Chapter 2
Productive Urban Development: Linking Planning and Economy in Al-Alamein New City, Egypt

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Abstract As rapid urbanization continues to transform the landscape of the cities around the world, subnational governments are under great pressure to address negative externalities associated with poorly-designed and informal expansion. The global trend persists as the rate of growth in unplanned or poorly-planned expansion outpaces that of the planned expansion. The lack of coordination between spatial planning and economic development planning widely observed in subnational governments aggravates the current unsustainable urban expansion. This chapter proposes an innovative approach to urban development planning which harnesses transformative force into an inclusive, equitable, productive and sustainable form of urban development. By integrating spatial analysis with value/supply chain analysis, it assesses the importance of mobility, connectivity, and inclusivity for industries. Upon the analysis, the methodology highlights a strong interrelation between urban layouts and productivity of cities and presents itself as an alternative approach to planning cities. The chapter introduces the case of Al-Alamein, a new city under consideration for development in Egypt, to showcase the government's systematic approach to meet new challenges arising from rapid urbanization and presents a model for future new city development for Egypt as well as for countries around the world, utilizing comprehensive approach to sustainable urban development.

Keywords AL-Alamein · Productive cities · Spatial planning · Urban layouts · Comprehensive design

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2.1 Introduction

Cities have always been at the center of socio-economic development and transformation throughout history. Studies indicate that almost all countries demonstrate the minimum of 50% urbanization rate prior to achieving middle-income country status and every high-income country have reached 70–80% of urbanization rate. High population density facilitates social interactions which catalyzes knowledge spillover, investments, innovation, job creation, and industrialization. Meanwhile, a set of negative externalities such as traffic congestion, slum formation, unemployment, and environmental degradation brought about by unplanned rapid urban expansion looms over city sustainability. Sustainability of city heavily hinges on city capacity to foster positive externalities derived from the economies of agglomeration while mitigating such challenges. Subnational governments, especially in developing countries such as Egypt, where most of the projected global urbanization is expected to occur, are under an immense pressure to accommodate population and land expansion in a sustainable manner.

In response to the imbalanced urbanization, Egyptian government has designated Al-Alamein as one of the New Urban Communities (NUC) program in promoting urban equilibrium by building new cities around densely populated areas. The integrative approach to urban planning will be tested in designing Al-Alamein with an objective of making the new city socially-inclusive and a productive hub for business and job opportunities. The findings of this research will have significant implications not only for Egypt, but also for other governments around the world as a robust case study in building new cities that are spatially, socially, and economically sustainable.

2.2 Productive and Spatial Analysis in NUC

2.2.1 Theoretical/Practical Background for Sustainability

Sustainable urbanization implies a process that is economically productive, socially inclusive, and environmentally sound for both present and future generations (UN-Habitat 2017). With the world population residing in urban areas growing to the unprecedented level, urban sustainability and the quality of life has become a pressing issue around the world. Widely observed trend of rapid migration to urban areas, especially in developing countries, heightens the competition over limited resources among residents and undermines government's capacity to provide basic services. Egypt is not an exception to this trend. Around 43% of the population resides in cities today, of which the majority is concentrated in the Greater Cairo Region (GCR) and Alexandria. Although the share of urban population is not high by global standards, the growth of urban land use is outpacing that of population in many Egyptian cities, endangering sustainability (New York University et al. 2016).

2.2.2 Linkage to Comprehensive Development Methodology

Due to the rapid expansion of cities, governments around the world proclaimed, under the unified voice of Sustainable Development Goal 11 and with the New Urban Agenda (HABITAT III 2016), their quest for building cities more inclusive, resilient, and sustainable for people to live in. In October 2016, governments, civil society, academia, and private sector convened in Ecuador to renew their commitments for the New Urban Agenda for sustainable urbanization.

Sustainability of cities seldom occurs by chance, they occur by political will and concerted effort from wide spectrum of stakeholders. Cities which aim to achieve sustained urbanization while curbing informality are more likely to preserve fertile rural lands and environment, promote socio-economic development and inclusion, and decrease commuting distance and time which, in turn, reduce carbon footprint. And it all begins with holistic planning. Growing interest and awareness calls for a comprehensive development methodology which supports cities to grow in an economically, spatially, and environmentally efficient and sustainable manner.

