

THE PLANNED SUB-CENTRES FOR RIYADH CITY, A SHIFT TOWARDS POLYCENTRIC METROPOLITAN DEVELOPMENT

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ABSTRACT: Riyadh city, the capital of Saudi Arabia, will be transformed in the near future to a polycentric model which corresponds to the characteristic of modern cities. The city is now a monocentric, and its urban form was affected by the expansion of low-density residential areas. Riyadh has a population of just over four million inhabiting a developed land of nearly 1200 km². The city was and will continue to be a focal point of attraction for migration, economic activities, and many key urban services. In February 2007, new regulations for the city new sub-centres were approved by the High Commission for the Development of Riyadh. This planned change for the city which is part of a polycentric metropolitan strategy tends to create new developments of sub-centres that could accommodate some key urban services outside the central business district as well as offering employment opportunities. This paper explores the reasons behind such changes, and the new regulations proposed for the planned sub-centres.

Key words: City Centre, Polycentric Development, Regulations, Sub-Centre

1. INTRODUCTION

It may be appropriate to claim that it is no longer necessary for a large city to have a central businesses district (CBD) as the only hub for its vital services; a large metropolitan area may rather be a polycentric (multinucleated approach of development) that is linked by a modern rapid transit with the aim of creating an integral

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orderliness of development in terms of densities and specialised urban services. The promotion of a balanced polycentric urban system is currently among the key policy objectives of the European Union. In a study by McMillen (2001), he indeed confirmed that by 1990, the percentage of suburban residents working in the city had declined in every metropolitan area covered by his research (11 cities from the US Midwest).

It can be argued that most of metropolitan areas are polycentric in nature; hence big cities are not truly monocentric, which validates a possible urban strategic choice to adjust the urban physical pattern to a new model. A model that is based on promoting sub-centres or what is also known as 'edge cities' to accommodate employment and some key services outside the main districts of CBD.

This notion of sub-centres which might be a result of the previously mentioned strategic choice can be implemented either by a city development authority (e.g. municipality) or large-scale developers, in order to relocate many businesses and considerable services through coordinated development activities. It is worth to highlight why many big cities around the world move to the polycentric model. Basically, some metropolitan authorities find the polycentric model an efficient approach to tackle rising land prices and rents in inner areas of cities. Other reasons may include the escalating costs of commuting by users, transportation and congestion externalities, among other considerations. In short, such a model could minimise urban spread out of cities for the reason that development would be deliberately planned in accordance to specific places and densities.²

² This idea was initiated by the leading plan for the city of London (in 1944) which was prepared by Abercrombie. The plan proposed decentralisation of development (green belt along with satellite towns) to solve the city's problems which include huge and highly densely populated developed central areas, lack of open spaces, and other problems related to housing, transport congestion and pollution.

From a merely economic perspective, sub-centres have emerged when large employment districts have been created outside the cities to become competitors to the traditional city centre as places of work (McMillen, 2001), and started to have significant effects on urban spatial structure.

Table 1: Comparison between CBD, Suburban Locations and Sub-Centres

Criterion	CBD	Suburban locations	Sub-centre
Functions	Provides specialised functions/services; e.g. financial institutions, legal firms, etc.	Preferred by businesses that serve consumers outside the metropolitan area, such as manufacturing firms, distributors and wholesalers	Offers daily/weekly services for residents in the vicinity. Monthly needs maybe served if the sub-centre has the diversity and size to do so
Transportation	CBD can be served by rapid transit system, ring roads, and highways designed to carry labours from suburbs into the city	Served by quite new road network with far less congestion	It combines many of the advantages of CBD and suburban zones. It uses the modern road network and rapid transit systems to connect supply and needs of workers from outlying places
Land and rent	Both very expensive	Fairly cheaper than CBD	Like CBD it locates various activities and businesses in close proximity with reasonable costs for land and rents

2. SUB-CENTRES, AIMS AND CONDITIONS

The aim behind the development of sub-centres can be attributed to the need to promote multiple nodes of concentrated service/commercial activities and employment within the metropolitan boundaries, which are typically linked with major transportation transfer points such as light train and bus interchanges.³ The concentration of mixed uses nodes within the metropolitan limits would help to fulfil the needs of the vicinity and generally reduce the number of trips to the city centre. This concept is obviously similar to the notion of satellite towns of the first half of the past Century (Sorensen, 2001).

