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RURAL MIGRATION AND URBAN GROWTH IN RIYADH, SAUDI ARABIA

by
Saleh Abdullah Malik

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Sociology)
in The University of Michigan
1973

Doctoral Committee:

Professor Charles Tilly, Chairman
Professor Gayl Ness
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CHAPTER I

INTRODUCTION

Urbanization of Saudi Arabia:

At least thirty per cent of the population of Saudi Arabia were nomads or semi-nomads before the discovery of oil and the subsequent economic development in the 1940's. The rest of the population was engaged in handicrafts or had small shops in the suq or bazaar. With the exception of the two holy cities, Mecca and Medina, the growth of the urban population was minimal. The massive movement of people from the desert and from small villages to urban areas, especially to the capital Riyadh, did not begin until the 1940's. The growth of the urban population and rural migration to urban areas at the present time are phenomena which can be easily observed.

There are three cities (Mecca, Riyadh and Jeddah) each of which has a population estimated between 150,000 and 300,000. There are also twelve other cities, each with a population between 20,000 and 100,000. The total population of the country is roughly estimated at between six and eight million. Thus, it appears from these figures that Saudi Arabia is essentially rural. More

than eighty per cent of its population lives in localities of less than 20,000 inhabitants.[1]

The area of the country is almost one million square miles. The density varies from one region to another. It is about three persons per square mile in the Western province, two persons in the Eastern Province, and one person in the Central Province (Doxiadis, 1968, p. 2). The density is still very low, and there are large areas which are either desert, mountainous, or covered with sand dunes. The discovery of oil in the Eastern Province and the potential mineral sources in the west will no doubt increase the rate of urbanization in these areas. The Central Province, the least dense area, has begun to catch up with the other provinces. Buraida and Onaiza, twin cities on the Ruma wadi, have discovered huge amounts of potable underground water. This water has been utilized extensively in large agricultural projects. More importantly, the Central Province boasts the presence of the country's capital city, Riyadh. Since the 1940's, the administrative role of Riyadh actually has increased and brought a subsequent increase in population to its present level of 300,000 people.

In brief, the population is concentrated in the holy cities, the headquarters of the government, and the oil industrial towns. However, the two largest and most

---

[1]These figures are based on the author's preliminary knowledge and some unofficial reports.

dominant cities are Riyadh and Jeddah, located in the center and on the western coast, respectively. These two cities dominate all other cities in their cultural, educational, political, and administrative roles. On the whole, these two cities, having multifunctional characteristics, have been the destinations which migrants struggle for. Unemployment in rural areas has forced the villagers to seek employment in urban settlements. In addition, the development of services and communication facilities in industrial and commercial centers, along with government jobs, has increased this movement and turned it from a temporary to a permanent process.

Riyadh was chosen for this study because it is a good example of a fast growing city, and it has been the target of thousands of migrants since the 1940's. There is also more available information about its social and economic characteristics which will help achieve the purpose of this study.

History of Riyadh's Urban Growth:

Riyadh is believed by some historians to exist on the ruins of Hajr (Al-Jasir, 1966, p. 16). Hajr, the capital of Yamama province, was situated between wadi Bat'ha and wadi Hanifa. Hajr continued to be the major town in Yamama during the eighth and ninth centuries. However, Hajr's dominance gradually declined, and the town

eventually disappeared. Ten centuries later, the town was renamed Riyadh (Ibid. 16). "Riyadh" means gardens. This name was probably selected because of the city's proximity to the cluster of farms and green ranges located in a nearby strip of land between wadi Bat'ha and wadi Manfoha. Some of these farm villages, such as Manfoha, Meakal, Dukhna and Jabra, can still be recognized, even though they have now been annexed by the city administration, since the city's rapid growth has tended to absorb them. These villages appear to be self-contained, which might indicate that they once were economically autonomous. (Figure 1)

Riyadh became the capital of the Saudi dynasty around 1730, but its prosperity was threatened for a number of years by drought and attacks by hostile invaders. It survived but remained small and unstable until King Ibn Saud (the father of the present king) captured and revitalized it in 1902. The King immediately declared Riyadh the capital of Najd province. Thirty years later, Riyadh became the capital of Saudi Arabia after the King succeeded in unifying most parts of the Arabian Peninsula.

