

THE IMPACT OF INFRASTRUCTURE DEVELOPMENT FOR A CIRCULAR ECONOMY: THE CASE OF SUSTAINABLE DEVELOPMENT OF IRAQ

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ABSTRACT:

The infrastructure is one of the great important sectors in countries as it has become a measure of the extent of development of these countries and its effects on the state in general and the economy in particular, and the issue of economic growth and creating opportunities, because of its clear reflection on economic stability. Economic development without tangible progress in the initial quality and presence of infrastructure.

Therefore, the aim of this paper is to classify the concepts of both infrastructure and economy, and we will see how they have a direct impact on the country, the approach of this paper will start from the most important part or the largest part of the infrastructure which support the country and create part of the economy or the vision for the future of Iraq, and in the end the results of this The paper provides some analysis and diagramming strategies for these elements which will support our objectives in the paper.

KEYWORD: *infrastructure, economy, development, transport investment.*

1.INTRODUCTION

The importance of infrastructure is great for the country and this can be seen through the direct impact that it leaves on the country in general and the economy in particular, specifically the issue of economic growth and the generation of opportunities, due to its clear reflection on economic stability. Economic growth and the generation of opportunities are reflected in economic stability, without tangible progress in the quality of the infrastructure as well as its presence in the beginning.

The World Bank released its report titled "The Lifeline: The Opportunity for Resilient Infrastructure" on June 19, 2019, to signify its importance, and considers it "the essence of life and the pillar of livelihoods, and it can improve the work of schools, hospitals, business and industry, as well as opportunities to find jobs and achieve prosperity." As the president of the World Bank Group says. The main problem of this paper to explain and prove that how is the infrastructure in Iraq has direct impacting on the economy and we want to make this point more clear to the Iraqi government instead of their depending on the oil industry only, may researcher did about the infrastructure and the economy and the relations between them and they reached that there are many points have impact on each other, my contribution in this paper to make this problem more clear by considering some analysis and classifying the elements of this paper one by one which I did already and I reached to main goal of this paper and I proved that the infrastructure is very important and it has impact on the economy of Iraq.

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2. INFRASTRUCTURE OF IRAQ

At a time when Iraq suffers from the significant damage to infrastructure, which is reflected in the high deprivation of families from their services, as their deprivation rate reached 58.95% in 2010, and this percentage is very high by international standards(1).The Iraq's economy suffers from the dichotomy of oil and the state, which has negatively affected infrastructure and finally economic stability, as the economy's dependence on oil and neglecting other sectors means generating more unemployment, which has taken on frightening numbers from 10% to 40%, especially since its industry is an industry. It is capital intensive and not labor intensive, as 1% of Iraqis work in the oil sector in exchange for its revenues, which constitute 99% of government revenues (2). It is necessary to refer to the remarkable change in the infrastructure of Iraq, such as the change in the electricity sector, transportation, bridges, railways, and airports, but the Iraqi government still has a lot of work and investment in these sectors in line with the rapid growth of the population (3). After the war of 2003 The Iraqi government decided that the first Coalition Provisional Authority (CPA) reconstruction plan had four 'pillars': justice, security, governance, and infrastructure. For infrastructure it involved big money being poured into hundreds (and eventually thousands) of projects. The concept was that, with a repaired infrastructure, the economy would recover and grow naturally (4) , from her the Iraqi government it's start to recognize that the infrastructure is one of the good source to the economy beside the oil for few years only because the corruption and the war after 2003 make the government and the country focus only on the oil industry but they took in consider that the developing in the infrastructure of Kurdistan religion (north of Iraq) is became one of the main source of their economy and they did the plan for many projects to rebuild and develop the infrastructure but the non-secure case make the projects and the investors to not start now.