In fact, there are some conditions need to be maintained to ensure the success of a polycentric metropolitan strategy, such as; (1) a metropolitan area should have more than two sub-centres, according to the population size and the developed area; (2) sub-centres should follow a certain level of hierarchy with respect to the city centre autonomy; (3) availability of reliable transportation system (public transit system and a good quality road network) to connect the sub-centres with the city and the environs; and (4) sub-centres should have a functional relation and are complementary to the city centre.

3. RIYADH CITY IS MOVING TO POLYCENTRIC METROPOLITAN DEVELOPMENT

In February 2007, the High Commission for the Development of Riyadh (HCDR) has approved new planning regulations for the city's sub-centres and their locations. These regulations adhered to the city urban spatial strategy, and both initiatives were initially proposed by Ar-Riyadh Development Authority (ADA), the technical arm of HCDR.

In the past, Riyadh city was characterised by a monocentric model along with low density development. High density developments were concentrated along the main roads which are linked with the city centre on one hand, and the residential areas and suburbs on the other. This approach of development has produced many undesired

³ Tokyo-Japan is an important example of a city that has developed a strong set of metropolitan sub-centres (see: Sorensen, 2001).

outcomes for the city (see figure 1) such as commuting problems, transportation and congestion externalities, and some other environmental problems (e.g. air pollution).

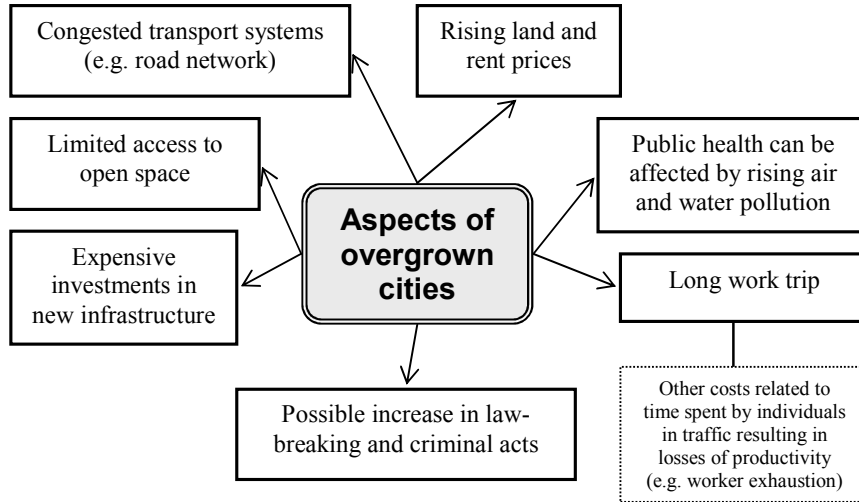


Figure 1: Aspects and Issues of Overgrown Cities

In fact, this is the case now, as the city has just over four million residents and its developed area reached about 1200km². Consequently, the city's future will experience yet further problems as population will continue to grow at high rate (for instance, during the 1990s the growth hit a record high reaching 8% annually) and the city's built-up area could double. This means that the city centre might not function properly to serve the growth needs and/or create new jobs, let alone prosperity and convenience requirements for the capital residents.

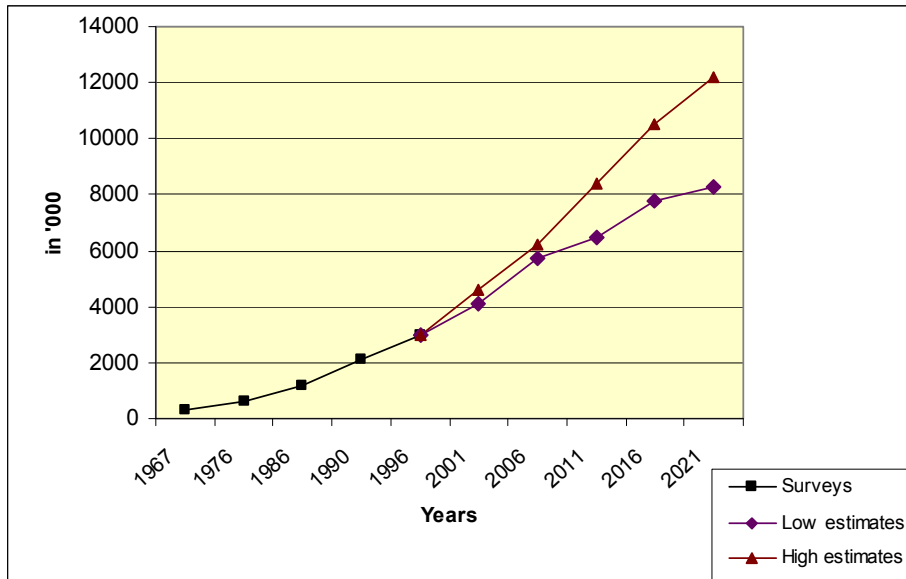


Figure 2: Population Growth of Riyadh City, Surveys and Estimates. Source: ADA (2004)

Because the city is controlled by an urban limits policy, it did not experience a great deal of urban sprawl despite the low density development. Urban sprawl increases in urban areas where activities and employment move away from the city's inner areas. On the contrary, urban sprawl can be effectively overcome if the suburban jobs and key activities are clustered together in sub-centres (see: McMillen, 2001).