2.2.3 Urban Economy, Productive and Spatial Analysis in NUC

Cities are the main platform for production, innovation, and trade, while industries are the engines of economic growth and employment creation. As cities facilitate capital mobilization and labor matching, business opportunities arise and enterprises are becoming more productive. Currently, cities account for over 80% of global GDP. The share of city contribution to the national GDP is more pronounced in developing countries. The resulting industrialization and economic agglomeration have and continue to increase productivity while transforming the demographics and landscape of cities.

Productivity is, in simple terms, the ratio of the value of the output to the input consumed in producing the output Total Factor Productivity (TFP) is the share of output not explained by the amount of inputs used in production. It is defined and determined by how efficiently the inputs are utilized in production.). The higher the productivity the more efficiently one can provide a good or service to consumers. Naturally, productivity is closely related to labor skills. Higher skilled labors are less likely to produce defected products, more likely to specialize in a more complex and value-added end of the production spectrum, earn higher wages, and likely to utilize capital in an optimal level. On the other hand, poor countries or cities with limited labor capacity tend to demonstrate high dependency on primary productions and struggle to engage in value-adding activities (Kremer 1993). For a country or a city to promote economic growth and higher standard of living while bridging the widening economic gap, taking steps to enhance its productivity is imperative.

The productivity 'of a city' can be measured by the weighted average productivity of all its industries. The industry productivity is derived from the average productivity of sectors, which, in turn, is that of enterprises. When one enterprise becomes more efficient in delivering a similar product or service due to increased labor capacity or newly discovered technology, it will either gradually drive out the less competitive enterprises or force them to become more productive; consequently, driving up the productivity of the entire sector and industry (Lewis 2004). When an industry sector becomes more productive, it expands and consolidates both forward and backward linkages, generating employment opportunities across and beyond the sector. This lays a foundation for investments and policy interventions on occupational training, R&D, investment promotion etc. Moreover, unlike macro-level economic performance analysis where compounded variables are at play, sector level analysis is more proximate and allows us to draw more concrete causal links between interventions and economic performances. Therefore, it is the industry sector level that we set as a unit of evaluation as well as intervention in enhancing productivity of a city.

2.3 Value Chains and Supply Chains

The means by which industries and enterprises compete has evolved over the years. When Henry Ford designed its first moving assembly line in 1913 in Michigan, the strategy was to produce a simple designed automobile in the largest number, at the lowest cost. The competitiveness of this production model was founded upon the idea of economies of scale. Although the idea still finds its relevance in today's globalized market, various other factors which determine competitiveness have emerged over the years.

Under the premise that sector productivity enhancement begets competitiveness, this chapter sheds light on the analytical tools that are widely employed to enhance the following endogenous or Self-growth variables which shape the productivity of a sector: (1) efficiency in performing a specific value adding activity and (2) efficiency in delivering inputs and finished products, although value chain analysis and supply chain analysis overlap in scope and are often used interchangeably, there is a clear distinction between efficiency in producing and efficiency in delivering.

2.3.1 Market Demand and Value Chains

The first variable that affects the level of productivity could be assessed through a value chain lens. Value chain is an idea which views a manufacturing or service organization as a system consisting of various segments, which ranges from input providers, producers, and to final consumers. As each segment adds value as the product and services move along the chain, costs and profitability are heavily

influenced by the efficiency of each participant along the value chain (Porter 1985) Analyzing value chains is one of the most powerful and utilized tools for assessing productivity of a sector as well as a way of creating an enabling business environment. Value Chain Analysis (VCA) is an accounting tool which deconstructs and analyzes how much cost and value is added from the raw materials stage until a product reaches end consumers. It allows us to measure the productivity and cost efficiency of each of the stages along the value chain (Intangible endogenous variables such as organizational capital is also embedded in the scope of productivity and efficiency). By comparing the findings with international standard or a competitor, one can highlight specific bottlenecks to sector competitiveness. Furthermore, VCA is an effective tool in identifying distortions caused by anti-competitive policies or regulations, and market and human resources that hinder industries from becoming more competitive.

In addition, value chain is also a medium through which enterprises understand rapidly changing market demand. From the market standpoint, value is created or defined by customers' perception or an interpretation of a product or services (Flint 2008). Fostering a cohesive and integrated value chain allows the participants to become more competitive by having a better assessment on costumers' value placement.

