

# Urbanization and Urban Pattern in Yemen

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**Abstract :** Urban development in Yemen is more than two and a half thousand years old and has adapted well to the historical and the economic changes in the past. However, in recent time towns face problems which seems to put great challenges to its urban culture, infrastructure, architecture, social fabric etc. The present paper attempts to investigate the urban pattern in Yemen during the past two decades. Variations in urban development and growth pattern in Yemen have occurred mainly due to spatial discrepancy in geo-economic and strategic factors. The distribution of urban centres and growth rates of primary and secondary urban settlements are investigated with reference to factors of urban growth since 1986.

## Introduction

The history of Yemen forms an inseparable part of the development of the Arabian Peninsula where several kingdoms emerged, matured, and disappeared. At the time when transportation technology was primitive, the location of Yemen mid-way between the western and the eastern world meant wealth and prosperity. In the past, Yemen's role functionally depended on its location as a transit point between India and China in the east, and the Middle East and the western world on the west. The location of Yemen (figure 1) shows its strategic location in the context of its historical centrality in the Old World. Overall, Sana'a, the capital is located in the centre of this nodal location. "The Arabian peninsula has an ancient urban

tradition dating back to 700 B.C. when the South Arabian Kingdoms of Mi'naean and Sabaeen established trading settlements along the western periphery of the peninsula in Hejaz. At their height, the Mi'naean and Sabaeen each controlled part of South Arabia, which became under them an important area for trade and commerce. Other petty kingdoms grew up on the northern fringes of Arabia. The earliest of these was that of the Nabataeans, whose capital city of Petyra, in present day Jordan, was an important trade centre during the Hellenistic and early Roman periods (about 350 B.C. to about A.D.100)" (Karan and Carami, 1988).

The distribution of population in the Republic of Yemen contrasts with that of other Arabian areas where the population of many Arabian countries is concentrated in the marginal areas or in the river valleys as the desert occupies the centre, whereas in case of Yemen the population is clustered in the heart of the Yemeni land because of the relatively higher rainfall and fertile soil in the high lands.



Fig. 1 : Location of Yemen

## Ancient Urbanization

The history of urbanization in Yemen (Arabian peninsula) goes back as far as the second-first

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1 millennium B.C. By that time, a number of urban centres had emerged under the Saba'ian, Mi'naean, Hadramout and Qataban Kingdoms and later under the dominion of the Himyarrit Kingdom. The most famous cities of pre-Islamic era were Baraqish, Qataban, Awsan, Qarnaaw, Nashaq, Shabowah, Mareb, Sana'a, Ragma (Nagran), and Dafar. Most of them are located in the lowland valleys having close proximity to the sea routes, only Sana'a and Dafar, are both located in the highlands. The latter two assumed importance when the centre of power and trade routes shifted from lowlands to the highlands. As trade passed from the land routes to the sea routes, many cities along the coastline such as Ashahir, Al-Mukalla, Qana, Aden, Moza, and Mocha prospered (Al-Khameri, 1992). A number of cities emerged and thrived during the Islamic period such as Sana'a, Mocha, Moza, Zabid, Jiblah, Modighra, Tarim, Ta'iz, and Shibam. Many of these ancient cities, which are still functioning today as secondary cities along with other cities, are shown in figure 2.

Unlike the valleys of the Tigris-Euphrates, Nile, and Indus, the Yemeni civilization of lowland valleys was supported by an advanced irrigation system, based on seasonal rainfall storage, rather than continual flow of water resources through perennial rivers. Agriculture based economy and trading nodes were scattered all over the land of Arabia Felix (old name of Yemen). "Yemen is one of the most ancient settled countries of the Arab world with a rich cultural heritage and old civilization going back to at least 3000 years." (Al-khameri, 1992)

With the invention of sophisticated irrigation systems and dam building along with an improved plough, the ancient Yemeni civilization dominated a larger part of the Arabian Peninsula, controlling the transit stations between the Indian subcontinent and the old western world, including Egypt. Berger and Kampsax (1977) have stressed the antiquity of Yemeni urban tradition, "The urban tradition in Yemen goes back to the Himyaritic, Sabaean and Mi'naean civilizations. For thousands of

