

# Major National Projects as Development Poles and Their Impact on Urban Development

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**Abstract** –The national projects of all levels, patterns and classification are an urgent and inevitable necessity, which is the hope of Egypt to rebuild the abandoned space, re-exploit its resources and potentials, solve the problem of regional disparity, achieve balance between the regions of the republic and attract new urban communities. In the light of national projects, a new urban map is drawn and to know the developmental role of major national projects, it is necessary to measure the ability of these projects to attract urbanization so that we can promote these projects and properly evaluate the decision to direct investment to them. - Concentration) According to the strategy of urban development with its two main axes, a set of standard criteria was used, and each criterion includes a set of variables. Applied statistical equation to measure the polarization capacity of the new city of El Alamein and stand on its developmental return on the urban map.

**Key words**– Major National Projects - Regional National Projects - Local National Projects - Development Pole - Growth Point - Polarization

## I. INTRODUCTION

The major national projects are Egypt's vision in investing its different resources. It helps in spreading the urban development with its central concepts, measuring the ability of these projects to attract the urbanization and making the development and investment index in its comprehensive concept as a determinant of the priorities of starting these major national projects and expanding them to achieve a higher level. This leads to re-drafting the national urban map of Egypt.

## II. THE PROBLEM

In spite of what the Egyptian state is witnessing from a strong impetus and a developmental boom in national projects, the aim of which is to achieve the developmental return at the national level, there are still problems and variations in the regional development rates reflected in the phenomenon of (regional disparities), as a result of the absence of employing the developmental returns of these projects in the development of national projects. By measuring the extent to which these projects can actually attract urbanization to assess the direction of investments for these projects.

## III. OBJECTIVES

The research aims to identify the national projects at all levels of planning, and to identify the major projects, including poles of development, and identify the elements of their success and determine the return on development by measuring their polarization capacity by determining the factors affecting the ability of national projects to urban polarization? And how to measure the polarization of the urban capacity of national projects, which in turn reflected on the spread of urban development throughout the Republic.

## IV. THE MAIN AXES

*The first axis: basic concepts*

*Classification of development projects according to the planning level:* To identify the levels of national urban development projects, we find that they fall under three levels related to the administrative division of Egypt (administrative economic rather than developmental), which differ from each other in terms of (project size, beneficiaries, investment return, geographical scope and level of development), <sup>(1)</sup> they are:

- National projects.
- Regional projects.
- Local projects.

*The concept of major national projects:* includes a set of concepts (concepts - characteristics)

**Major national projects:** A group of projects that the state establishes sponsors and provides the necessary investments, with the tendency to attract investments from the private sector to various economic activities (agriculture, industry, mining, tourism, urban and rural development). To include more than one governorate, to achieve parallel development between the various regions of the governorates of Egypt, during a timetable of up to twenty years <sup>(2)</sup>.

**Regional projects:** This is concerned with the level of regional projects, which are raised through the level of regional planning at the provincial level, we find that they differ from the previous level of the highest level, which are projects at the national level; where overlap within the limits of development, and the return of projects; because there are projects working at both levels, It has an impact on the

national level. For example, the National Project for the Development of Sinai, in order to increase the productive capacity of it in accordance with the requirements of the current and future governorate<sup>(3)</sup>, such as (the development of the province of Assiut within the scope of the development of the Central Upper Egypt).

*Local development projects:* primarily concerned with social service projects, which are held at a limited spatial level, such as the level of rural communities and neighborhoods, usually with the contribution of the local community (e.g., strategic plans for small and medium cities).<sup>(4)</sup>

*Characteristics of major projects:* The main characteristics and dimensions of major projects are summarized as follows:

- Attract human potential and support loyalty and belonging.
- Making a qualitative leap in development rates.
- The spatial dimension is to balance the pattern and distribution of investments.
- Time dimension .This dimension is to achieve a national goal of production through the future weight of investments.
- Diversified areas of development. This is achieved through the pursuit of comprehensive and integrated development projects.
- Achieving vertical and horizontal development Vertical development comes with the creation of national projects
- The investment dimension The nature of projects between infrastructure and urban development and the corresponding social services and human development in addition to investments in agricultural, industrial, tourism and service development<sup>(5)</sup>.