All these issues have underpinned the necessity for a new strategy to transform the city into a polycentric model. This is going to be a shift towards the principles of polycentric metropolitan development (i.e. decentralisation of growth expansion) via the development of seven new sub-centres in both the urban growth corridors and the expansion zones of the city. This in fact would facilitate the dissemination of economic activities, administrative and social services to most of the newly developed residential areas.

Furthermore, this could spread the benefits of good social and economic performance across the city, while at the same time, strengthening a balanced competitiveness between the planned sub-centres. Fujita and Ogawa (1982) assume that linking metropolitan areas and their hinterlands (to form polycentric urban system) with each other via infrastructure and dynamic linkages should achieve such aims.

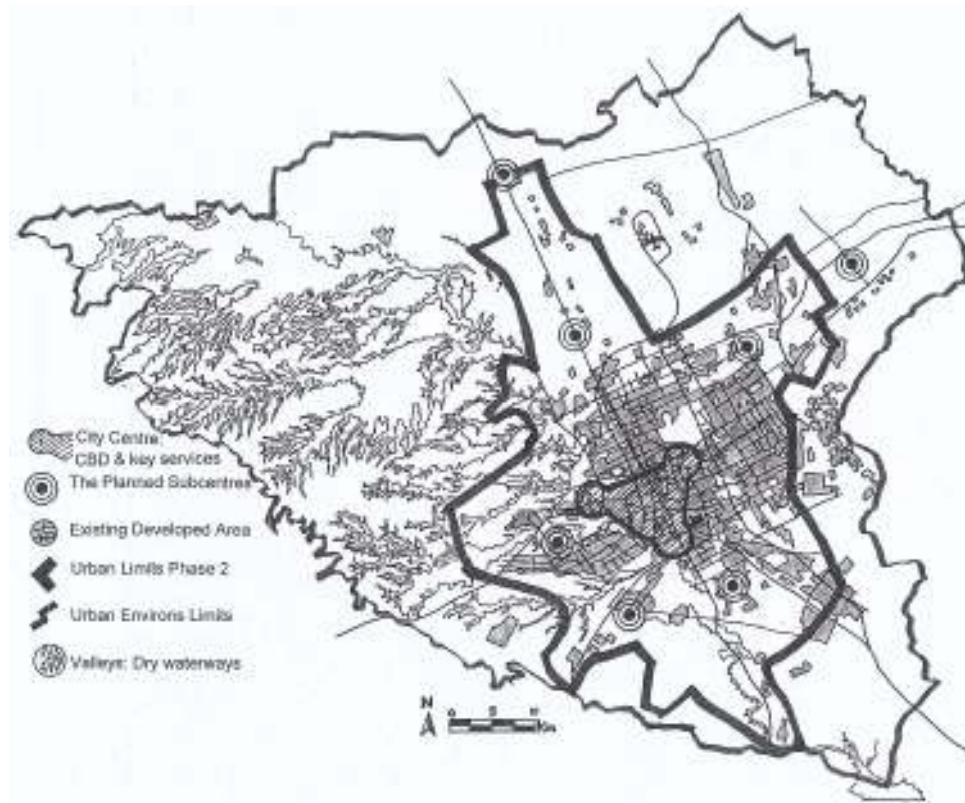


Figure 3: Locations of the Planned Sub-Centres within the City's Metropolitan Limits

Taking into account that each urban growth corridor in the city can accommodate between 600 thousands and one million inhabitants towards the year 2025. The planned sub-centres will become new focal points to house essential and quality services and activities for their serviced areas (that is within a radius of 10km). A set of objectives were adopted when planning for the sub-centres, these include (1) maintaining safe environment that provides floor for both quality living and successful businesses, (2) high economic viability, (3) creation of job opportunities, (4) prosperous and active business centres to serve the development requirements and people needs, and (5) creating an environment that reflects the local culture of the city and its people.

Each sub-centre will have wide range of mixed land uses and a variety of services such as governmental and administrative services, economic activities. Also, a sub-centre will comprise a set of offices buildings, banks and financial services, shopping centres, social, cultural and recreational services as well as high density residential complexes.