The construction of a new capital was a great challenge for King Ibn Saud. Other than unlimited space, everything was either scarce or totally unavailable. Water, skilled workers, construction materials and money were unavailable. First, the King built a wall with five

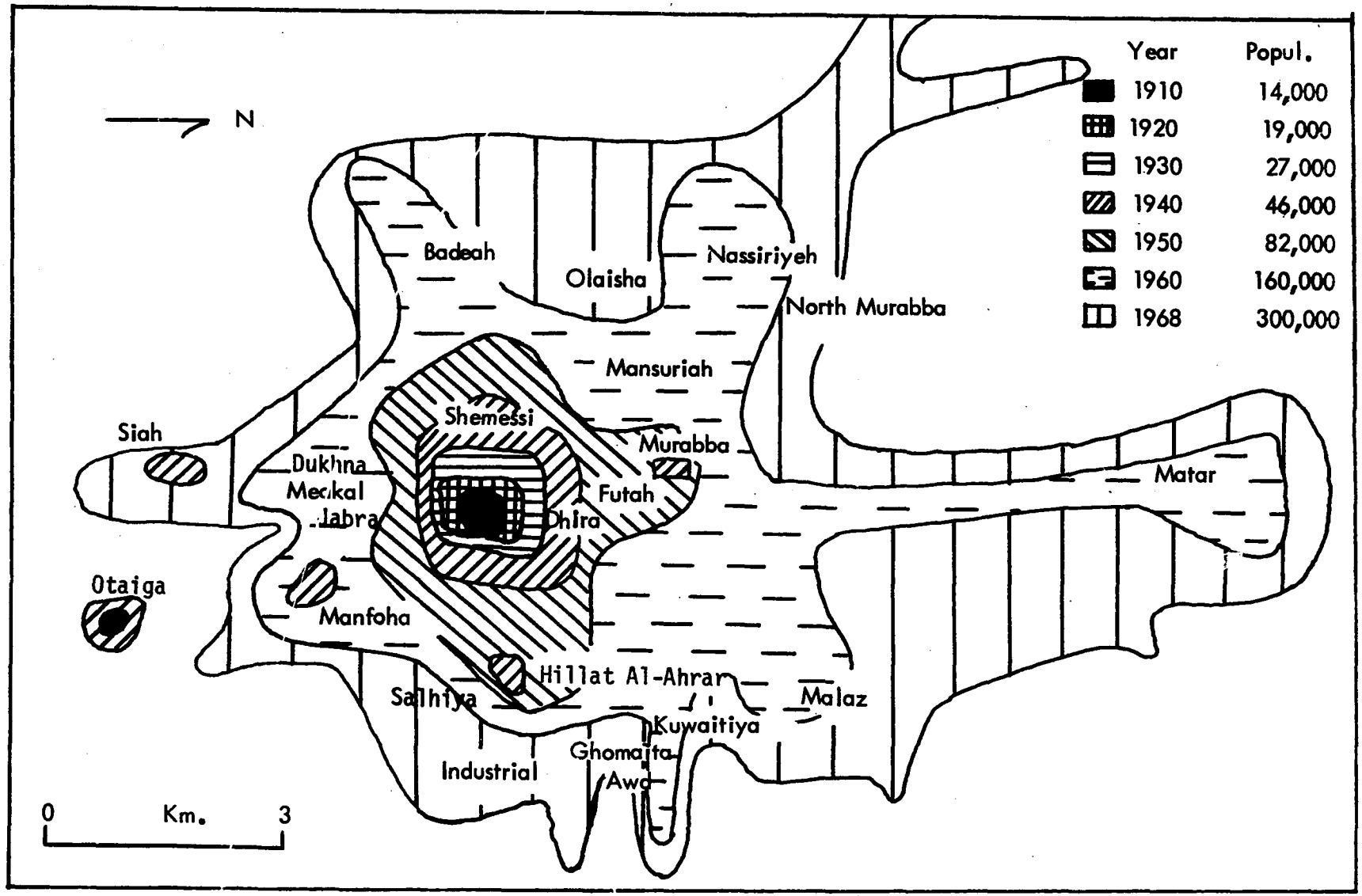


FIGURE 1. URBAN GROWTH OF RIYADH, 1910- 1968.