*The basic concepts related to urban development:* It includes a set of concepts (development pole - growth point - polarization - common strategies for development), which includes a more detailed meanings integrated with them in order to reach the desired urban development through the settlement of a set of related activities With technical and economic relations in a homogeneous space and extend its developmental impact to the surrounding areas so that the growth and development of these areas and contribute to the acceleration of economic development and achieve national goals under the strategies of urban development.

The first is the proliferation strategy, the second is the concentration strategy and the third is the development poles strategy and the economic base strategy.<sup>(6)</sup>

*Growth Pole:* A set of activities that generate dynamic growth in the economy as a result of the interrelationships (front and rear) between it and Leading Industry<sup>(7)</sup>

*The Growth Point:* “It is endemic to a group of activities in a limited homogeneous space and its effects are limited and do not extend beyond the area where I am located.”<sup>(8)</sup>

*Polarization:* It is a group of phenomena that arise in a particular area enjoying geographical, economic, social and administrative advantages in order to gain the characteristics of attraction and influence in the surrounding areas so that they always turn to it.<sup>(9)</sup>

*Basis of classification of major national projects:*

Development projects have been classified into several categories as follows Figure (1):

- Classification of national projects according to the planning level as explained above.
- Classification of national projects according to project type.
- Classification of national projects according to project function and leadership activity.

*Classification of national projects according to the type of project:* National projects are usually shown through three types as follows:

- Pattern of national projects in the form of spots: the new administrative capital.
- Pattern of national projects in the form of Zonal areas (Zones): West of the Gulf of Suez.
- Pattern of national projects in the form of development circles (Corridors): axis of the Suez Canal. Figure(1):

*Classification of major national projects according to project function and leadership activity:* Major national projects aim to achieve one goal, and national projects can be divided according to the nature and function of the project. They have been classified as follows:

- Agricultural projects such as one and a half acres.
- Projects of an industrial nature such as the development project west of the Gulf of Suez and the city of Damietta mainly.
- Urban projects such as the new administrative capital project.
- Projects of a tourist nature such as the project of the new city of El Alamein.
- Projects supporting development such as (axes - energy projects - food projects ...), which had a clear impact and a noticeable impact on urban development through the establishment of a group of urban communities to serve these projects and their success and continuity. Figure(1):

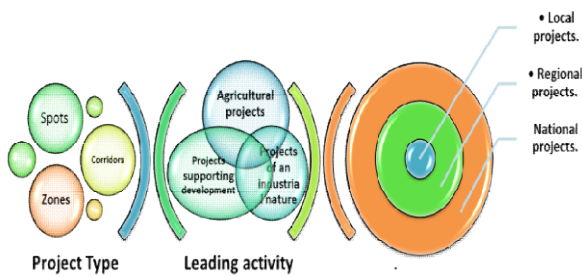


Fig.1 Levels of urban development projects

*Major national projects currently under consideration:*

The major projects presented in the previous period, of which a part came into operation, and the rest under study were handled through the regions where these projects are located, and according to the national plan for Egypt 2050, there are promising developmental areas dealt with in the national plan. <sup>(10)</sup> They are as follows:

1- Development of Suez Canal Region as a global logistics and industrial center (Phase I): It includes several projects including (East Port Said development project as container port and industrial zone, North West Gulf of Suez development project and AinSokhna hub port, Technology Valley project in Ismailia east of the channel, Axis development project) Suez (as a global logistics hub).

2. Sinai Development: This includes (industrial development in central Sinai, tourism development in South Sinai, reclamation of 400 acres on the canal of peace water, and the implementation of projects supporting development in North Sinai).

3 - Development of the North West Coast and desert back: Includes

- Establishment of the city of Million Alamein as a major regional development center.
- Complementing the North-West Coast and the Dahir of the Desert
- Development project of the Qattara lowland in Western Sahara
- Development and Reconstruction Corridor Project in Western Sahara.

4 - Development of the governorates of northern Upper Egypt: include (the establishment of transverse axes for development in Upper Egypt, and development projects based on them, the cultivation of 100,000 acres in the western Minya Plain (aromatic and medicinal plants)).

5- Development of southern Egypt, Nubia, Halayeb and Shalateen. South Upper Egypt includes:

- The project of reclamation of agricultural development in Toshka and Darb Al-Aryeen area.

- The development of the extractive and mining area in Safaga (Golden Triangle).
- Development project of Lake Nasser.
- Extractive Industries Development Project in Al Alaqi Valley, South Valley.

6- New projects at the national level.

- The proposed national road network 3200 km roads.
- The project of reclamation of one million acres within the plan of reclamation of 4 million acres.