4. A FRAMEWORK OF REGULATION

It should be taken into consideration that the approved regulations are going to be guidelines for the proposed plans targeting land owners and developers in order to illustrate the concept of sub-centres and its related initiatives. The approved regulations have been put forward to control planning and subdivisions, they will also control land uses, development densities, and other standards of urban design.

The gross residential density in the sub-centres will be between 30 to 35 units (dwelling) per hectare. While public spaces will take in half of the total area of each sub-centre to encompass administrative centre, open spaces, roads and a public transportation station. Bearing in mind that building ratio should not exceed 50% of any land parcel.

However, for special and unique projects within the proposed sub-centres, private sector initiatives could be encouraged to increase the limit of floors number to 12 conditioned to the consent of HCDR.

Developers will be required to provide all the infrastructure elements including side walks, landscaping, street lighting, etc. Roads and streets must be built to the highest standards possible with clear hierarchy and then linked with the city main traffic system. Car parking for offices and commercial uses will be one car parking for every 25m², and one car parking for every residential unit. Pedestrian paths and other design standards related to privacy, safety, street and advertising signs, landscaping elements will be proposed by developers and approved by HCDR. Such proposals should follow similar standards for comparable special developments.

Table 2: Regulations of Land Uses, Percentage to the Sub-Centre Area, And Maximum Number of Floors

Land use	% uses/centre's total area	Max. floors No.	Planning share
Residential: medium to high density	20-25%	2	50%
Commercial:	25-30%	6	

retail, offices, hotels, banks, shopping malls			
Public services: administrative centre, technical institutions, colleges, library, cultural centre, hospital	9-12%	3	50%
Open spaces: parks, play grounds, plaza, foot paths	10-15%	-	
Roads and infrastructure:	22-26%	-	

Source: ADA (2007)

5. POLYCENTRIC MODEL FOR RIYADH, COULD IT WORK?

Seeking to transform Riyadh into a city with an acceptable balance between work and living, then, a deliberate distribution of activities and functions throughout its metropolitan limits would be an essential choice for the future. Promoting of sub-centres could play a central role in order to draw development pressure away from Riyadh's inner areas and establish an urban structure that is based on a polycentric system.

In this regard, a decision to introduce sub-centres of concentrated mixed uses (focal points of key services and employment) is a realistic alternative in order to deal with the urban growth and its control policies. Such a decision would help in avoiding the urban constraints related to the shaping of overall patterns of growth, and simultaneously achieving the objectives of metropolitan structure plans.

However, the shift towards a polycentric metropolitan development may not necessary be a smooth change. It may rather come across some difficulties in the case of Riyadh city. First, most of the lands in the areas designated for the development of sub-centres are privately owned. And this makes it inevitable to increase the provided incentives to expedite the development in accordance to the approved regulations.

Second, the absence of a comprehensive network of rapid transit within the areas of the proposed sub-centres creates a major obstacle towards the implementation of such a strategy. Taking into account that the initial development of sub-centres in Tokyo was largely an outcome of the advantages brought about by the location at the points where rail lines intersect and commuters changed travel mode (Sorensen, 2001:14). Thus, having no reliable public rapid transit will not facilitate the achievement of one of the main reasons of polycentric model, which is a shorter work travel trip. Third, private sector may not essentially be willing to channel its capital investments in sub-centres development; they rather prefer more lucrative development such as investing in the housing sector. Forth, the regulation of the planned sub-centres did not include neither budget nor land acquisition mechanism adequate to carry out the proposal. Fifth, the infrastructure services in the city may already be overstressed and exhausted in some parts. Therefore, the marginal costs of expanding capacity to the new developments should follow proper estimations and recognise future needs of the planned sub-centres.

6. CONCLUDING REMARKS

Contemporary strategic metropolitan planning embraces the approach of polycentrism as one of the applied means to solve the cities problems such as rising land prices and rents, congestion and environmental externalities, etc. Polycentric development is an effective policy to relocate services and employment, producing a balanced growth that could reduce urban sprawl.

The introduction of polycentric metropolitan strategy could improve the economic basis, environment and infrastructure services of the city. It may enhance the economically less favoured parts of the city, in order to increase their attractiveness for investment on one hand, and promote economic diversification on the other. Success in promoting a sub-centre plan should come through an appropriate location policy and land use planning to stimulate the mixing of urban functions and the use of public transport. Moreover, the promotion of sub-centres should encourage and support partnership-based approach with the private sector through joint projects and the mutual exchange of experience to attain the desired outcomes.

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