.2	29	16	13	53.6	28	15	13	بنى سويف
Fayoum	38.1	21	8	13	42.9	21	9	12	الفيوم
Menia	23.4	47	11	36	33.3	54	18	36	المنيا
Asyout	57.3	75	43	32	60.3	73	44	29	أسيوط
Suhag	51.8	56	29	27	51.8	56	29	27	سوهاج
Qena	38.7	31	12	19	43.3	30	13	17	قنا
Aswan	38.7	31	12	19	38.7	31	12	19	الأسوان
Luxor	25.0	20	5	15	25.0	20	5	15	الأقصر
Red Sea	65.0	20	13	7	65.0	20	13	7	البحر الأحمر
El-Wadi El Gidid	36.4	11	4	7	46.2	13	6	7	الوادى الجديد
Matrouh	37.5	8	3	5	37.5	8	3	5	مطروح
North Sinai	50.0	16	8	8	50.0	16	8	8	شمال سيناء
South Sinai	20.0	5	1	4	10.0	10	1	9	جنوب سيناء
Total	63.2	1798	1136	662	63.4	1782	1130	652	(١) تشمل وزارة الصحة والجهات الصحية الأخرى
(1) Includes the Ministry of Health, subsidiaries, government agencies and other agencies.									
Source : Ministry of Health & Population									
المصدر : وزارة الصحة والسكان									
مصر في ارقام 2022									

(1) Includes the Ministry of Health, subsidiaries, government agencies and other agencies.
Source: Ministry of Health & Population
مصدر: وزارة الصحة والسكان
مصر في أرقام 2022

Figure 9: Health Units with Beds (18)

Population				السكان
*تقدير أعداد السكان بالمحافظات طبقا للتوقع 2022/1/1				
Population Estimates By Sex & Governorate 1/1/2022*				
Unit : (NO.)				وحدة : بالعدد
Governorate	الجملة Total	انثى Female	ذكر Male	المحافظة
Cairo	10 100 166	4 882 202	5 217 964	القاهرة
Alexandria	5 469 480	2 669 521	2 799 959	الإسكندرية
Port-Said	783 433	381 473	401 960	بورسعيد
Suez	778 970	379 878	399 092	السويس
Damietta	1 593 610	776 449	817 161	دمياط
Dakahlia	6 930 797	3 408 264	3 522 533	الدقهلية
Sharkia	7 744 815	3 763 129	3 981 686	الشرقية
Kalyobia	6 024 438	2 919 066	3 105 372	القليوبية
Kafi-El-Sheikh	3 645 111	1 779 797	1 865 314	كفر الشيخ
Gharbia	5 343 756	2 614 639	2 729 117	الغربية
Menoufia	4 640 003	2 251 049	2 388 954	المنوفية
Behera	6 723 269	3 259 641	3 463 628	البحيرة
Ismailia	1 419 631	688 763	730 868	الإسماعيلية
Giiza	9 323 196	4 495 445	4 827 751	الجيزة
Beni-Suef	3 492 903	1 693 822	1 799 081	بنى سويف
Fayoum	3 970 083	1 904 437	2 065 646	الفيوم
Menia	6 148 074	2 981 086	3 166 988	المنيا
Asyout	4 903 763	2 372 421	2 531 342	أسيوط
Suhag	5 547 268	2 680 221	2 867 047	سوهاج
Qena	3 531 018	1 719 721	1 811 297	قنا
Aswan	1 614 967	795 012	819 955	أسوان
Luxor	1 364 640	661 833	702 807	الاقصر
Red Sea	393 551	189 446	204 105	البحر الأحمر
ElWadi ElGidid	261 167	127 289	133 878	الوادي الجديد
Matrouh	520 459	249 359	271 100	مطروح
North Sinai	496 386	243 754	252 632	شمال سيناء
South Sinai	113 795	55 396	58 399	جنوب سيناء
Total	102 878 749	49 943 113	52 935 636	الإجمالي
Excerpt in Figures 2022				مقتطف في الأرقام 2022