7. Projects for national, regional and local transport.

- Desalination projects and the provision of new sources and rationalization of water consumption.
- Providing new and renewable sources of energy, such as solar and wind energy. According to the National Plan 2050 adopted in 2012, these previously observed regions are the most promising regions / areas of development on the Egyptian map with the potentials and development opportunities that are capable of leading the development of Heliopolis in the next phase. <sup>(11)</sup> Figure(2).



Fig.2 Major national projects proposed during the first phase 2012-20120 <sup>(11)</sup>

*Second Axis: Review of some international and regional experiences*

*North West Gulf of Suez Development Project:* The Gulf of Suez region was chosen to establish a special economic zone to correct the industrial zones and promote them towards production and export.

*Project Location:* <sup>(12)</sup>

The North West Bay Development Project is a development pole located 35 km south of the city of Suez on the west coast of the Gulf of Suez near the AinSokhna site at the intersection between the Cairo / AinSokhna road and the Suez / Zafarana highway. The first planning of the region in



its southern part was made into 4 economic sectors, each of which includes a heavy and medium-sized industrial zone and a main service center. The southern part of the area is 99.97 m, while the northern part includes 2 economic sectors such as heavy and medium industrial zones and it has two sub-centers connected to the southern part, 4 housing areas, 2 storage areas and 4 light industrial zones. A population environment of 1.6 million. The figure shows the master plan for the development of the West Gulf of Suez project and its industrial plant. Fig. (3)

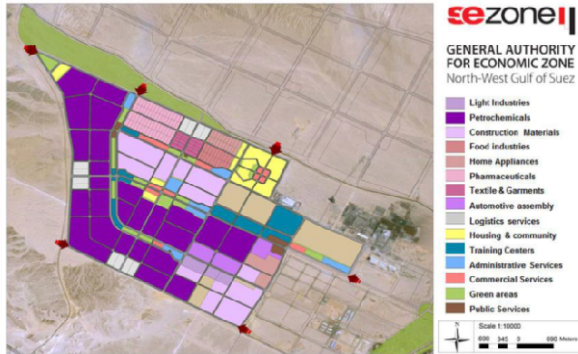


Fig.3 The outline of the development project for the West Gulf of Suez (Southern Region) <sup>(13)</sup>

The location of the project we find that it has the following:

- The possibility of establishing a distinctive hub port Ataqa, whether it is a commercial port or an advanced fishing port with all the necessary services, part of which was part of the first phase.
- The possibility of establishing an industrial zone that leads to the development and advancement of the local economy.
- The availability of an advanced infrastructure network in the region, which serves the industrial zone and the port and thus the urban gathering, which makes the region a magnet for the national and international framework.
- The presence of natural resources and resources such as limestone, dolomite, coal, petroleum and fisheries, which leads to the diversification of activities and raw materials, which generates a huge economic base to attract and settle manpower.
- The ability of the region to absorb the population increase through the expansion of the horizontal and vertical level as a result of the availability of infrastructure, as well as the opportunity to establish urban communities based on those economic activities characteristic of the land site and thus move a number of manpower to the project area as a result of the availability of employment opportunities up to 25000 opportunities, Expected to reach 360 thousand opportunities.

- Establishing a residential city to accommodate the resulting population increase.
- The availability of diversified economic activities in relative importance, which gives the opportunity for the emergence of the leading activity factor and its impact on the rest of the activities through the front and back relationships, and thus shows us the economic return from the region and thus the extent to achieve urban development and the relative importance of the region as shown in the table:

TABLE(1): SHOWING the REGIONAL MULTIPLIER CRITERION<sup>(1)</sup>

Type of activity Activity	Relative importance
Industrial activity	%86
Services and Port	%7
Fishing activity	%3
Tourism activity	%2
Urban Development	%2

Urban polarization capacity of the region for the other major national projects to indicate the priority of development and investment.

TABLE (2): NORTHWEST GULF of SUEZ PROJECT<sup>(14)</sup>

Variables	Phase I	Phase II
Careers	25305 jobs	360000 jobs
Targeted investments	18.38 million pounds	5.5 billion pounds
Annual income per capita	60,000 million pounds	14000 pounds
Area allocated for the project	200 km <sup>2</sup>	176.5 km <sup>2</sup> (industrial area)
		22.5 km <sup>2</sup> (Port)
The spatial distance from Cairo	169 km	
The spatial distance from Alexandria	399 km	



Fig.4 Proposed Master Plan for the Northwest Gulf of Suez <sup>(15)</sup>

*Panama Canal Hub* <sup>(16)</sup>

The importance of the site

The Panama Canal extends 8 km from the Bay of Limon on the Atlantic Ocean to the Gulf of Panama on the Pacific Ocean.