gates around the city to protect it from expected invaders. As time passed, political stability and relative economic progress were achieved. As a result of this progress, Riyadh began to expand beyond this wall in all directions. The King built a palace for the royal family outside the old city and called it Murabba or "Square Palace." The King's example was followed by others who crossed the wall and built new houses around the city. However, the style of the houses and housing materials remained the same. Mud or bricks made of mud and straw were the only materials used. The streets were narrow, short and curved. Riyadh began to grow slowly until the 1940's. Then it boomed in the 1950's when King Ibn Saud's dream became a reality. Water was discovered in abundance after many years of exhaustive geological surveys. In addition to the discovery of water, there are two factors that have contributed significantly to the growth of the city. The first factor was the connection of Riyadh with the industrial oil centers in the Eastern province through railway and highway construction. Second, Riyadh began to play a major administrative role after the move of the ministries, directorates, and other large bureaucratic government offices from the Western province to Riyadh (Doxiadis, 1968, p. 3). These two factors have certainly given impetus to Riyadh's fast growth, inasmuch as they have encouraged people to leave the parts of the country where unemployment is very high and come to Riyadh, where more

jobs are available. In fact, more than fifty per cent of Riyadh's population was not born in Riyadh. According to the Household Sample Survey conducted by Doxiadis Associates in 1968, eighty-five per cent of the city's household heads were born outside Riyadh.

Migration to Riyadh is still taking place, but the annual rate of increase of this migration seems to be declining due to the improving conditions in small towns and rural areas. Nevertheless, migration is still the main factor in Riyadh's rapid growth. Natural increase--birth over death--is also another factor in this growth. With the advancement of medical technology, the mortality rate has been declining while the fertility rate is still high. Mary McLean, analyzing these two factors of urban growth in the U.S., asserts that:

> Cities grow from within and from without. Growth from within, consisting of the excess of births over deaths, is usually not significant numerically. Growth from without may result from the release of farm workers replaced by improved farm machinery, farm industrial developments that attract workers and their families from rural regions and other cities, and from the complex of forces that has led to a steady movement of people to the deep water rims of the country and the metropolitan region. (1957, p. 3)

Although Riyadh existed as a town long before this migration, it could not have grown to its present size had it not been the target of thousands of migrants. There are more than 100,000 persons among the city's population (estimated at around 300,000) who reported that they are recent migrants to Riyadh. They have been in Riyadh for less than ten

years. Almost seventy-five per cent of the total increase in the last decade could be attributed to net migration, and about twenty-five per cent is due to natural increase. The average annual rate of increase is 8.2 per cent, of which 6.2 per cent represents the net migration and two per cent represents natural increase (Doxiadis, 1968, p. 84).

Doxiadis' Sample Survey has estimated Riyadh's population through the last four decades as follows:

TABLE I: ESTIMATED POPULATION OF RIYADH[2]

Year	Population	Average Annual Rate of Increase
1930	27,000	
1940	46,000	5.4%
1950	82,000	5.9%
1960	160,000	7.0%
1968	300,000	8.2%

The table indicates that the net rate of increase of the population is extremely high. If this rate remains the same, the population will double within ten years.

Riyadh is not exceptional in its population boom nor in its attraction for thousands of rural migrants. There are many cities in the Third World in general, and in the Middle East in particular, that are going through the same process. A sample survey of 1,933 households in

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[2]These figures are based on investigations in the past by different scholars and government agencies. However, there has not been an official published census for Riyadh, or any city in the country, which could give accurate information as to the population's true rate of increase.

Beirut in 1953 shows that twenty-six per cent of the population were born in Lebanese villages (Churchill, 1954, p. 45). Similarly, Cairo had doubled its population four times in four decades from 1907 to 1947. An estimated thirty-three per cent of Cairo's population are rural migrants (Abu-Lughod, 1961, p. 23). Amman had only 2.1 per cent of Jordan's population in 1915, but it had 9.7 per cent of the population of the same territory in 1957 (Hacker, 1960, p. 57). Baghdad increased its size by eight times from 140,000 in 1904 to one million in 1960 (Duri, 1960, p. 907). More than twenty-five per cent of the current population of Baghdad came from rural areas (Madfai, 1963, p. 59).

Table I shows that Riyadh's population has increased by more than ten times in the last forty years. It appears that this shift in residence from rural areas to urban settlements is a process which is taking place on a large scale in developing countries. This process has been attenuated by the discrepancy between the city and the village. The city, with its better opportunities for employment, and the village, with its bad conditions and high unemployment, have encouraged villagers to change their residence.

Like any booming city in the Third World, Riyadh's urban growth is fast and hard to predict. But unlike western cities, Riyadh, in its urban expansion, defies all available concepts and models. Riyadh manifests more

alternative types of urban settlement. It differs from western cities in housing materials, architecture, mixed land-use patterns, socioeconomic structure, and the interpersonal relationships among its people. The expansion of the city has not meant the decline or the weakening of communal ties or family relationships. Nor has this urban growth been accompanied by anonymity, superficiality, or transiency in the relationships described by the classical school of urban sociology (Wirth, 1956, p. 120). Despite this rapid urban growth and modernization, Riyadh, to a large extent, and especially in its old and poor districts, still represents a replica of a pre-industrial town with agglomerations of settlements like those portrayed by Sjoberg (1960).