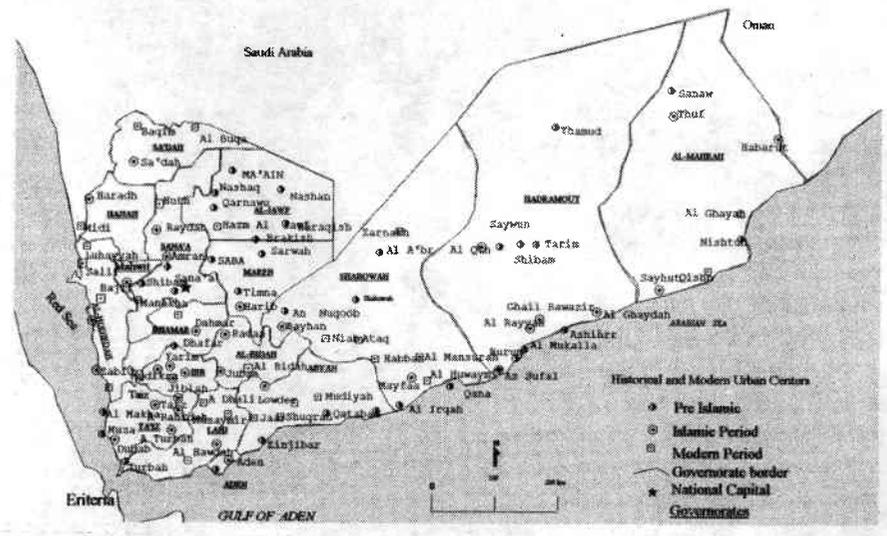


Fig. 2 : Ancient and Modern Urban Centers

years Yemeni cities have functioned as centres for trade, often assuming a predominant role in the Arabian Peninsula and the Indian Ocean. Besides being centres of trade and agricultural distribution, the ancient cities of Yemen served as the political and economic centres of Arabia. The seventh century A. D. was a critical time in the history of Arabia, which resulted in the marriage between the ancient Yemeni culture, symbolized by the urban architectural heritage and the Islamic culture. These events represented a turning point in the socio-economic organization and urbanization trends, which have had a tremendous impact on the pattern of urbanization in the area. Under the Islamic state, several cities and towns were established as political and educational centres where Islamic teaching spread. Taxes (*zakaht*) collected sustained these urban centres during this era.

The geographical situation of Yemen, straddling the Red Sea and the Indian Ocean, on the one hand, combined with proximity to the Fertile Crescent and Egypt on the other, made it the third centre of ancient civilization. Therefore, Yemen has frequently been the focal point of attention by the large Empires of the time, like the Abyssinian, Persian, Portuguese, Ottoman and British empires. Such a situation was a mixed blessing, because it brought wealth and want as well as good and evil into the area, depending on the ups and downs in the socio-economic and political situation through its history. Due to the openness of its coasts and in spite of the relative inaccessibility of its closed highland interior, Yemen has been influenced by and has contributed to civilizations of the ancient world and the overall development of the Middle East. The ruins of ancient cities, elaborate dams, irrigation systems, monumental buildings, and man-made terraces bear testimony to past Yemeni urban civilization.

The Arabian-Islamic culture, which significantly characterizes the structure of the Arabian city, reflected in the city formation

namely the distinctive elements such as a specialized market (*the suq*), a great or major mosque (*masjid* or *gama'*) and a fortified wall with gates. However, in many cities, which have been subjected to colonization, like the North African cities, an altered form brought about inconsistency not only with regard to the architectural style and the layout of the city, but also in terms of the socio-economic fabric of the city. In this connection, Eckert (1992) has stressed the alteration of the typical Islamic cities in North Africa, as well as Sana'a. According to him, "the medina's (cities) in North Africa have fought a running battle for up to 100 years with colonial cities, whose grid pattern enveloped them like a spider's web of steel and concrete, Sana'a suffered a much more sudden blow barely ten years ago when it lost its ramparts and strategically important northern, western and southern gates." (H. Eckert, 1992:2) Furthermore, mercantilism and high technology of the modern period has destroyed the potential of the Third World cities to develop naturally, at the same time making them incapable of building a competitive modern socio-economic foundation, which could act as a springboard for subsequent development.

Early Islamic Yemen was divided into three administrative provinces: Sana'a, Al-Janad, and Hadramout. Yemen used to have a few independent states during the medieval period, each with its own capital, such as Mikrana, Jiblah, Zabid, Aden, Ta'iz, Sana'a and Shohara. Before the twentieth century, there were no significant urban centres exceeding 100,000 inhabitants, except for Aden, as Yemen had undergone a long period of isolation under the Imamate dynastic rule. Now Yemen has 19 provinces or governorates (including 2 more new governorates: Ammran and Ad-Dalea were created in 1999) in addition to the national capital, Sana'a.

### *Modern Urbanization*

The definition of towns in Yemen has differed from decade to decade and between

former North Yemen and South Yemen. In North Yemen, 2000 persons, in addition to an administrative function were the criteria for distinguishing towns from rural settlements in 1975. The Census of 1986 puts the figure at 5000 persons, instead of 2000 for an area to qualify as an urban centre. In the former South Yemen (according to the 1973 census), urban population was defined as 1) the inhabitants of Aden, 2) the population of the capitals of the governorates, 3) and the residents of the administrative centres. Therefore, in Yemen the urban proportion varies significantly as South, and North Yemen had different yardsticks by which an urban area was defined. However, according to the last census of 1994 for unified Yemen, "*all centres of moderiahs (districts) and towns of 5,000 population or more were considered urban centres (towns and cities.)*"

### *Urban Population in Yemen*

Modern urbanization in Yemen is of recent origin. The Revolution of 26<sup>th</sup> September 1962 in the former North Yemen and the Revolution of 14<sup>th</sup> October 1963, in the South marked the beginning of the modern phase of urbanization. The other important events leading to urban growth were: 1) Independence of South Yemen from British dominance on 30<sup>th</sup> November 1967, 2) the discovery of oil in 1984, 3) the Unification of Yemen on 22<sup>nd</sup> May 1990, 4) and the return of workers from abroad, following the Gulf War in 1990 (Al-Khameri 1992). All these events had a positive impact on the urban process in Yemen reflected in the population growth.