B- Function and characteristics of the project

The main resource of the Republic of Panama is a global corridor that follows the Suez Canal.



Fig.5 Panama Canal Axis <sup>(16)</sup>

*Main Activities on the Axis* <sup>(17)</sup>

The economy depends on the activity emanating from the waterway, on global and domestic trade, manufacturing and transport.

For most of the rest of Panama, the economy depends on agriculture

- Agriculture: is the mainstay of human activity in Panama and employs about 62% of the workforce
- Fishing: Shrimp is the most important production of the fishing industry in Panama, followed by anchovies.
- Manufacturing: About two thirds of manufacturing companies are located in the province of Panama directly west of the Canal.

*Urban development on the axis*

The nearby part of the Panama Canal is a center of constant urban activity and the rest of the country, consisting mostly of quiet rural areas and urban sprawl along the Panama Canal.

TABLE (3): INDICATORS of the DEVELOPMENTAL RETURN of the PANAMA CANAL AXIS on the REGION. <sup>(17)</sup>

Agriculture Sector	60 % of the total labor force in the region
Food Industry	60% of the manufacturing companies are concentrated in the province of Panama
local production	Increase in GDP (6.6%)
Urban Development	60% of urban agglomerations focus on the development axis

Urban development in Panama follows the economic and social forces by nature. The population and economic activities are concentrated on the axis of the Canal to develop the interior region.

*The ingredients of the success of national projects in urban development from previous experiences:*

From the above we draw several elements of the success of the national project according to the type of project, whether a project in the form of axes, regions or points as follows:

- Liaison with international interlocutors.
- Road network efficiency.
- Contact ports.
- Availability of railway network.
- Create developmental poles.
- Proximity to arable areas.
- Traffic in industrial zones.
- Proximity to tourist and archaeological areas.
- Proximity to new urban communities.
- To correspond to natural factors.
- Stay away from environmental risks and having a national strategy.
- Promoting practical aspects of research and studies.
- Efficient institutional framework for hub management.

V. THE DEVELOPMENTAL IMPACT OF NATIONAL PROJECTS ON THE URBAN MAP IN THE URBAN DEVELOPMENT PLAN FOR EGYPT

*Egypt Urban Development Strategy*

The urban development strategy is based on two positive axes that are commensurate with the nature of the Egyptian globe based in the valley and the delta.

□ The first axis in the long run: It aims to establish development poles in uninhabited areas such as desert areas,

which enjoy natural resources that can be exploited to rebuild these areas and attract the population and achieve economic profits, and in this direction began to establish national projects of industrial or agricultural nature or Commercial, and termed national land projects, taking into account the security strategy of the State. It also represents the establishment of a series of new cities around the valley and the Delta in successive generations, forming shia centers and attracting the population to alleviate the population density on the dark cities and preserve the agricultural lands and to become new cultural centers, which achieve stability, social balance and economic prosperity.

The second axis: upgrading the existing urban structure: through the preparation of general and detailed strategic plans for the Egyptian cities and villages, as well as the project of the urban areas of Kfour, Azab and hamlets.

Developmental return on national projects <sup>(18)</sup>

By analyzing the developmental role of the national projects represented in the axes and the national projects in all their classifications on the urban development and the urban map of Egypt so as to achieve the desired national goals, we draw the following:

□ Where Republican Decree No. 233 of 2016 was issued for the development of land on a number of 21 axes of roads that have been decided to be allocated for the benefit of the Ministry of Defense, which lies at a depth of 2 km on both sides.

(The General Authority for Urban Planning was commissioned to prepare strategic plans on the main development axes. Based on the State's plan for the planning and development of national projects, which were divided into three phases of time, about 10 priority development zones were identified: (Suez Canal development axis - the north-west coast range - the area of the low Qattara - the Western Minya plain - the Western Desert oases - development triangle Job Upper - golden triangle for mining - border triangle (Halayeb - Shalatin- Aburmad)) - Nubia and Lake Nasser - Toshka and East Owainat Figure (7):

It includes 8 development ranges as follows:(Suez Canal, Sinai, Delta, North West Coast, North Upper Egypt, Central Upper Egypt, South Upper Egypt, New Valley and Oasis, Central Capital Development Area)Figure (6).