2.3.2 Spatial Dimension and Supply Chains

While VCA helps us to understand the cost efficiency at each value-adding segment along a production system, Supply Chains Analysis (SCA) is a highly effective tool in assessing the efficiency of the flow of goods and services. Supply chains is a conduit through which products, services, information, and capital move from one segment of the chain to another until they reach the end consumers (Cooper et al. 1997). For example, a supply chain mapping exercise captures the flow, economic distance (Economic distance reflects the time and cost of transporting goods between a point of departure to destination), and efficiency of an agricultural crop from farm gate to the final consumer. In addition to efficiency, which is generally measured by cost and time, reliability and predictability in service delivery are also key determinants of a well-functioning supply chain. Supply chains are often fragmented, especially in developing countries. Fragmentation results in, among other things, waste, income loss, increased product price, and lack of product availability in the market. SCA provides insights into specific logistics constraints hindering competitiveness, and helps identify both policy- and market-based interventions to improve efficiency and competitiveness. As it captures the movement of goods and services, supply chain efficiency is bound by both physical and trade logistics infrastructure, which are often defined by urban planning.

The importance of supply chain management and logistics efficiency is becoming even more pronounced with continuous growth in competition and market demand for greater product diversification. With greater number of enterprises pro-

viding similar goods and services, increasingly weaker brand loyalty is observed in the market. The current market trend of gradual shift from mass production to more customized and personalized products and services is creating complexity for a traditional supply chain model (Sheffi 2012) Combined with increasing consumer awareness, available product information, and shortening product cycle, enterprises are forced to operate a more effective and efficient supply chain striving to meet consumers' demand and maintain high level of productivity, while minimizing inventory and cost of logistics. Specialized supply chain and logistics models have become an essential part of competitiveness in today's globalized economy and enterprises invest substantial amount of resources to gain competitive edge over each other. Increasing number of regional logistics hub, colocations, and cluster developments are the testaments to such trend.

2.3.3 Economic Efficiency and Planning

As demonstrated above, the efficiency in flow of production factors and information along the value and supply chain holds a great implication not only to sector productivity, but also to urban economic development. Conversely, efficient mobility of production factors and information is vastly affected by public policy and urban planning. Both hard and soft infrastructure that cuts across industries is often defined by public investments. The urban landscape is also influenced by government's zoning regulations and building permits (Sheffi 2012). While government support does not guarantee productive development, behind every success in achieving urban economic efficiency around the world, there is a prominent role played by the governments.

2.4 Urban Layout and Productivity

Despite a commonly held conception of interdependence between urban planning and productivity, urban development projects seldom undertake approach integrating economics with urban planning. In practice, often, government economic and urban planning sub-functions are carried out in silos. Economic development projects tend to ignore the spatial dimension, while the economic perspective is consistently left out in many urban planning processes. Such trend has limited many cities from fulfilling its potential to the optimum.

2.4.1 Interpretation of Urban Layout and Productivity

Productivity and economic prospect of a city is closely related to the physical and spatial layout of its environment. Factors that compose urban layout such as the number of intersections, size of a block, or a share of built-up area occupied collectively define the degree of urban mobility. Transport infrastructure such as road and port is the conduit through which goods, services, and labor travel and, consequentially, the quality of such infrastructure greatly affects urban productivity. Under the current global context of expanding urban population and built-up urban area, there is a growing need for better spatial allocation of services and infrastructure to enable cities to become livable and sustainable economic powerhouses. An extensive time-series analysis asserts that the growth rate of informally planned or unplanned land expansion is outpacing that of planned expansion across the world (New York University et al. 2016). As unplanned expansion has a propensity to generate urban sprawl and informal settlements outside of the government purview, it is detrimental to intra-city mobility and connectivity. For instance, an urbanization review conducted in Nairobi, Kenya concluded that less than 20% of formal employment opportunities are accessible to average Nairobi households within 1 h by walking or using public transportation system (World Bank 2016). Such low level of intra-city mobility directly contracts the size of labor market and severely stunts the city's capacity to fulfill its productivity potential. In the case of Egypt, urban expansion is often observed around key public services such as schools and hospitals in urban fringes (UN-Habitat 2016). Such development aggravates residents' access to public services and economic opportunities in other parts of the city. In countries such as Kenya and Egypt where high population concentration in working age is one of the key competitive advantages, poor connectivity and mobility could weaken the potential to take advantage of demographic dividend.