In the last 25 years, the population of Yemen grew rapidly, and consequently the population density per square kilometers grew from 12.7 in 1975 to 31 in 2000. A large variation among the governorates and cities exists in terms of density. Sana'a city has shown the highest population density per unit in relation to other cities while Ibb governorate

achieves the highest population density among the governorates. Non-availability of civic records in Yemen makes it difficult to go back several decades to assess the urban growth in a temporal perspective. The first ever-recorded reports were the charity records in 1949 for north Yemen and that of Aden colony in 1946. Those records mentioned that the urban proportion in the North was 5% and the population of Aden was about 83,000 of which 70.6% were Arabs and 0.4 % Europeans and the remainder consists of other ethnic groups.

In North Yemen, the urban population formed only 2.8 percent, land in former South Yemen about 17 percent of the total population in 1955. These figures rose to 13.3 and 35.9 percent, respectively by 1985 (Al-Zua'bi, 1994). The proportion of urban population in Yemen according to the first census in 1975 was 11 percent. After unification in 1994, the urban population grew to 3.4 millions, representing about 24 percent of the total population of 14.59 million inhabitants. It is estimated that the proportion of urban population, which was 26.54 percent in the year 2000, might increase to around 29 percent in the year 2005.

Yemen is one of the least urbanized societies in the Arab World. The Arab countries can be classified into three categories, in terms of their urban ratio. The leading countries with the highest share (over 80 percent) of urban population are the Gulf countries, Lebanon and Libya. The least urbanized group (10-40 percent) is represented by Yemen, Sudan, and Somalia. The third intermediate group (41-79 percent) form the remaining Arab countries: Iraq, Egypt, Algeria Jordan, Oman, and Morocco etc. (Al-Khameri, 1992). Surprisingly, the Arab countries with the lowest levels of urbanization have the highest annual urban growth rates. Like in most of the Third World countries, the urban population in the Arabian countries resides in the major urban centres. Thus, capitals and port cities usually dominate the urban hierarchy in these countries.

## *Distribution of Urban Population in Yemen*

The population of Yemen is scattered over a number of small villages (37,598) and hamlets (68,215), in addition to primary cities (18), secondary cities, and towns called *Moderiat* (226). Given the geographical location and the topography of Yemen, around two-thirds (75 %) of the population clusters on the Plateau region, around an ancient strip extending from Sa'adah in the north to Aden in the south. Many towns located along this strip have experienced civilization through thousands of years and Al-Zua'bi has referred to it as "a Civilized Mountain Strip." Such a distribution reflects the age of settlements, soil fertility, precipitation advantage, and relative availability of transportation in this Plateau Region. The remaining population settled along the coastal valleys and in the eastern region and at the margins of the desert.

The total population of Yemen is distributed over 19 governorates, in addition to the national capital. Each of these governorates has a provincial capital and many administrative (*Moderiat*) centres, besides a large number of villages and hamlets. The first census taken in 1975 shows how little Yemen was urbanized, despite the low level fixed by the census to define an urban area (2,000 persons and over). According to this census, former North Yemen had only 11 percent of the population living in cities, but if 5,000 inhabitants were considered as a minimum size of an urban centre, the rate would have fallen to 7.5 percent.

According to the census definition of 1994, the urban population formed 23.47 percent (out of 14.9 millions), of the total population. Out of this about 70% of total urban population lived in the 18 central cities of the governorates (table 1). The urban population in the whole country increased more than three times from 0.77 million to 3.42 millions between 1970 and 1994, with an annual growth rate of about 13-

14 percent. It was estimated to be 4.6 million in 1999 (Al-Zua'bi, 1994, p.202, 1994 Census of Population and Housing, and SYB 1999). Population projection estimates that the total population of the country would be 20.3 million in 2003.

The major factors of rapid urban growth have been besides the high natural growth rate in-migration from rural to urban areas and the influx of returnee workers from Gulf States, who preferred to reside in the primary urban centres, especially in Sana'a after the Gulf War.

### *Urban Share of the Central Cities (capitals) of the Governorates*

Distribution of urban population is reviewed under different aspects. First, the urban population in the governorates is measured against the total urban population in the country, secondly the capital cities are compared with the total urban population of their governorates, and the urban population of a capital city is compared with that of all capitals (table 1). Furthermore, an annual growth of urban population living in capital cities and other urban centres is used to evaluate capital cities' urban development in relation to other urban settlements during the inter-censal period, 1986-1994 as shown in table 1 and figure 4.