The proposed national axes work on identifying a range of developmental scopes, so that each of the proposed development areas will spread urban development across all scales through national projects covering different sectors. (Northern oases).Figure (6).

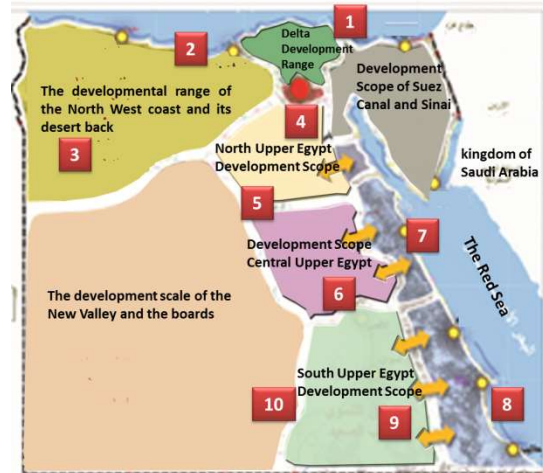


Fig.6 Identify areas of priority development and development scopes

National projects achieve the urban balance of the urban map and justice in the distribution of the population in terms of being a center of gravity capable of attracting new development centers in the future to achieve the spread of urban development throughout the Republic, represented in the following cities and urban agglomerations: El-Jadida, New Mansoura, New Port Said, New Alexandria, October and Zayed extensions, as shown in Fig. (7)>

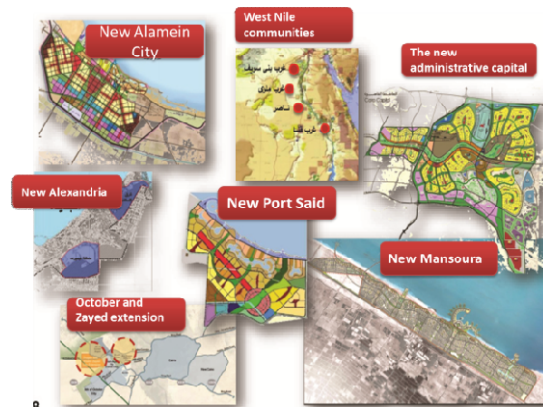


Fig.7 Electrodes proposed <sup>(19)</sup>

From the foregoing, it is clear that Egypt has witnessed several developmental attempts to open new horizons for development out of the valley and the Delta through major multi-class development projects, all of which aim to achieve one goal, which is to create new urban communities to break the concentration and accumulation of population in populated areas.

*Objectives of the National Strategic Plan 2050 in light of national projects*



(Achieving a balance between the sizes of Egyptian cities - redefining and redefining the role and reality of the Egyptian countryside in development - increasing the populated area from 6% to 15% of the total area during the next four decades - supporting decentralization in management, planning and implementation).

Spatial space according to the urban development strategy of Egypt up to 2050, reaching 6% to 15%, the expected population size of Egypt is 140 million, 90-95 million people are absorbed in the valley and the Delta, 9-10 million people in the east of the Canal and Sinai, 4-5 million people in the northwest coast, 5-6 million people in the Eastern Desert and Red Sea, 30 million people in the development areas west of the existing valley<sup>(19)</sup> Fig. (8)

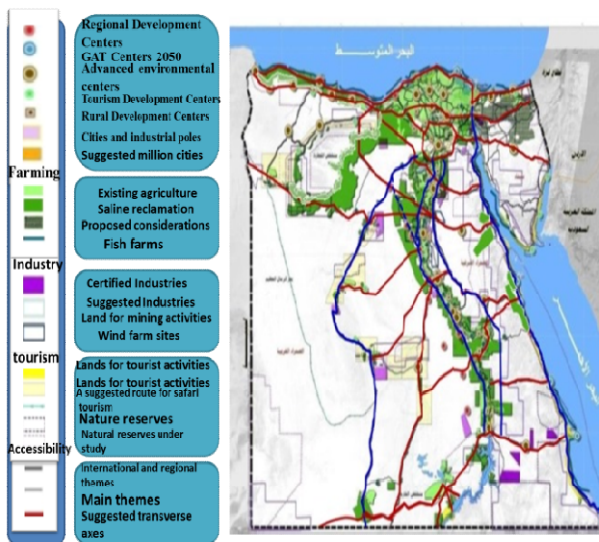


Fig.8 Egypt National Strategic Plan 2050<sup>(15)</sup>

The 2050 National Plan, which is currently being prepared by the General Authority for Urban Planning, is the first correct step to prepare an urban development plan for the Arab Republic of Egypt, as the previous attempts have not been completed or developed for an integrated urban approach to all regional, general and strategic plans. A synthesis of sectorial studies rather than development strategy.