It is not our intention to trace the total history of the city, for it is not the focus of this thesis to analyze the city's historical development. The main concern here is to study the present conditions of the city from a social and economic point of view. An attempt is also made to gauge the impact of this fast urban growth on the social and economic condition of the residents. Riyadh, therefore, is a vivid and interesting example for the study of an urban center receiving thousands of migrants every year.

The Research Problem:

Although migration and its concomitants have been the subjects of major interest for sociologists for many years, rural migration to Riyadh has not been investigated from sociological point of view. It is hoped that this thesis will be a preliminary study of this fast-growing city, its attraction for rural migrants, and the socioeconomic consequences of this rapid urban expansion and this massive migration. This relatively affluent city, being a commercial center and the headquarters of the government, has attracted many villagers who were pushed from the land by the continuous and successive years of drought on the one hand, and were attracted by the city's higher rate of employment on the other. The drought of 1958 and the subsequent seven dry years caused widespread damage to animals, crops, and property and have accelerated the cityward migration.

The land problem, though serious, is only one of several causes of the migration from rural areas and small towns to major cities in the country. The shortage of schools and health clinics, high rates of unemployment, and low economic levels in rural localities have forced villagers to evacuate their land and seek alternatives. (In addition, Riyadh has begun to attract rural people because of the promise of an easier and more prosperous life.) However, it is noticed that the migration to Riyadh exceeds the economic opportunities the city can offer.

Reputation outstrips these opportunities and many migrants stay jobless in Riyadh. It is the reputation of the city, its attractiveness, and the availability of relatives and friends in the city which perpetuate this process.

Rural migration to Riyadh strongly resembles the Egyptian rural migration to Cairo described by Abu-Lughod as having two characteristics: (1) Migration to Cairo has tended to occur in major spurts; (2) The major cushion in the assimilation of rural migrants is the nature of the subcommunity to which they gravitate. These two factors--migration with family, relatives, or friends, and the migrant's gravitation to the neighborhood containing people from his village--have developed the protective pattern of physical proximity and certain social institutions which help minimize the difficulties of transition (Abu-Lughod, 1961). Similarly, the pattern of settlement of rural migrants to Riyadh suggests that migrants constitute a definite sub-group among Riyadh's population. The economic factor partially accounts for their concentration in districts 2, 4, 5, and 6 (Figure 2). These districts are characterized by the availability of cheap housing and, therefore, are attractive to rural migrants seeking inexpensive living. Rural migrants consistently tend to settle near relatives or friends who have already migrated to Riyadh. In fact, one of the motives for migration is the desire to settle near family and friends who are already established in the city.