More than two-thirds of the total urban population resides in the provincial/governorate capitals, including the national capital city of Sana'a and the free-economic capital of Aden. The remainder of the urban population (30%) is found in 226 administrative centres (*Moderiat*) or districts. Even though the population of an administrative centre (*Moderiah*) does not exceed 5,000, it is considered an urban centre according to the 1994 census because of its administrative function and these centres are many.

Table 1: Percentage of Urban Population and Capitals' Shares to Total Urban Population of Governorates: 1986-1994

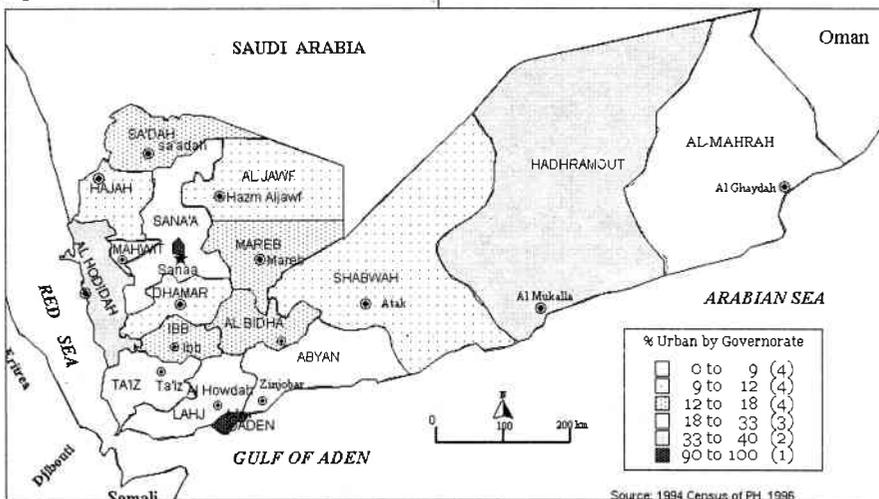
Governorates	% Total Urban Population 1994	Capitals	% Urban Share of Capitals to Gov.		Ann. Growth of capitals 1986-1994	Ann. Growth rate of Govr. 1986-1994	% of all Urban in the country		No. of urban centers		
			1986/88	1994			1986/88	1994	1975	1994	
1	Sana'a city	100	Sana'a city	100%	100%	15%	15%	22%	28%	1	1
2	Sana'a	6	Sana'a	92%	90%	6%	4%	2%	3%	33	37
3	Aden	91	Aden	100%	99%	6%	2%	17%	12%	NA	4
4	Ta'iz	18	Ta'iz	89%	85%	11%	3%	10%	11%	18	20
5	Al-Hodaidah	35	Al-Hodaidah	52%	55%	12%	3%	15%	16%	18	22
6	Lahj	5	Al Hawdah	55%	61%	2%	3%	2%	1%	NA	5
7	IBB	13	Ibb	48%	45%	14%	2%	5%	7%	20	20
8	Abyan	19	Zinjoubar	22%	17%	6%	3%	3%	2%	NA	4
9	Dhamar	11	Dhamar	89%	80%	10%	3%	3%	3%	9	9
10	Shabowa	11	Ataq	11%	23%	38%	9%	2%	1%	NA	5
11	Hajja	9	Hajja	55%	23%	7%	5%	1%	3%	31	33
12	Al-Baida	17	Al-Baida	31%	25%	10%	3%	2%	2%	10	12
13	Hadramout	33	Al Moukalala	37%	39%	7%	2%	13%	7%	NA	8
14	Sa'adah	12	Sa'adah	92%	48%	2%	5%	1%	2%	12	14
15	Al-Mahwit	7	Al-Mahwit	43%	35%	10%	2%	1%	1%	7	8
16	Al-Mahra	32	Al Ghidah	31%	43%	7%	-5%	2%	1%	NA	4
17	Mareb	11	Mareb	21%	20%	33%	6%	0.3%	1%	4	12
18	Al-Jawf	16	Al Hazn	94%	21%	20%	12%	0.1%	1%	NA	9
18	Total / Meap	23	18	72%	70%	10.5%	3.5%	17.3%	23.5%	163	226

Note: The national capital included in Sana'a Govr. And Figure of urban for Hazn Al Jawf has been corrected

Source: 1975, 1986, 1993, 1996 Statistical Year Books. 1994 Census of Population and Housing. Dr. Az Zua'bi, M, 1996

In addition to the capital cities, the remaining urban population is dispersed all over a large number of settlements due to the small size of urban centres. Despite an annual overall growth rate of 3.5 percent between 1986 and 1994,

the average annual growth rate of the urban centres amounted to 10.5 percent for the same period, which means three times the rate of natural increase, i. e. around two thirds of the urban growth was mainly due to rural-to-urban



Source: 1994 Census of PH, 1996

Fig. 3 : Distribution of Urban Population by Governorate

Fig. 4 : Annual Growth

migration and only one third is attributed to natural increase. Table 1 gives a clear idea of the pattern of urban distribution. The provincial/governorate capitals act as polarization forces for both, internal migrants and external immigrants. A comparison between the population figures of 1986 and 1994 show that the small and large provincial capitals do not grow at the same rate, some capitals are even declining.