The national projects also played a role in spreading the urban development in the Republic by attracting a group of urban gatherings around the national projects with developmental poles, which create small development poles. Areas of the Republic.

*National projects and the possibility of meeting the requirements of urban development*

It is worth mentioning that the study and research has set several criteria for the evaluation of national projects and their impact on urban development

*Criteria for measuring the polarization capacity of national projects:* These criteria were used to measure the capacity of the development pole to attract urban clusters through an equation that was deduced according to the following criteria:

- Relative advantage criterion.
- Growth potential criterion.
- Absorptive energy standard.
- Criterion of the region's contribution to the achievement of development goals<sup>(7)</sup>

Where the thinking tended to use the mathematical statistical equation derived from the previous study resulting from the calculation of the ability of new cities as models to attract urban clusters, and then can be compensated with the values given and applied to any national project (development pole) within the region and its development scope as a model of the study to find out any of the factors more Influence in the calculation of the polarization of urban capacity as an indicator of the priority of development and investment.

Applying the mathematical expression of linear regression using a set of independent variables with a variable

$$X_1 + b_2 X_2 + b_3 X_3 + \dots + b_n X_n^1 Y = a + b$$

Where Y = the value of the dependent variable (population).

X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>n</sub> represent the values of the various independent variables of (1 - n)

..., b<sub>n</sub>, b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub> .. Regression coefficients represent independent or negative variables.

a = Constant

By calculating the values of independent variables as follows:

- The ratio between the volumes of investments directed to the group to the group of investments of the groups included in the study.
- Ratio between the income of the individual in the urban pool to his income in the governorate.
- The distance between the urban assembly and the governorate of the assembly.
- Percentage of space allocated to services to total area.

*Selected national projects to measure their polarization capacity*

To study the standard methods used in the growth pole and the standards for developmental poles to calculate the polarization of the urban polarization, and then choose the most important national projects with a development pole and study them in terms of location, objectives and standard criteria needed to calculate the polarization ability in terms of comparative advantage criterion, development potential and energy standard And the criterion of the extent of the region's contribution to the achievement of development goals.

It is possible to identify the most important national projects currently underway (the new city of El Alamein), which was described by the National Plan for Egypt 2050 as a development pole with a wide range, and was highlighted by the decision makers in the Egyptian state. In order to be able to study the polarization of urban communities expected to be built around the project (development poles) as a priority for development and investment and this is what the study aims to.

#### *New Alamein City Project*

The first-generation model of the new generation of cities in the northwest coast, which is planned to accommodate more than 3 million people at the end of its early stages. The city is being built on an area of 48,000 feddans, serving as a model for a comprehensive urban planning strategy aimed at absorbing a large part of the population growth projected in the coming years with the concept of inclusive sustainable development.

The orientation for the development of the western scope of Egypt came within the framework of the national strategic plan for Egypt, which is the roadmap for realizing the current and future urban development in Egypt. To adopt a series of development projects in all sectors that will support the spatial and communication relations between this domain and the rest of the Republic, in order to facilitate the movement of population and employment, and achieve population spread, and various economic activities, and hence the targeted development in the future.

#### *The project Location:*

The new city of El Alamein is located within the administrative borders of MarsaMatrouh governorate for 48 km from the international road (Alexandria - Matrouh). With a beach front 14 km from Marina Gate 7 to the port of Hamra and more than 60 km south of the coastal strip and the city is planned to accommodate more than 3 million people, with an area of 48917 acres.

#### *The goal of the project:*

It aims to revitalize inbound and outbound tourism, revitalize and develop the northwest coast, to accommodate the population increase in other governorates, as it is planned to accommodate 34 million people until 2050, not in Alamein alone, but along 450 kilometers on the Mediterranean coast. From the establishment of "El Alamein El Jadida" to the formulation of a vision for the future of development, through the creation of the urban environment necessary to achieve sustainable development, with the identification of future needs for the purpose of the establishment of the city, and identify programs, priorities and mechanisms of implementation at all planning and executive levels. The main elements of the project are as follows: (10,000 housing units - a coastal sector - an archaeological area consisting of - an

urban sector - an international tourist center - 8 platforms - towers).