2.4.2 Connectivity and Main Components of the City

In broader economic terms, connectivity of a city is generally defined by how central a city is to global markets and transportation and logistics network. The higher the level of connectivity, the more conducive for cities to trade and plug oneself into the global value chain at a lower cost. A study highlighted a robust correlation between air connectivity and share of exports composed of parts and components (World Bank 2014). In this regard, connectivity has become one of the most powerful indicators for projecting a city's development potential.

While connectivity is often defined by geographic location, it is not the sole determinant. Tangible variables such as transport and logistics infrastructure as well as intangible variables such as customs and freight forwarding system, legal and financial institution, human resources, ICT, and business climate collectively influence the level of connectivity to global market. The more connected a city is,

the higher the propensity to attract new ideas, creative class, technologies, innovations. These are the very factors which underpin the competitiveness of value and supply chain for any industry sector.

A comprehensive methodology integrating value/supply chain with spatial analysis presents an alternative approach to urban development. The spatial element promotes an urban layout that is compact, integrated, inclusive, and connected. In tandem with the productivity enhancing tools, it visualizes the functional aspect of the value/supply chain and to explore ways to harness the expansion of urban population and urban land consumption to be the optimum use to industries and economy. Furthermore, compact and dense urban layout renders the infrastructure and public services provision more economically efficient. This allows the limited municipal budget to be earmarked for other services and activities which will contribute to further urban development.

2.5 Egypt Case Background NUC Development

The Egyptian New Urban Communities (NUC) development experience started in the mid-1970s, as part of the national strategy to tackle the challenges facing Egypt urbanization. It is well known that the urban population in Egypt is not evenly distributed among the 219 cities, 96% of the republic's total population lives on 4% of the total national area (The Guardian 2015), while the remaining percentage spread on 96% of the total area. This lead to more imbalances where 68% of the republic's total population are living in three regions: the GCR, Alexandria and Delta; representing 1.8% of Egypt's total area while 77 cities comprise 4% of the urban population. Furthermore, existing villages and cities mostly surrounded by valuable agricultural land threatened by rapid and unplanned urban growth. This interne can be seen as over 16 million urban inhabitants live today in informal and squatter settlements around urban areas. New Urban Communities in the desert vicinity were thought as an alternative solution to the problems.

New Egyptian cities were an opportunity to enhance the economic growth and major economic interfaces that are able to attract direct foreign and Arab investments to recover Egyptian economy as one of the most important roles in causing urban equilibrium and development outside the inhabited area. Such initiative has found the economic and political framework represented in economic openness and open-door policy implemented since 1975. Consequently, the Egyptian program of establishing new cities around the Cairo, Alexandria and densely populated areas in Delta started in 1974.

2.5.1 The Three Generations of New Egyptian Cities

The Egyptian initiative building new towns back to 1868, when the Khedive of Egypt establish the New cities of Port Said and Ismailia that took place among the establishment period of the Suez Canal, since then number of new settlements were established such as Heliopolis and Masr El Guedida in the 1930, considered as one of the first private investment in urban development all-over the world as well as Nasr City in the 1956 as suburb neighborhood at the fringing of Cairo city. Nevertheless, the actual start of the New Egyptian Cities (NUC) programme was taking place in the 1977 till now throughout three generations of cities that shaped 22 new cities.

It is worth mentioning that the NUC programme was launched without clear national urban policy (Hai 1981), or even a national program to establish and build NUC. Later number of justifications were specified as redistribution of population along the whole national geographic space, instead of being centered in 5% of Egypt's total area as well as limiting the urban dominance of Cairo and Alexandria, through establishing counter magnetic poles and redirecting rural immigration to major cities, to new planned destinations in addition to limiting the random growth and encroachment on agricultural land and limiting the housing problem in general, especially in major cities, etc. Subsequently, the original plan for the 22 cities was revisited due to synchronizing of the market and updating with development on the ground and therefore the targeted year and the number of inhabitants.