Distribution of urban population according to the 1994 census clearly brings out the excessive concentration in primary cities, particularly the capital cities. This is reflected in the urban distribution in figure 3 and table 1. The capital cities of Sana'a, Aden, Ta'iz and Dhamar have more than 80% of the total urban population of their respective governorates while the small capital cities have attracted less than one-third of the urban inhabitants from their regions (figure 5), due to poor infrastructure and lower level of social facilities. Therefore, the socio-economic and commercial functions of some capital cities along with their administrative functions are mainly responsible for extreme concentration of urban population. in these cities.

Individually, Sana'a city, and the governorates of Aden, Al Hodeidah, and Hadramout show the highest percentage of urban, though the governorates of Sana'a and Lahj demonstrate the lowest ratio of urban population as shown in figures 3 and 5.

About two-thirds of the urban population in Yemen concentrates in the four regional cities, namely Sana'a, Al-Hodeidah, Aden, and Ta'iz. Fifteen out of the seventeen capital cities showed a growth rate well above the rate of natural increase, ranging from 6% for Aden and Zinjoubar, 33% for Mareb and to 38% for Ataq (Shabowah), between 1986 and 1994. The higher annual growth rates of Ataq (38%) and Mareb (33%) are the result of economic factors, namely oil production. Another factor for the growth of Ataq was political stability, a large number of returnee population settled there after the Gulf War. The high growth rate for the other capital cities are due to the lack of employment opportunities and social facilities in the rural regions surrounding these capitals, causing a flow of rural migrants to the central cities of the region, seeking work, better infrastructure and social facilities, especially education. Only two capital cities, namely Sa'adah and Al Howdah reported

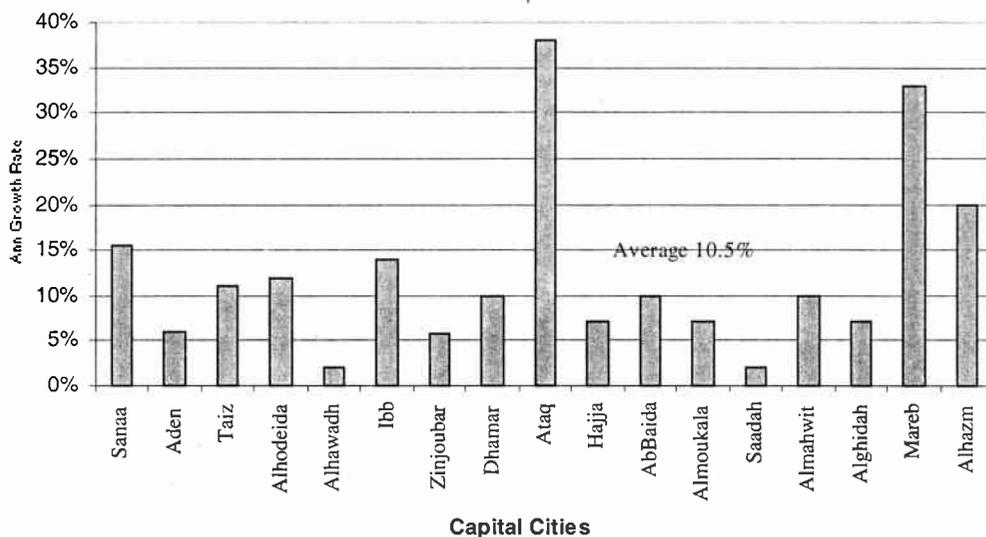


Fig. 4 : Annual Growth Rate of Provincial Capitals: 1986-1994

growth rate below the natural increase rate. Sa'adah town seems to be overshadowed by other fast growing secondary towns in the governorate and Al Howdah by the nearby towns of Aden and Zingobar. The relative loss of urban population from these cities could be also due to the attraction exerted by the main cities, or due to out-migration to Saudi Arabia, particularly Sa'adah that has a common border with Saudi Arabia. Therefore, the difference between their overall natural increase and the annual urban growth rate can be attributed to migration, specifically urban-to-urban migration.

The capital cities of the seven governorates; Mareb, Ataq, Sana'a, Ibb, Al-Hodeidah, Al Hazm and Ta'iz had a growth rate ranging between 11 and 38 percent which can be explained by the availability of employment opportunities at these capital cities, whereas, several of the other capitals with lower annual growth rates are those located in the southern region, including Aden, northern and western regions such as Sa'adah, Hajjah. Despite their small size, the capital cities of Hazm Al Gawf, Ataq in Shabowah, and Mareb have experienced the highest annual growth rate between 1986 and 1994 (figure 4 & table 1), which can be attributed to the attraction of oil

fields found in these regions, besides the fact that attention has lately been given to these regions by the government.