3. THE INFRASTRUCTURE LEAD TO ECONOMIC STABILITY

The infrastructure in developing countries or countries that are subjected to many wars or exceptional circumstances that would tempt the permanence of this infrastructure or limit its maintenance or even its development will be in the focus of attention of investing countries or even international companies interested in investing in such sectors. Therefore, these investments play a big role in that country, where when the infrastructure is integrated and of high quality and reasonable prices, this will be reflected in many things, down to the prices of goods, services and job opportunities in that country, and this in turn drives the economic wheel in that country and achieves the economic stability of the country and same case as a negative result if the country was facing problems as wars or deferent things which make the investors don't have the desire to come and start their investing . Infrastructure is beneficial for both businesses and households and for the economy broadly. For businesses, infrastructure can help to lower fixed costs of production, especially transportation costs, which are often a central determinant of where businesses are located (5).

4. INVESTMENT PROJECTS OF INFRASTRUCTURE

After the last war in 2014 which was for three years the government recognize and decided that must put a plan and make other resources for the income, there are many investment and project some of them thy are start to do on the reality and the rest of them only on paper:

4.1. Health sector's status and development:

Health indicators is of great importance to growth, standard of living and human capacity building. It is well known that the health status of the people in any country is considered as a main factor in the economic growth of the country. In Iraq, the Ministry of Health is in charge of determining the health level within a large system of hospitals and different medical clinics in addition to the private health

sector represented by private hospitals and private medical clinics, Number of hospitals in Iraq (public and private) till 2018 is 380 hospitals and 1620 healthcare center (except KRG)(6)

Table 1. Investment opportunities in health sector announced by the MoH

No.	Project name	Achievement rate	Province
1	400 – bed hospital	%30	Wasit
2	200 – bed hospital	%56	Anbar/ Haditha
3	300 – bed hospital	%29	Karbala
4	200 – bed hospital	%17	Baghdad/ Al Husaynia
5	400 – bed hospital	%25	Kirkuk
6	400 – bed hospital	%26	Al Muthana
7	100 – bed hospital	%37	Saladin/ Samara
8	100 – bed hospital	%30	Saladin/ Dejal
9	100 – bed hospital	%30	Saladin/ Tooz

Moh letter no. 73629 in 16/2/2018

Source: National Investment Commission (2019)

No	Project's Name	Type of Investment Opportunities	Province
1.	Specialized cancer treatment center	New	Baghdad, Al Karkh and Al- Rusafa
2.	Arabic Child Hospital in Al-Karkh (50 beds)	New	Baghdad/ Al-Karkh
3.	3-4 Drugs and medical appliances factory.	New	Baghdad, Al Karkh and Al- Rusafa
4.	2 Sterility and fertility hospital	New	Baghdad in Al Karkh and Al- Rusafa
5.	2 Specialized ophthalmology hospital	New	Baghdad, Al Karkh and Al- Rusafa
6.	1 Specialized cardiac surgery hospital	New	Baghdad, Al Karkh and Al- Rusafa
7.	2-3 hydrogen peroxide (pure O ₂) Plant	New	Baghdad, Al Karkh and Al- Rusafa
8.	2 Complete medical city	New	Baghdad, Al Karkh
9.	4 General hospitals, capacity: 50 bed each	New	Baghdad, Al-Karkh and Al- Rusafa
10.	4 Specialized medical centers, capacity: (20 bed or more)	New	Baghdad, Al-Karkh and Al- Rusafa
11.	Joint venture with international companies' hospital management and other medical fields	Contracting with specialized companies to open new hospitals in Iraq	Baghdad, Al-Karkh and Al- Rusafa
12.	Extra governmental hospitals to be submitted as an investment opportunity	Contracting with specialized companies to open new hospitals in Iraq	Baghdad, Al-Karkh and Al- Rusafa
13.	1 General hospital capacity: (100 beds) area 2 dumun	New	Wasit/ Kut city center
14.	1 Specialized Heart and Blood Vessels Surgery	New	Wasit/ kut
15.	1 Specialized gynecology Center	New	Wasit/ kut
16.	1 Specialized Infertility and IVP (Tube Baby) Center	New	Wasit/ kut
17.	1 Specialized ophthalmology Surgery hospital (50 beds)	New	Wasit/ city center
18.	1 Specialized oncology Center	New	Wasit/ city center
19.	General hospital 100 beds	new	Wasit/ Swaiyra
20.	1 Specialized in Laparoscopic surgery and laser center	New	Wasit/ Kut
21.	1 Specialized Plastic Surgery Center	New	Wasit/ Kut
22.	1 Complete Medical City	New	Wasit/ Kut
23.	Medical Supplies and drugs Plant	New	Wasit/ Swaiyra- Kut
24.	1 General hospital 1000 dunum	New	Holy Najaf