The first generation of the Egyptian NUC that last to 1982 produced seven Cities. Apart from the El Salheya that was agricultural-based economic this version produced mostly industrial-based economic cities and regional services, which aimed at further attracting industry investments. The first generation's cities such as 10th of Ramadan, 6th of October, Borg El Arab...etc. possess around 48% from the total new cities inhabitants in the 22 cities. However, the second generation that has taken place in 1982 and lasted for 18 years produced 8 Cities, was mainly targeting to absorb the high concentration in the Greater Cairo Region (GCR). Therefore 50% of the second-generation cities were around GCR as satellite and residential cities such as New Cairo, Sheikh Zayed, Badr, El Shorouk, etc. succeeded to attract around 50% from the total new cities inhabitants in the 22 cities. Furthermore, the third generation created 7 Cities with regional Services, light and basic industries, which trends of building NUC near existing cities. This version failed to attract population of nearby dense Cities.

2.5.2 Economic and Urban Role of New Cities

The NUC development programme economic and urban role exceeds the city and it region. The effect of these roles goes beyond the influence of geographical boundaries of the city regions and result significantly at the development and the

urbanization of Egypt. Since those cities were supposed to serve as a development locomotive to upgrade the local economy of the Egyptian governorates. The authors therefore analyze in depth these effects to highlight the economic and urban role of NUCs comparing proposed strategic plans, local and regional economic role, designated population with the actual development, economic population, provided job opportunities.

The total planned areas in 22 NUCs are approximately 1733 km^2 that approximately equal 31% of the current total urban areas in Egypt. The original plans for the NUC were predetermined to produce 630 km^2 for residential uses that equal 36% from the total NUCs area, 248 km^2 for industrial uses (14%) and 651 km^2 (37%) for other uses particularly for amenity, education, medical and other regional service uses (UN-Habitat 2016). Statistics show that the lands allocated for non-residential or industrial activities such as trade, service, tourism and recreational activities in these cities are approximately 136 km^2 (8%); 31 km^2 have been allocated so far. The number of productive and operational factories in new cities is approximately 7630 out of 40,000 factories nationwide, at the rate of 19.1%. The amount of capitals invested in the construction of these factories is approximately 91 billion L.E., providing 533,000 new industrial job opportunities. Factories under construction are approximately 3887 factories, providing approximately 92,000 new and additional job opportunities according to 2014 statistics (UN-Habitat 2016).

2.5.3 NUC Impact on Urban Development

The Egyptian NUCs therefore are expected to play a regional role as polycentric service and hubs of business and job opportunities. The NUC influences rationally designed to go further than the city region, as for major regional commercial centers, medical service middles, academic and research centers, business development areas, regional entertainment facilities, etc. NUCs have partially succeeded at attracting private investment in comparison to huge direct government official investments. As during the past 20 years around 91 billion L.E has been implemented by the private sector particularly in industrial investments (UN-Habitat 2014); whereas, the total amount of implemented government investments exceeds the 65 billion L.E distributed to residential investment (14.4 billion), service investments (4.9 billion) and utilities investments (46.8 billion). It is important to notes that currently the total amount of population in new cities is 4.211 million people, at the rate of 10% of the total urban population. The new cities are expected to accommodate approximately 22 million people by the year 2032 (UN-Habitat 2016), representing 17.2% of Egypt total population (128.5 million people). Nevertheless, during this period the share of Egypt's total infrastructure investment budget that was directed to the NUCs was approximately 22%, whereas today, only 4% of Egypt's population lives in these desert New Towns.

2.6 Al-Alamein Urban Development and Planning

Although, NUCs should act as regional development hubs absorbing the population increase and economic growth as recommended by the National Urban Policy Study (NUPS) (PADCO 1981); the regional plans in the eighties for the Northwest Coast and Alexandria urban region lacks critical determination for linkages between NUCs and existing/proposed economic activities tourism, agricultural or industrial. Nevertheless, the development triangle plan "Alexandria – El-Alamein – Wadi Al-Natrun" in 1999 (GOPP 1999) secures new regional development zones with formulation of the regional role of the NUCs axis. Subsequently, in 2007, El-Alamein New City (ANC) was proposed – as a millennium city under the framework of the national project to resettle five million people in the Northwest Coast from Al-Hammam city to Salloum – to be the main development center at the Northwest Coast East sector level. Since then all strategic plans i.e. Northern Coast Development Plan, Egypt 2052 Urban Development Plan, etc. consider that (i) Interdependent regional economic hub for investment and international trade gate to Africa and Southern Europe States by supported free zones and export ports activities and (ii) Enhancing the productive capacity of Region increasing and the integration between the various activities in the Region as the main roles and objectives for ANC development.