مصدر: وزارة التعداد والسكان
مصر في أرقام 2022

Figure 10: Population report by governorate, by gender (19)

6.2 Hhealth services:

According to the survey regarding the standards of medical services (Figure 8), the necessary and available numbers are claimed and claimed to analyze the comparison and comparative analysis. This model is the number of health units, the requirements of which are determined based on the population size and scope of service distribution. Using the attached table issued by the General Authority for Statistics for the population size in each governorate and the number of health centers and units in each governorate (Figure 9-10), we note the following:

- We discovered that the benefit productivity rates change from one governorate to another. We discovered the most noteworthy level of effectiveness in ranges with low population density, such as the Ruddy Ocean, the Sinai

Peninsula, and South Sinai

- We note and conclude the difference and lopsidedness in the wellbeing benefit scope within the critical and most populated governorates. Cairo accomplishes 70.30% scope and Alexandria 48.72%. We note the significant imbalance.
- The lowest rates are in Fayoum Governorate 10.55% and Qena 16.95% (Figure 11).

From the above, we note the imbalance in the distribution of health services across the governorates. These services are considered one of the most important aspects of quality of life, reflecting the pressure on major governorates, such as Cairo, to compensate for the shortage in other smaller governorates. This reduces the efficiency of service in these governorates.

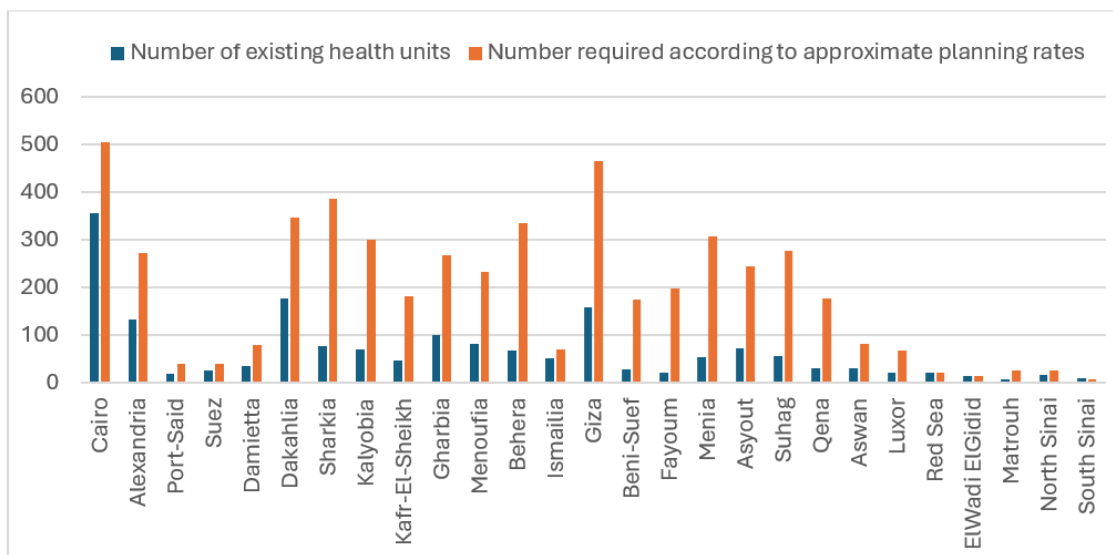


Figure 11: Graph showing a comparison between the number of required health units and the number of existing units - Source: Researcher

6.3 Sports and youth services

Agreeing to the associated table of planning benchmarks for passing on the number of clubs and youth centers concurring to masses (Figure 12) and the scope of scattering, we find that by comparing the populace concurring to the Central Agency for Open Mobilization and Insights report for each governorate with the number of sports clubs, we find that the benefit proficiency rates shift from one governorate to another. Through a comparative investigation between the services that ought to be accessible based on population and those that exist (Figure 13), the taking after gets to be clear:

- The lowest service coverage rate is in the major governorates of Cairo and Alexandria.
 - Through analysis and study, we conclude that the most efficient governorates in sports services are the coastal governorates, including the New Valley, South Sinai, and the Red Sea.
- These are illogical rates, making it necessary to refer to the agency to verify the accuracy of this data. A study of the statistics authority's reports revealed that the increased efficiency of youth and sports services in these ranges comes about from the incorporation of private clubs in tourist zones.