#### *General view of the new city of El Alamein*

The new El Alamein City is a unique national and regional center that combines mixed use and attractive development investments and ensures a high standard of living in a sustainable and ecological development of the city.

Elements of the new city of El Alamein at the national and regional level

- Provide pillars for various economic activities within the city and its environs sufficient to accommodate 3-4 million people
- Availability of infrastructure supporting the growth (road network, airport, railway, power stations, water supply network, communication networks, etc.)
- Availability of land areas suitable for urban development, which does not conflict with other uses such as agriculture and tourism
- The existence of communication between the site and beach areas are being developed as tourist centers
- proximity to the eastern urban centers in the bathroom and Burj Al Arab and the regional transport network (international coastal road - WadiNatroun road)<sup>(21)</sup>

#### *Criteria for the selection of the project (New Alamein City) as a development pole*

Relative Feature Criteria: The project area is characterized by several relative and national advantages due to the availability of several advantages:

- The geographical location of the north-west coast, which supports the development of an important and promising scope in the Republic, and is working on the adoption of a series of development projects in all sectors that will support the spatial and communication relations between this area and the rest of the Republic.
- The project is considered a way out of the narrow delta. , Estimated at about 34 million person.
- The project is a new gateway to Egypt linking Africa with southern Europe in terms of tourism and economy.
- The region has the best climate in the world ranging from 22 to 30 summers and 17 winters and its coastal structure that allows tourism to flourish.
- The site is characterized by the connection of many countries of the world with airlines charter El Alamein international direct transport of tourists<sup>(22)</sup>



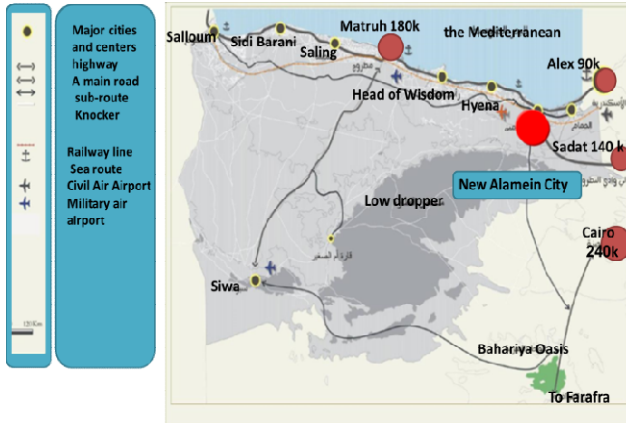


Fig.9 Rectifiers and general vision of the new city of El Alamein

**Development Potential Criterion:**

This criterion is based on the availability of localization features in the region in terms of raw materials, labor, necessary commodities and infrastructure elements of the project and the impact on the establishment of urban communities:

- The availability of areas dedicated to urban exploitation to suit the size of the required development, which is planned to accommodate more than 3 million people at the end of its first stages.
- The project is part of a series of development projects to develop the northwest coast and link it from the project site to Salloum.
- The development of the project includes the establishment of new communities, linked to the proposed regional road network and land reclamation based on rainwater and groundwater.
- The location of the project is characterized by the availability of a set of urban cores around it. To grow up in its own right.
- The availability of infrastructure is the first environmentally friendly city that relies entirely on solar energy for the provision of electricity, and the application of e-government system, which serves urban communities and makes the region a magnet and the focus of attention of the national and global framework
- Availability of tourist attractions attractive for development because of the excellence of its place and beaches and faces and with the urban plans and resorts planned tourism will enter Egypt in the global competition in leisure tourism. .
- The presence of the international coastal road and Humawzi for the Mediterranean with a length of 1050 km and achieve a direct link between the northern governorates of the eight Republic: North

Sinai, Boussaid, Damietta, Dakahlia, Kafr El-Sheikh, Beheira, Alexandria and Matrouh, through three major development sectors namely: Sinai with a length of 20 km, Delta with a length of 280 km and a length of 550 km.