2.6.1 Integration with City Region

ANC as one of the main four growth NUCs proposed (New Marsa Matrouh/New Borg El Arab/New Sidi Barany) for the development of the north-west coast region, is expected to accommodate the urban population increase as well as founding for critical regional development that could shift the gravity center of Alexandria urban region – at the same time it is a coastal city that has the role to link the region with the Mediterranean basin.

Subsequently, on the one hand the development of ANC that will act as attraction centers for activities, population and to accommodate around million people must be critically integrated with the city region. The development size, regional services, market forces, etc. will affect the nature of connections between the region and other regions. The ANC witnesses completions of the International Coastal Road and linking it to West Delta and Sinai, and the investment in the new Borg El Arab and El-Alamein airports and Marsa Matrouh, which will dramatically affect the city form and rationalizing new investments directed to production and service sectors that will serve the regional and national objectives.

On the other hand, it is important to note that the ANC development risk rates due to issues hinder development. The regional leakage of proposed ANC economy for the benefit of the emerging adjacent areas, such as residential, commercial and negligible activities is expected, if the integration of regional development policy

remains absent. Furthermore, the regional competition between the functional roles of ANC and the role of regional sister cities might weaken opportunities of success and the feasibility of economic activities based in region's cities. Determination of tools for promoting and enhance productive investment dedication towards the ANC and other new urban communities in the region domain, as well as strengthen the central service role of the old urban communities.

2.6.2 Spatial Dimension and Supply Chains

The term value-chains captures a sequence of related and dependent activities that are needed to bring a product or service from conception, through the different phases of production, to delivery to final consumers and after sales services, and finally to disposal or recycling (UNIDO 2014). Thus, value-chains are complex entities where production is only one of several value-added links in the chain, where logistics, combination with other products, combined solution offerings, logistics, and etcetera are other links. They may include a range of related and dependent activities within each link of a chain, and between different chains. Intermediary producers in one value-chain may feed into several other value-chains. Value-chains can span enterprises of a local economy, a sub-national regional economy, the entire domestic economy, a supra-national regional economy, and the global economy.

In NUC development and in particular the ANC the need for analyzing the value and supply chains becomes essential due to the fact that it secures proper figures that reflect complex environment. The value-chain analysis for the ANC becomes an increasingly useful approach to gain a comprehensive view of the various interlocking stages involved from taking a good or service from the surrounding economic region of the city as raw material to production and then to the consumer. To establish a strong and sustainable ANC's economy with such ambition, the city cannot achieve succession on an individual enterprise basis, but rather, requires a systemic view that applies methodologies based upon approaches such as value-chain analysis and encouragement of industry clusters at the city region level (UN-Habitat 2016).

Therefore, the creation of ANC competitive environment will play important role to secure sustainable development. Nevertheless, it is essential to know (i) what works in the regional level beyond the city region territory including "strategic bets" on new regional industries, (ii) what works for the ANC "locally" in efforts to improve the performance of the city region's existing industries, including issues of infrastructure provision, access to financing, and ways of establishing effective PPPs, and (iii) how to create coalitions to enable ANC to make a real breakthrough in regional trade.

Subsequently, the ANC examined the costs and benefits carefully to avoid being locked into low productivity value chains and therefore into low-level development trajectories. Success will require an innovative and far-sighted approach on the part

of policymakers, development partners and the private sector to take full advantage of ANC resources. First, most countries in the MENA region have historically experienced more investments in infrastructure and in manufacturing capacities in several sectors also had a degree of industrial infrastructure especially in light manufacturing. Second, North Africa has a geographical advantage particularly due to its proximity to one of the largest markets in the world, the EU market. This gives North Africa an important advantage in its trade relations with the EU. Third, many countries in the region enjoy preferential market access to key markets particularly the European Union through association and free trade agreements and also the United States in the cases of some of the countries in the region. Fourth, countries of the region have accumulated a degree of managerial and organizational capacities that enable these countries to meet needed requirements; however, the region, overall, has not exploited these advantages to the full potential.