An uneven development and unequal distribution of national wealth and social welfare and facilities have lead to the dominance of a few urban centres over others. Furthermore, the existing gap between rural and urban areas in terms of socio-economic development finally compels or forces the masses to leave their original settlements in search of employment opportunities, social facilities such as education and health care and in the hope of improving their living standards. Five provincial cities, namely Sana'a, Aden, Al-Hodeidah, Hadramout and Ta'iz accounted for more than three-quarters (76.1) of the total urban population in the country in 1986. Their share declined in 1994 to (73.4) because of either the emergence of new urban centres or on account of rapid increase in the other southern cities.

The phenomena of single-city dominance in each governorate in Yemen can be illustrated by the concentration of urban population in the four provincial capital cities, attracting more than 85 percent of the total urban population of their regions in both, 1986 and 1994, which is clearly marked in the rank

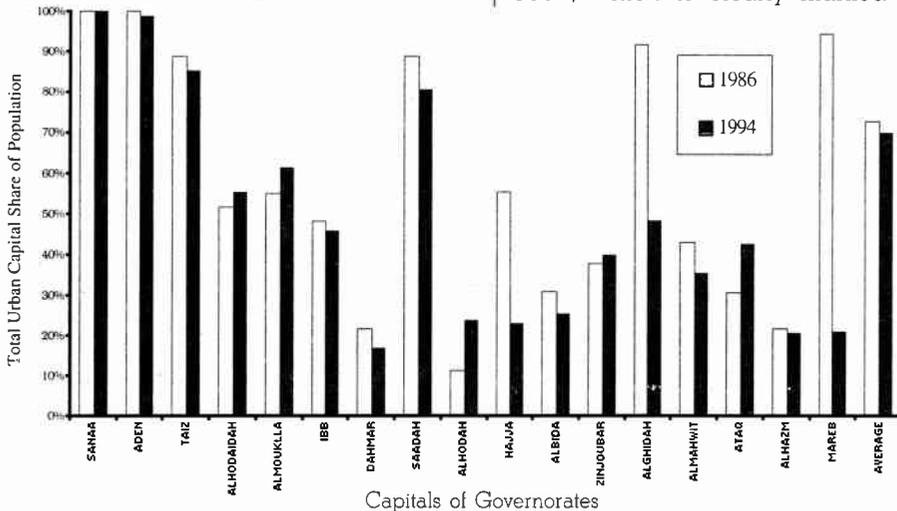


Fig. 5 : Concentration of Urban Population in Governorate Capitals in 1986 and 1994

**Table 2 :** Annual Urban Growth by Governorate, Capitals, and Urban Centres: 1986-94

Governorates/ capitals	Rank Order of Capital Cities		Ann. Urban Growth Rate between 1986 and 1994			Ann. Rural Growth from 1986 to 1994		Net Migration (Lifetime mig.)
	1986/88	1994	Govr.	Capital	Centers	Rate	+ natural	
San'a City	1	1	0.15	0.15	0.27	0.06	--	53.8
San'a/Sana'a			0.27			0.03	2.5	-7.2
Aden/Aden	2	2	0.06	0.06	4.15	0.04	-0.5	25.2
Ta'iz/Ta'iz	3	3	0.12	0.11	0.2	0.04	0.05	-4.7
Al-Hodeida/Al-Hodaidah	4	4	0.11	0.12	0.09	0.05	0.05	8.2
Hadramout/Al-Moukala	5	6	0.06	0.07	0.05	0.04	1.05	-5.8
IBB/Ibb	6	5	0.15	0.14	0.16	0.04	0.05	-6.7
Dhamar/Dhamar	7	7	0.12	0.10	0.31	0.05	0.05	-4.3
Sa'adah/Sa'adah	8	8	0.15	0.02	1.58	0.05	1.05	-8.0
Lahj/Al-Hawadah	9	11	0.009	0.02	-0.02	0.08	1.05	0.02
Hajja/Hajja	10	9	0.36	0.07	0.71	0.06	4.5	-1.1
Al-Baida/Al-Baida	11	10	0.15	0.10	0.17	0.05	2.5	-5.3
Abyan/Zinjoubar	12	12	0.12	0.06	0.13	0.07	1.5	1.2
Al-Mahra/Al-Ghidah	13	15	0.008	0.07	-0.02	0.05	3.5	3.04
Al-Mahwit/Al-Mahwit	14	13	0.15	0.1	0.19	0.13	1.5	-10.08
Shabowah/Ataq	15	14	0.09	0.38	0.06	0.15	11.5	8.8
March/March	16	16	1.36	0.2	21.19	0.3	26.5	5.07
Al-Jawf/Hazm Al-Jawf	17	17	0.35	0.33	0.35	0.1	6.5	1.03
Average			0.11	0.1	0.14	0.05	1.5	2.9