City	Population	Number of Existing Clubs	Number of Required Clubs	Service Efficiency	Number of Existing Youth Centers	Number of Required Youth Centers	Service Efficiency	Overall Efficiency
CAIRO	10 100 166	68	505	13%	92	253	36%	25%
ALEXANDRIA	5 469 480	89	273	33%	45	137	33%	33%
PORT SAID	783 433	18	39	46%	23	20	115%	81%
SUEZ	778 970	9	39	23%	23	20	115%	69%
DAMIETTA	1 593 610	13	80	16%	101	40	253%	134%
DAKAHLIA	6 930 797	33	347	10%	430	174	247%	128%
SHARKIA	7,744,815	31	387	8%	377	194	194%	101%
KALYOBIA	6 024 438	21	301	7%	206	151	136%	72%
KAFR EL SHEIKH	3,645,111	23	182	13%	244	91	268%	140%
GHARBIA	5 343 756	21	267	8%	282	134	210%	109%
MENOUFIA	4 640 003	35	232	15%	285	116	246%	130%
BEHERA	6 723 269	22	336	7%	381	168	227%	117%
ISMAILIA	1 419 631	31	71	44%	113	36	314%	179%
GIZA	9 323 196	31	466	7%	210	233	90%	48%
BENI- SUEF	3 492 903	20	175	11%	187	88	213%	112%
FAYOUM	3 970 083	26	199	13%	138	100	138%	76%
MENIA	6 148 074	20	307	7%	164	154	106%	57%
ASYOUT	4 903 763	23	245	9%	170	123	138%	74%
SUHAG	5,547,268	39	277	14%	176%	139	127%	70%
QENA	3 531 018	16	177	9%	183	89	206%	107%
ASWAN	1 614 967	37	81	46%	194	41	473%	259%
LUXOR	1,364,640	16	68	24%	110	34	324%	174%
RED SEA	393,551	27	20	135%	19	10	190%	163%
ELWADI ELGIDID	261 167	12	13	92%	92	7	1314%	703%
MATROUH	520 459	23	26	88%	96	13	738%	413%
NORTH SINAI	496 386	12	25	48%	70	13	538%	293%
SOUTH SINAI	113,795	6	6	100%	24	3	800%	450%

Figure 12: Shows the number of residents, the services that must be provided accordingly, and the services actually available(19).

Sports Services			Local Services			Central Services			Regional Services						
			Open playgrounds (C)	Open playgrounds (B)	Club (C)	Open playgrounds (A)	Club (B)	Club (A)	Stadium (B)	Gifted schools	Stadium (A)	Athletes' hotel	Sports medicine unit	Sports development center	Olympic village
Maximum Service Capacity (Person/Day) (in thousands of people)			0.2	0.4	10-20	0.6	25-50	50-100	25-40	0.3-0.5	70-100	0.2	0.1-0.3	5-10	5-7
Location in relation to roads			Branch	Branch	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main	Main
Existing communities and areas	Total site area (in acres)	Minimum	0.75	1	5	2	6	30	50	10	75	0.5	0.25	15	40
		Maximum	1.5	2	10	4	12	50	100	20	150	1	0.5	20	80
	Percentage of built-up area (%)	Minimum	5	5	15	5	15	15	25	25	25	40	40	25	25
		Maximum	10	10	20	10	20	20	40	40	40	60	60	40	40
New communities and areas	Total site area (in acres)	Minimum	1.1	1.25	7.5	3	8	45	70	15	100	0.75	0.5	21	50
		Maximum	2.2	3	15	6	18	90	140	30	200	1.5	0.75	25	100
	Percentage of built-up area (%)	Minimum	5	5	15	5	15	15	25	25	25	20	20	25	25
		Maximum	10	10	20	10	20	20	40	40	40	40	40	40	40