**Absorptive Energy Standard:**

It means the capacity of the region to absorb the population increase, which is measured by the ability to expand within the region by increasing its density (vertical expansion) and horizontal expansion. By the next 40 years, tourism is the main economic base of the project besides agriculture based on irrigation of rain water and the Nile River, industry and mining wealth and investment and thus move a number of manpower to the project area as a result of just The general study of the study area indicated that the project will create at least 1.5 million jobs through the settlement of 5 million people.

**Regional multiplier criterion:**

The regional multiplier is measured by the extent of the relationships and correlations between different activities within the economy.

The impact of the payments generated by one of the activities within the national economy, hence we find.

The study area has a variety of economic activities in relative importance, which provides the opportunity for the emergence of the leading activity factor and its impact on the rest of the activities through the front and back relationships, and is creating a recreational city as shown in the figure() below Urbanization



Fig.10 Land uses in New Alamein (21)

**Measuring the polarization capacity of the new Alamein city as a development pole**

Measurement of the polarization capacity of El Alamein city in the range of Alexandria

The polarization capacity of the development pole of the new city of El Alamein is measured based on equations derived from previous studies adopted.

*First: Calculating the values of independent variables:*

1-The ratio between the volumes of investments directed to the group to the group of investments of the groups included in the study:

New Alamein City Project: 0.490

2- Ratio between per capita incomes in the urban pool to that of its governorate:

In view of the major national projects, we find that the new governorates of El Alamein: Matrouh governorate, and then when calculating this variable should calculate the per capita income in that governorate, namely: per capita income in the city = 4200, per capita income in the governorate of Matrouh = 1185, the ratio = 3.544 pounds.

3 - Distance between the urban assembly and the governorate of the assembly: after the project of the city of Alamein Matrouh Governorate = 180 km

4-The ratio of the area allocated to services to the total area: the project area = 48000 acres, the area allocated for services = 14000, the ratio = 30%

5 - Ratio of the area allocated to agricultural activity to the total area of the community: the project area = 48000 acres, the area allocated for agriculture = 714 acres, the proportion = 0.00014.

Compensation to the values obtained in the following statistical equation:

$$X_1 + b_2 X_2 + b_3 X_3 + \dots + b_n X_n Y = a + b_1$$

$$370075.23 * 0.490 - 1059.525 * 3.544 - 343.213 * 180 + 680530.38 * 0.30 + 208762.7 * 0.00014 + 77492.37 * 1 - 107306.1 * 1 + 198258 * 1 + 2545.564 * 1 - 68724.22 * 1 - 68296.61 * 1 - 27021.90 + 41.618 * 1 = \mathbf{5900000}$$

Therefore, we find that the polarization capacity of the equation = 5.9 million people, and when compared to the expected polarization capacity according to the general policy of the state, which was estimated at 6.5 million people, we find that: the efficiency of the equation 84%, and it is clear to us how efficiently using the polarization capacity equation high. It can be applied to all national projects with developmental poles.

*The developmental impact of the scope of the new city of El Alamein on the urban map*

- Achieving a high economic growth rate of not less than 10% - 12%.
- Resettling at least 5 million people and providing 1.5 million new jobs.

- Integrate the region into the national and global economy by increasing its contribution to GDP from less than 0.5% currently to about 7%.
- Improving social conditions and improving the living conditions of local communities so that the human development index is not less than 0.77 (current national average 0.689)
- Developing infrastructure networks and enhancing exchange relations between the study area and the other regions of the Republic
- Providing auxiliary infrastructure for the growth of economic structures and technological industries
- Environmental improvement, conservation of natural resources and preservation of Bedouin heritage.

## VI. CONCLUSIONS

The new city of El Alamein is a successful national project where the city has achieved from the applied equation the number of potential population by not less than 80% and thus can be directed to investment in accordance with the State's investment plan to advance the urban, economic and social development of national projects and achieve the desired benefit.

The need to pay attention to the projects of the development pole as part of the development strategy with the necessity of the availability of infrastructure and services in the new development areas and its link to the markets around it, which will return to the state economic and social returns

The need to evaluate the national projects so that the problems of incomplete project and achieve the attraction of the architectural sponsor and to reach the project in order to reap its fruits, the basic criterion for the success of any national project is the extent of its ability to attract urban population.

Address the issues of state regions: through the application of the equation to various national projects in the regions of Egypt so that the results can be assessed and accordingly redistribute investments, which work to achieve the urban balance on the urban map of Egypt.

The map of Egypt shows the target year in the light of the development of national projects



Fig.11 The development of the map of Egypt in the light of national projects.

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