Source : 1975, 1986, 1993 and 1996 Statistical Year Book, Census of Population and Housing  
Az-Za'ubi, M. Almarjai fi Athaqfah Asukaniah

order distribution. (Sana'a, Aden, Ta'iz, and Sa'adah). On the other hand, there are four other provincial capitals, which make up fewer than 20 percent of their total regional urban population due to the balanced growth of urban centres within their regions. The remaining capitals had between 20 and 85 percent of the total urban population in their regions (figure 5). Part of the reason, as discussed above, relates to the unequal distribution of development and resources such as employment opportunities and social facilities, which is responsible for such concentration. Important socio-economic factors are industrial development, oil production, and infrastructure. The other factors are those associated with the city as a capital or an urban centre of long standing or

having certain historical attributes and a general perception of Sana'a and Aden as preferred cities. The census data reveal that Aden and Hadramout governorates appear to lose their dominant position, as the national capital moved to the north since the unification of 1990. Their overall urban share fell from 17 to 12% for Aden and 13 to 7% for Hadramout between 1986 and 1994, while Sana'a's share rose from about 22% to 28%. This inverse trend applies to the relative share of urban population among capital cities of the governorates too. This decline is reflected in the annual growth rate of 4% for Aden against more than 15% for Sana'a, for the same period.

Table 2, and figure 7 show the ranking of the eighteen capital cities including the

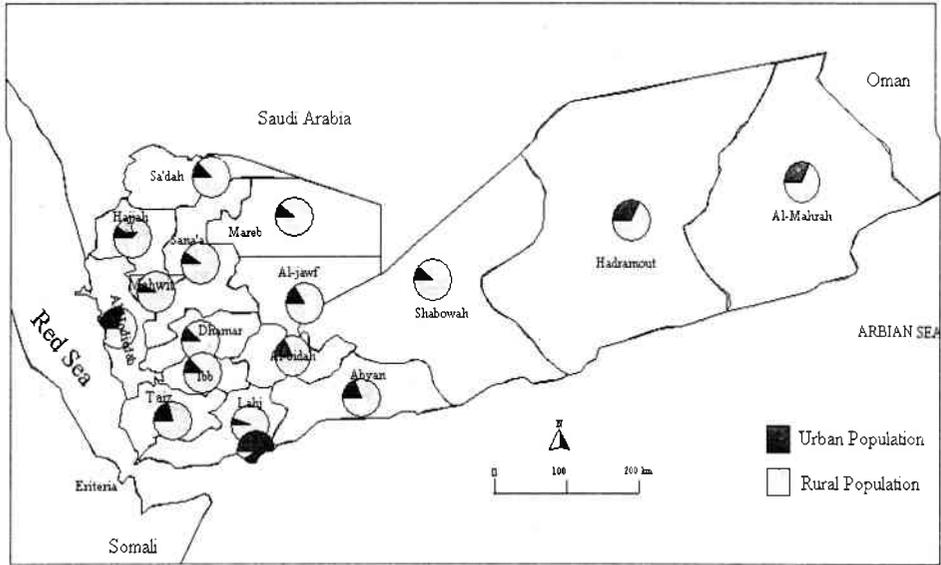


Fig. 6 : Distribution of Urban-Rural Population by Governorate

national capital of Sana'a. The largest four cities and the smallest two cities maintain their rank order between the two census of 1986 and 1994, while many medium size cities have changed their rank position, which indicates

that these cities have not yet attained their stable demographic features, due to instability in their socio-economic conditions. Another fact is that the annual growth rates of both central city and the secondary urban centres