Figure 13: Standards and guiding planning requirements for sports services (17)

For illustration, in Matrouh Governorate, we discover that there's as it were one government club compared to 11 private clubs, as expressed within the connected table issued by the Central Agency for Public Mobilization and Statistics, which reflects the imbalance, as the private clubs specialize in serving tourist areas and a specific class and type of residents of the city or

governorate, while the government clubs serve all residents at all levels, which reflects the lack of public government services for the residents of the governorate. (Figure 14)

To begin with, both instructive and well-being services were chosen as the targets of the third and fourth Sustainable Development Goals and compared to begin with. When considering and

analyzing educational services, one of their components, the number of students per class, was chosen for the primary education stage. Health

services were analyzed, and the number of wellbeing units

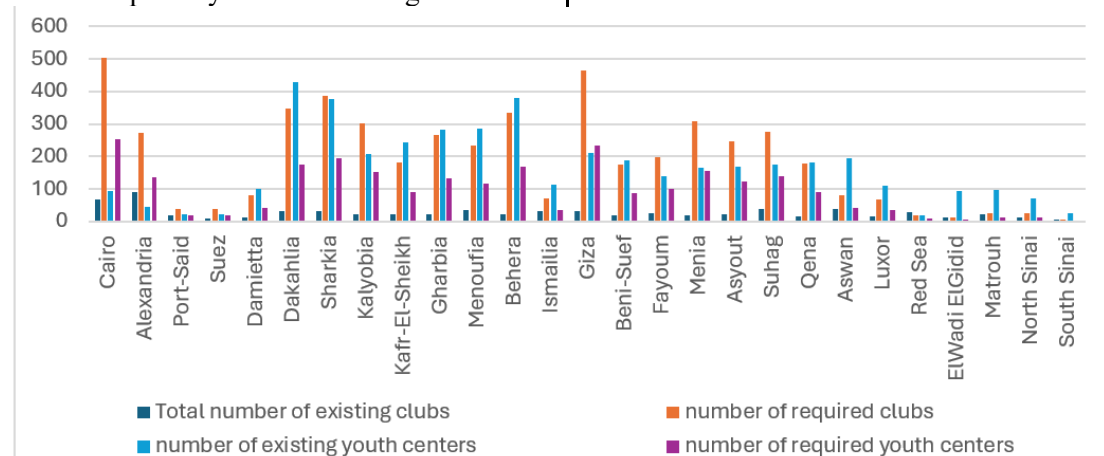


Figure 14: Population report and Number of sports facilities by governorates - Source: Researcher

containing beds was chosen from the health service components that contain beds. The degree of scope of the two services combined for the populace at the city level was concluded. By considering and analyzing the connected table (Figure 15), which was communicated through the chart (Figure 16), we were able to decide the degree of service scope proficiency at the governorate level, determine its percentage, and compare it. For comparison, we find the following:

effectiveness in service scope for the urban agglomeration are those with tourism exercises, such as South Sinai, taken after by scantily populated and farther governorates, such as the New Valley, at that point the Red Sea governorates, all of which surpass 100%, and North Sinai at 93%.

- The governorates with the most diminished service scope rates, not outperforming 50%, are Fayoum and Minya.