No	Project's Name	Type of Investment Opportunities	Province
25.	1 General hospital plot 25/2738 m5 Um Abasyat (10 dunum) Al Shafiya	New	Al-Diwaniah
26.	1 General hospital plot 18/4105 m18 Sadir Al Yousfiya (4 donum) Ifak	New	Al-Diwaniah
27.	1 General hospital capacity: plot 21/14 m2 Al Hebsa 6 dunum	New	Al-Diwaniah
28.	Specialized Major Surgery Center (cardiac & blood vessels, neurosurgery, oncology)	New (estimated cost \$5 million, 4000m ² area in the commercial zone in Ramadi	Anbar
29.	Medical equipment, Stethoscope medical beds, gauze, medical cotton, bandage, wheelchairs for people with special needs and handicaps, all kinds of tubes used for laboratory samples, blood pressure monitor, all types of needles, medical waste containers , blood transfusion equipment, temperature gauge, etc.)	New	Anbar

Table 2. Investment opportunities in health sector announced by the provinces

Source: National Investment Commission (2019)

4.2 Housing and infrastructure sector

Economically speaking, housing is a very vital sector for the important roles it plays in the formation of the fixed capital, generating incomes and creating job opportunities and through the connection with other activities. Many countries which enjoy financial surpluses go to maximizing the role of this sector, in other words considering it as a producing sector.

The Government of Iraq granted the private sector and the foreign investor the enabled role that may achieve touchable results in the housing production field by providing the lands suitable for housing purposes which will contribute to treating the problem of the residential slums and expanding in manufacturing the construction materials, taking into consideration the average growth of the Iraqi population and the fact of the need of 2 million housing units (6).

Table 3: Investment opportunities in health sector announced by provinces.

Province/ Region	Number of units
Anbar	45 thousand units
Babylon	54 thousand units
Baghdad	224 thousand units
Basra	80 thousand units

Province/ Region	Number of units
Diwania	35 thousand units
Diyala	43 thousand units
Holy Kerbala	31 thousand units
Kirkuk	40 thousand units
KRG	140 thousand units
Maysan	31 thousand units
Muthana	22 thousand units
Holy Najaf	37 thousand units
Nineveh	101 thousand units
Saladin	39 thousand units
Thi Qar	58 thousand units
Wassit	36 thousand units

Source: National Investment Commission (2019)

4.3 Transportation sector

This sector is characterized by a big contribution of the local and foreign private sector and investments in implementing and operating lots of its projects. The contribution of this sector to the GDP in the fixed prices was approximately %7.8 for the year 2018, Iraq has planned to exploit its special geographic location in developing the transport sector in all its branches (land, maritime and air), the matter that will help in achieving the economic growth and creating lots of job opportunities in the international commercial businesses especially when developing the sector's infrastructure which will result in diversifying revenues and providing better services to people and all users(6).

As we can see in these tables the Iraqi government, they have the plan for all the sectors specially for the infrastructure sector because the state to see and notes that must be other sources for the income and should establish a strong based to make the economy with balance.

5. CONCLUSIONS

The Iraqi government recognized after many wars that must they establish other sources instead the oil sector. Beside that They notes that there are two things make the investment and the projects difficult to start and work with because the country is not secure for the investors for that the Kurdistan region is more develop than another place in Iraq. Moreover, they consider the infrastructure sector is one of the main sources for the economy in Iraq, In the end of the conclusions There is direct impact between the infrastructure and the economic stability in Iraq Depending on what was presented in the plans and project lists.

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