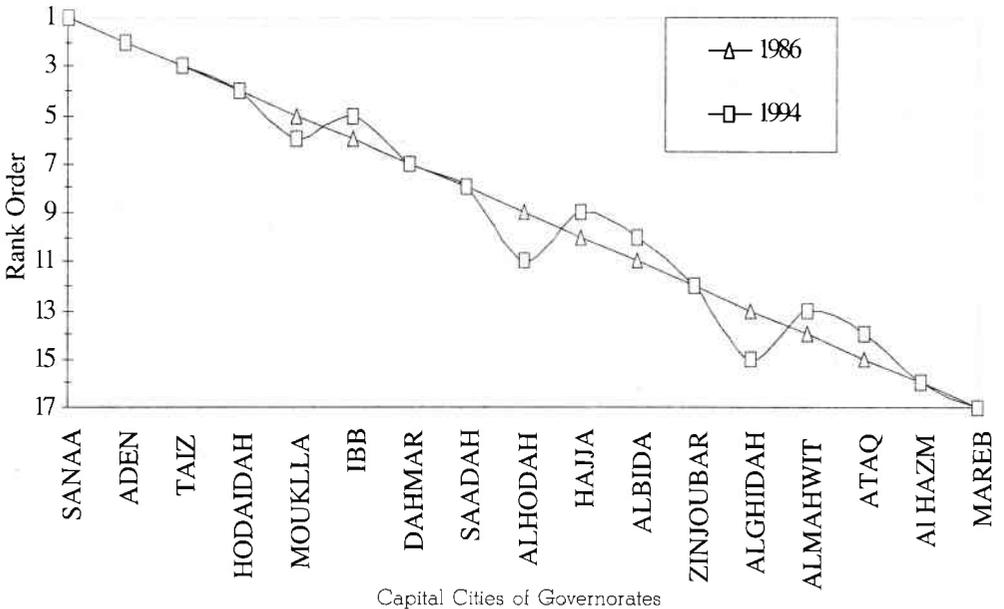


Fig. 7 : Rank-Size Order of Provincial Capitals:1986 & 1994

vary widely in all governorates. The secondary urban settlements of Aden, Al Gawf and Sa'adah recorded the highest rate of growth far beyond their capital cities between the two censuses. However, secondary urban centres of Lahj and Al Mahrah show negative growth rate which can be attributed to migration from these centres to either primary cities or abroad. Sana'a city, Aden, Al Hodeidah and Shabowah were the most attractive urban centres for migration. This is indicated by a higher rate of net migration, while Al Mahwit and Sa'adah showed the highest negative rate of net-migration.

### *Sources of Urban Growth in Yemen*

Components of population growth are the two vital rates: birth and death rate and migration. The natural growth rate being the difference between birth and death rates and of the total growth rate includes incoming and outgoing migrants. The average sex ratio in the urban areas of Yemen was 118 against 101 in 1994. This difference of 17 persons with more men than women for every 100 persons indicates that migration from rural to urban areas is significantly the major demographic source of urban growth. Sana'a City has the highest sex ratio (130) among the other urban centres and consequently the most intense and diversified pull forces attracting emigrants and returnee workers from abroad due to its comparatively effective urban functions. The most striking example of rural-to-urban migration can be understood with regard to Sana'a City. Assuming 3 percent as the city's rate of natural increase between 1986 and 1994, about 19.5 percent of urban growth can be attributed to natural increase, 9.9 percent to returnees from abroad, and 70.6 percent to mainly rural-urban migrants. This analysis is confirmed by the census of 1994 which show around 51 percent of current residents in Sana'a City had their previous residence in areas other than Sana'a City. Another earlier study reported that about

46 percent of Sana'a population in 1986 came from other regions within Yemen (Al-Zua'bi, 1994). Al-Khameri finds out in his study, titled *Intra-urban Residential Preferences in the City of Sana'a, 1992*, that about 80% of Sana'a residents came from other areas, which confirms our survey findings in 1999 that about 80% of the population are not born in Sana'a and came from other areas. The above factors of growth imply another set of facts explaining the direct demographic components. These invisible aspects represent socio-economic factors, which underlie the functions of Sana'a city dominating the urban hierarchy. For example, the privilege of administrative function and industrial development as well as commercial dominance, enhanced quality of social life through income increase, availability of facilities and infrastructure in urban areas act collectively as reasons of urban growth as they attract more people and investments from rural or other urban areas, simultaneously they act as catalysts when concentration creates a need for more and more infrastructure and facilities. Accordingly, a dynamic chain of urban processes is born and developed within contrasting sides, urban/rural poles of urban process in Yemen unlike those of developed nations, which predominantly work from within the urban environment.

### *Conclusion*

Factors promoting modern urban growth in case of Yemen are in order of importance:

- 1) Rural-urban migration; this is clearly reflected in the sex ratio, which favours males in the large cities. Natural increase adds substantially to the growth of population, but the push-pull forces, generating an exodus to the urban areas is more significant; since only one-third of the urban growth is attributed to natural increase, while two-thirds is mainly due to rural-urban migration, especially during the last two decades.

- 2) Another important factor, which accelerated the process of urbanization, was on account of returnees from abroad, mainly from the Gulf States. Comparison between 1975 and 1994 in terms of the number of urban settlements shows an increase of 14% in the number of urban centres. Thus, increase in the number of urban settlements is less significant than the accretion to the existing urban centres, which reflects the poor development of infrastructure away from the primary urban centres and between governorates.
- 3) Variation in the growth rate of capital cities of the governorates further reveals the diversity in the levels of development as a result of differences of socio-economic and resource allocation policy.
- 4) Finally, there is a direct association between urbanization process and increasing size of rural-urban migration, while an inverse relationship is found between out- and in-migration. It is interesting to note the inconsistent pattern of growth between both, urban and rural areas, and the contrasting trends among the governorates, provincial capitals, and even the secondary urban settlements. This distorted pattern is brought about by a sudden inflow of returnee migrants from the Gulf States and by the great disparity in economic conditions introduced by the planning policies and the economic development strategy.

The prevailing living conditions in Yemen's rural areas are extremely unbearable and miserable, particularly during the last decade, due to high rate of unemployment, limited natural resources, insufficient cultivated land, inadequate schools, lack of social facilities and amenities, lower wages, total absence of health care and recreational facilities, scarce work opportunities. All these depressed living conditions were strong forces to draw the rural population into the cities.

It is true that modernization and urban process in Yemen have improved living standards, changed people attitudes, and have provided both rural and urban societies with a minimum level of general welfare, such as education and health care, freedom of movement and speech, nevertheless, the major fruition of modernization has been restricted to the high and upper middle class through advantageous economic position they occupy and the social prestige they enjoy.

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