- The governorates with the most noteworthy

CITY	EDUCATIONAL SERVICES	HEALTH SERVICES	AVERAGE SERVICE COVERAGE
CAIRO	93%	70.30%	82%
ALEXANDRIA	82%	48.72%	65%
PORT SAID	104%	46.15%	75%
SUEZ	94%	66.67%	80%
DAMIETTA	90%	43.75%	67%
DAKAHLIA	82%	51.30%	67%
SHARKIA	84%	19.90%	52%
KALYOBIA	78%	23.59%	51%
KAFR EL SHEIKH	85%	25.82%	55%
GHARBIA	81%	37.83%	59%
MENOUFIA	82%	35.34%	59%
BEHERA	81%	20.24%	51%
ISMAILIA	91%	73.24%	82%
GIZA	75%	34.12%	55%
BENI- SUEF	83%	16.00%	50%
FAYOUM	79%	10.55%	45%
MENIA	81%	17.59%	49%
ASYOUT	79%	29.80%	54%
SUHAG	85%	20.22%	53%
QENA	87%	16.95%	52%
ASWAN	92%	38.27%	65%
LUXOR	104%	29.41%	67%
RED SEA	106%	100.00%	103%
ELWADI ELGIDID	139%	100.00%	120%
MATROUH	97%	30.77%	64%
NORTH SINAI	122%	64.00%	93%
SOUTH SINAI	155%	166.67%	161%

Figure 15: Comparison and compilation table of health and education service coverage and their impact on quality of life in governorates- Source: Researcher

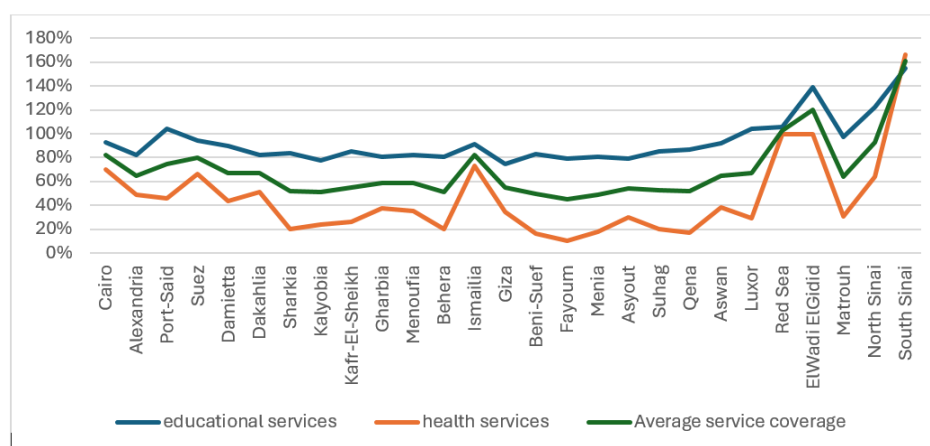


Figure 16: Graph showing a comparison of health and education services at the governorate level - Source: Researcher

Chart showing a comparison of health, education, and sports services at the governorate level. There are moreover numerous governorates with service coverage rates that don't surpass 60%, counting Beni Suef, Qena, Sohag, Assiut, Beheira, Menoufia, Qalyubia, Sharqia, Gharbia, Kafr El-Sheikh, and Giza.

- The capital, Cairo, achieves 82%, which is a good rate. It's too shocking that in spite of its significance as a major governorate, Alexandria as it were accomplished a 65% benefit scope effectiveness rate

- By posting these rates, we find that the number of governorates that finish To a few degree, normal rating is 8 governorates, of which because it were Cairo is the capital. The remaining governorates have small populations and are not considered population attraction governorates.

- The number of governorates that achieve average ratings is 6 governorates, including important governorates with large populations, such as Alexandria and Giza.

- The number of governorates with the fewest evaluations and exceptionally destitute evaluations is 13 governorates, which could be an exceptionally expansive number, particularly since they include nearly all of the Upper Egypt governorates. This reflects the poor quality of life there, which makes

them population-repellent governorates, showing disdain toward their locational potential and their traveler and common resources.

Second: By counting youth services (Figure 17) and comparing the three service tomahawks: instruction, prosperity, sports, and youth for each governorate to reach the quality of life in each governorate, to reach the quality of life in each governorate, we conclude the taking after:

- The cities that fulfilled the foremost essential capability, over 100 %, are the New Valley Governorate , which has advanced over South Sinai. At that point came Matrouh Governorate, which did not development interior the case of teacher and thriving services, at that point North Sinai, Aswan, the Red Sea, and Luxor. Figure 18
- There are no governorates with less than 50 %, but Giza, Fayoum and Minya governorates are still the smallest.
- Cairo Governorate has reduced its effectiveness, as has Alexandria Governorate.