Consequently, some areas in Egypt, Morocco, and Tunisia have benefitted from the integration in the Global Value-Chains (GVC) to expand employment and improve social conditions as for Al Alamein, being on the Mediterranean coast, to quickly become a member and network in transnational organizations, such as the Barcelona based Association of the Mediterranean Chambers of Commerce and Industry (ASCAME) becomes significant potential. It makes sense to network directly with European cities, rather than to go the chain up through national levels, where anyway usually only megacities are visible.

2.6.3 Development and Economic Engines

The economic development and economic engines of Al-Alamein New City should take place in the context of the macro-economic Egyptian economy, neighboring and integrating with the current and future MENA region economic activities, integrating with local clusters, in a continent and a world of increasingly globalized value-chains and hyper competition between business firms in progressively more open economies. To achieve a successful new city policymaking, as well as business, academic and civil society leaders must work together across-ministries, across sector and across geography to explore and ensure ignition of the robust economic growth that will support more-inclusive economies.

Economic and social agendas must go hand in hand and focus on institutional support for the prioritized business clusters, which will render the economic activities more productive and open up new and better job opportunities for all segments of the regional population and national immigrants. Better assigning available resources to productive activities is crucial and requires well-functioning markets. In fact, analysis shows that ANC possesses the potential to add at least 17,000 feddans (a unit of area in Egypt) needed for industrial areas out of 43,250 new feddans industrial expansions requested at the Alexandria schematic region level. It is proposed in the rest of the existing industrial cities and the projected new ones in the schematic region. Furthermore, it is expected that the ANC will secure

the regional industrial service center for the new proposed land reclamation projects in South, East and West of the city; these lands amount to 230,000 new agricultural feddans (GOPP 1999) – which are expected to be functionally allocated to produce fruits and vegetables export agricultural crops and industrial crops like beets, sesame and oil crops. Moreover, the new city location gives exceptional positioning for the city to play the role of the region's tourism service center for the tourist hinterland of the Northwest Coast which receives both beach and non-beach tourist patterns, especially conferences, safari and shopping tourism, in addition to its role as a destination for tourist resorts and vacation and weekend tourism patterns and expected Mediterranean tourists. Subsequently, it is highly recommended that the economic underpinnings and the economic engines will be but not limited to the following:

Industrial development: Exploiting the urban sprawl in West Delta, Northwest Coast and Matrouh in the establishment of new industrial areas and communities as well as knowledge-based industrial activity and encouraging industrial orientation of the activities that are integrated with other economic sectors with expansion for industrial zones and the development and updating of existing ones, etc.

Agricultural development: Utilizing the geographical location to increase the exports of some of the food commodities with comparative advantage and utilizing the region infrastructure to achieve the agro-industrial integration, thus contributing in increasing the value-added of the Agriculture sector to support agro-industrial activities and to contribute to the reduction of the food gap in some agricultural products that are available in the Region.

Tourism development: Achieve comprehensive development of coastal tourism development areas and exploiting the many and varied tourism potentials in providing new tourism patterns and diversify the tourism product in the Region, as well as encourage day use and quick trips thus enhancing the tourism role of the city as a tourist destination for residential resorts tourism and holiday and weekend tourism style.

2.7 Conclusion

The ANC is a major development pole in the West regional development area, within the Alexandria metropolitan urban region framework and its western expansion. Moreover, in the light of the Strategic Planning of Matrouh Governorate vision for the northwest coast development 2032 findings shows the region's most important resources that rangeland vegetation cover, including fodder, aromatic, and medicinal plants; oil and natural gas; some mineral and mining deposits; summer resorts, desert landscape; and the historical and cultural heritage. Subsequently, the various development proposals and the opportunities of developing ANC roles could be concluded as (GOPP 2010) (i) ANCs' urban development pole has potential to integrate to Alexandria urban region within the trends to develop the urban region, (ii) the city has huge opportunity as a major

development and manufacturing service center for land reclamation sector in West Delta region along Al-Hammam canal and Baheeg (GOPP and UN-HABITAT 2014), (iii) the ANC possesses real possibility to play integral role as a tourist service center for the development of direct tourism hinterland for coastal communities located on the Northwest Coast (New El-Alamein development within the framework of the Northwest Coast development plans) and finally, (iv) the city possesses also the opportunity as a portal and a main gate at the national level (as targeted in the 2052 national plan) and the West Delta sector in the frameworks of its association with El-Alamein international airport – new international port – International Costal Road- railway – Wadi El-Natrun/El-Alamein Road.

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