From this, we find that the addition of youth services did not significantly change the quality of life across all cities, but it did not significantly change the ranking of best or least efficient.

The city	Efficiency of educational services	Efficiency of health services	Efficiency of sports and youth services	Average service coverage
CAIRO	93%	70.30%	25%	63%
ALEXANDRIA	82%	48.72%	33%	55%
PORT SAID	104%	46.15%	81%	77%
SUEZ	94%	66.67%	69%	77%
DAMIETTA	90%	43.75%	134%	89%
DAKAHLIA	82%	51.30%	128%	87%
SHARKIA	84%	19.90%	101%	68%
KALYOBIA	78%	23.59%	72%	58%
KAFR EL SHEIKH	85%	25.82%	140%	84%
GHARBIA	81%	37.83%	109%	76%
MENOUFIA	82%	35.34%	130%	82%

The city	Efficiency of educational services	Efficiency of health services	Efficiency of sports and youth services	Average service coverage
BEHERA	81%	20.24%	117%	73%
ISMAILIA	91%	73.24%	179%	114%
GIZA	75%	34.12%	48%	52%
BENI- SUEF	83%	16.00%	112%	70%
FAYOUM	79%	10.55%	76%	55%
MENIA	81%	17.59%	57%	52%
ASYOUT	79%	29.80%	74%	61%
SUHAG	85%	20.22%	70%	58%
QENA	87%	16.95%	107%	70%
ASWAN	92%	38.27%	259%	130%
LUXOR	104%	29.41%	174%	102%
RED SEA	106%	100.00%	163%	123%
ELWADI	139%	100.00%	703%	314%
ELGIDID	139%	100.00%	703%	314%
MATROUH	97%	30.77%	413%	180%
NORTH SINAI	122%	64.00%	293%	160%
SOUTH SINAI	155%	166.67%	450%	257%

Figure 17: Comparison and compilation table of health, education, and sports services at the governorate level - Source: Researcher

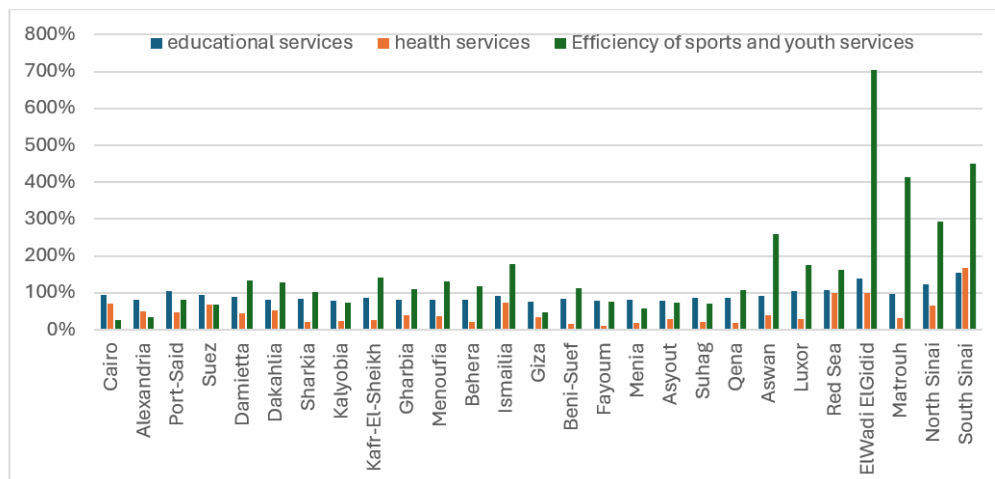


Figure 18: Chart showing a comparison of health, education, and sports services at the governorate level - Source: Researcher

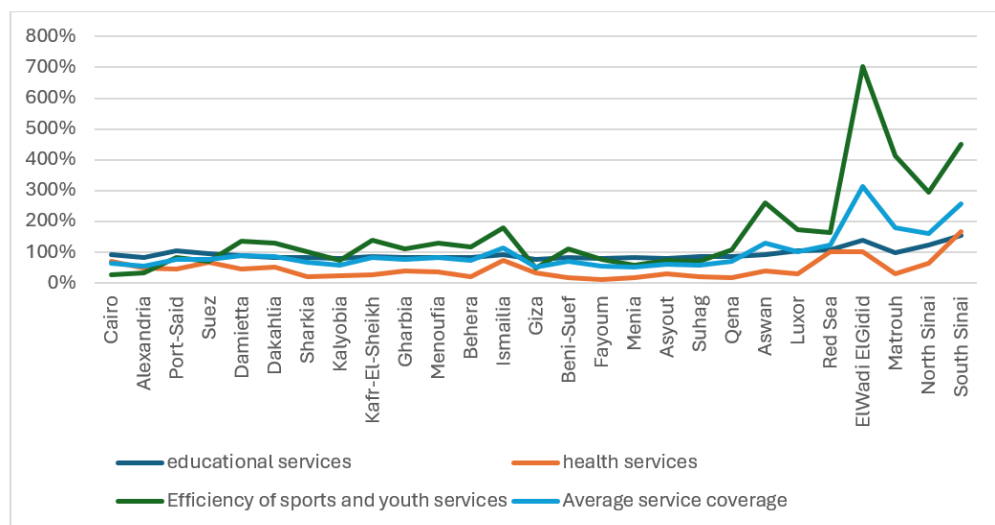


Figure 19: Chart showing a comparison of health, education, and sports services and Average Efficiency of Aggregate Services at the governorate level - Source: Researcher

Results:

By looking into the importance of services, the different kinds of services, and how they help improve the quality of life, which is a key goal of sustainable development, To get a detailed and accurate evaluation of how well these services are covered and spread out, we used, examined, and looked into reports from the Central Agency for Public Mobilization and Statistics (CAPMAS). This agency is officially recognized by the state and provides data on the number of services in different governorates, along with population figures, among other important information. published in periodic booklets by the agency. These data were compared with the Planning Rates Guide for Educational, Health, Youth, and Sports Services, which was prepared by the General Authority for Urban Planning as a primary reference for determining the number and distribution of various services at the level of various urban communities, based on each service and the population's needs. This research can help experts in making future plans by using data to create a clear picture of how development projects and their different areas might look in the future. Through our study, this was used in three main areas of service that are key to improving people's quality of life. These areas are linked to both the third and fourth goals of the United Nations' sustainable development.. The research especially focused on health and education, as well as the eleventh goal, which deals with making cities sustainable, having good services, green spaces, clean air, and cultural offerings, which are available in youth and sports services. A detailed analytical study has been prepared by comparing the available services according to their type and what should be available according to the planning rates to reach the rate and percentage of coverage of those services in the cities where they are available, of course based on the data from the Central Agency for Public Mobilization and Statistics, The most recent version, from December 2020, and the planning rates guide created by the General Authority for Urban Planning, which was published in 2014. From the above, we have reached a set of results that include:

- The proficiency of a few administrations in major cities despite the population density, such as Cairo and Alexandria, and their rise in other governorates despite their smaller populations.
- The productivity of educational organizations is otherworldly compared to that of success

and sports organizations in most governorates. This can be a result of back from private instruction, which covers an extensive number of students. Subsequently, counting the private section in giving fitting educator administrations that fulfill the fitting level of advantage for levels may be an extraordinary arrangement.

- The high efficiency of sports services in tourist governorates is an indicator that lacks analysis, as it results from calculating private facilities, but government facilities do not achieve appropriate coverage, which is what was confirmed from the detailed data of the sports and youth services sector.
- Some cities enjoy an excellent rate of quality of life as a result of the coverage of educational, health, and sports services, although they are not considered cities that attract residents. In contrast, major cities such as Cairo and Alexandria are cities that attract residents, but they lack good coverage of services, which is what must be studied and analyzed, and a solution must be found that balances the reasons for attraction to these cities and attempts to benefit from them in other cities as an attempt to reduce pressure on major cities and the fair distribution of population and then services.
- The lack of unified national standard indicators to assess the minimum efficiency of urban service distribution to identify the city's most in need of inclusion in future development plans.
- Depending on data without examination, comparison, and conclusions leads to an ungainly nature in future urban organizing.
- The requirement for coordination between the critical parties in collecting, analyzing, and organizing information.

Research Recommendations:

After checking the services that are currently available and those that should be provided, based on reports, statistics, and a study conducted in various cities across Egypt, we found some differences, with their varying geographic locations, populations, and economic levels, and by studying the social and economic factors surrounding these cities, resulting from their location and various economic activities, social and economic contradictions contribute to the unequal distribution of services. Even though areas with lower income levels have fewer opportunities

to access high-quality public services, this exacerbates the general sense of inequality among residents of these areas. Because of this, they move to cities where there is more money and better job opportunities. This has led to unexpected results in analyzing the quality of services and comparing these cities to each other. Through our study, we also concluded the importance of preparing a detailed strategic plan to address these issues. Urban planners should focus on achieving spatial equality and announcing the results of studies on the quality of services to the population to ensure the appropriate distribution of the population across the various governorates. This is to achieve the important goal of ensuring equitable access to public services for all urban residents. To reach this goal, we should know the good and not-so-good parts of each area and make rules that help share resources in a fair way. Finding out what services people believe they need and how well those needs are being met can give important information that helps improve city services. From the above, we find several major problems related to urban service distribution. To deal with these challenges well, you need to figure out what the problems are and come up with good solutions. Therefore, governments can adopt strategies such as:

- Empowering community interest in deciding urban benefit dissemination needs and executing a participatory planning approach, by coordinating the community into the arranging process to guarantee that its genuine needs are met.
- Adopting a unified quantitative evaluation model at the national level to measure the efficiency of urban services distribution for use in plans.
- Analyzing and comparing data from the Central Agency for Public Mobilization and Bits of knowledge, and drawing conclusions and proposals that are utilized in urban development plans regularly.
- Center on fulfilling spatial value, and not only that, but reasonable operational efficiency also when spreading services. The fair distribution of services is important for the fair distribution of the population at the state level and at the level of each city individually.
- Embracing advanced innovation, such as geographic data systems, to improve planning efficiency and guarantee a reasonable and present-day conveyance of services. Using geographic information systems (GIS) to display and examine gaps is important for government groups such as urban planning, managing public services, building infrastructure networks, and improving the quality of services.
- Redistributing government expenditures in a way consistent with the estimated improvement hole between governorates. Consideration must be given to governorates that need administration and accomplish the lowest rate of the scope of essential administration.
- The need to create coordination committees between local neighborhoods and central authorities to check how effectively advantages are used and how they move in space, to organize unplanned areas to achieve a better and more logical distribution of benefits.
- The need to develop the idea of decentralization in organizations so they can better serve local communities and create value that works for different groups.
- Counting the tomahawks, goals, and signs of progress towards sustainability within the tools used to evaluate and track the implementation of urban plans each year, so that the results are accurate and quick to obtain.
- The need to accomplish an alter between open and private services to ensure break indeed with get to for all segments of the masses.
- Connecting urban services markers specifically to the objectives of Egypt Vision 2030 in each city.
- Organizing yearly follow-up reports for each governorate to assess the changes in the range of benefits and the quality of life.
- Separating financing components by enabling support between the open and private sections, which we find compelling in some organizations, such as educator administrations, and which may reinforce a few other services to achieve a palatable level of quality of life.

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