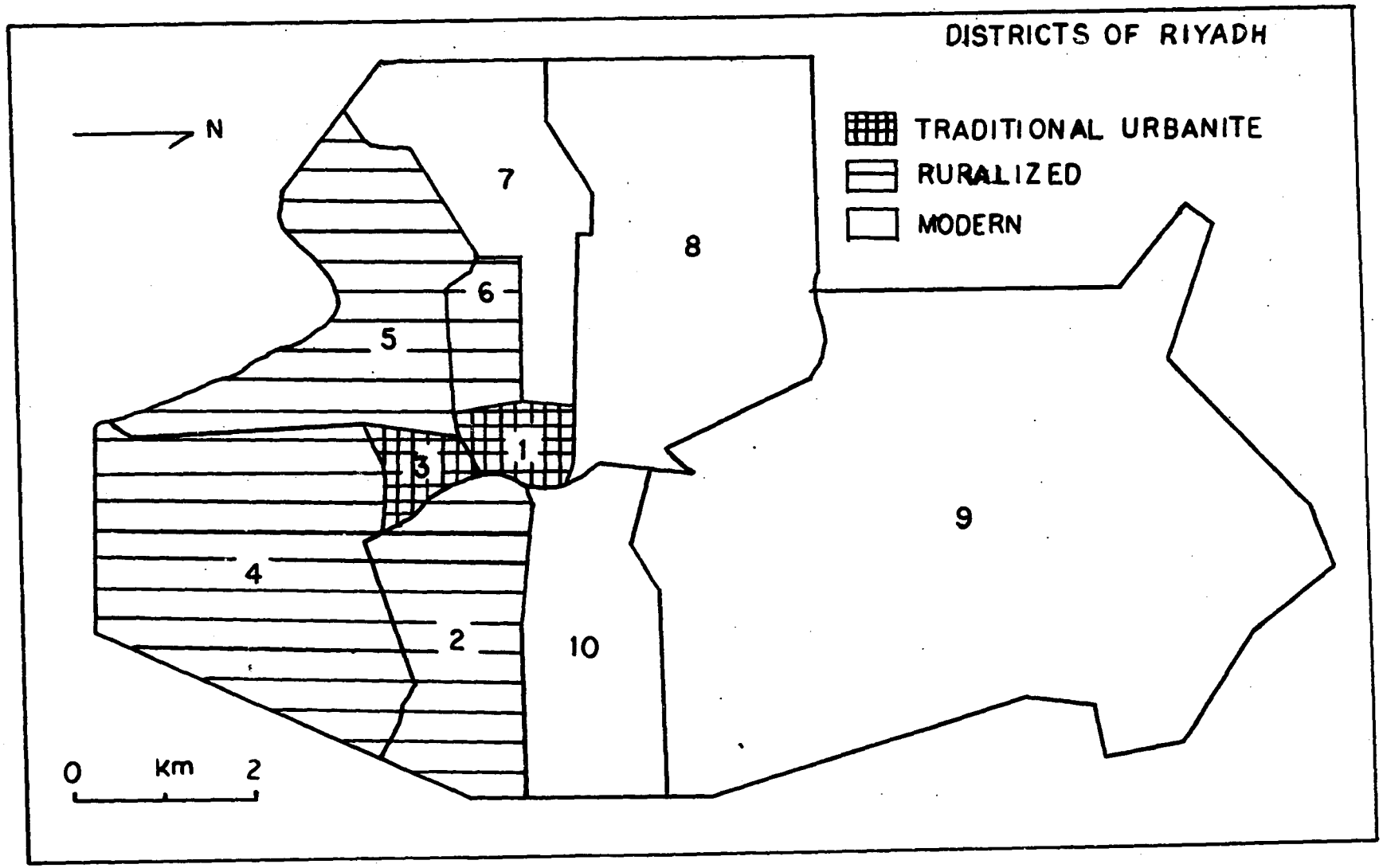


FIGURE II. RURAL, MODERN AND TRADITIONAL URBAN DISTRICTS OF RIYADH.

Our study intends, therefore, to analyze these two phenomena regarding rural migrants to Cairo and to see how they apply to the migrants in Riyadh. Considerable attention in this study will be given to the analysis of the motives, process, and consequences of this migration. Emphasis will be placed on the socioeconomic conditions of migrants after their migration to Riyadh.

One of the challenges, however, is to re-examine critically the whole notion of "assimilation" as it applies to segmented cities, and then to develop measures of change in behavior or status after migration which are appropriate to cities of that kind.

The data available on migration to Riyadh have a few characteristics relevant to this study. Although these data provide some demographic aspects, such as the respondent's current occupation, age, income, and education, the data do not disclose significant characteristics, such as why the migrant moved, the process and trends of migration, and the migrant's socioeconomic status before migration took place. Nevertheless, the study will utilize these data in an attempt to make a comparative analysis between migrants and non-migrants with regard to socio-economic dimensions and other demographic aspects, such as age, marital status, residence, and household size. Thus, one of the basic problems of this research is to determine the extent to which the integration of migrant families to an urban setting varies by place of origin. The present

study approaches the problem by classifying the Saudi migrants into three categories: (1) migrants from urban areas, (2) migrants from villages, and (3) migrants from the desert, and by comparing these three groups to each other on the one hand, and to non-migrants on the other hand. Because of the low standard of living, high illiteracy rate, and lack of industrial skills inherent in rural areas, it is anticipated that migrants from villages and the desert will occupy the low echelon of the occupational, educational, and economic strata. It is also expected that rural migrants will concentrate in certain districts, usually the poorer ones, in order to be close to their relatives and countrymen. In spite of the changes in some aspects of the rural migrant's social life after migration, one can still find among them certain elements of tribal organization, namely hospitality, reciprocal aids, and communal traditional attachments. The recent rural migrant to Riyadh, being a villager by birth and orientation, usually preserves his customs and traditional values. The rural migrants to Riyadh are not unique in preserving their culture within a new setting. The German Amish who immigrated to Pennsylvania are among the most successful farmers in the United States, yet they have maintained their own culture, dress, and religion for many generations.

Since it is expected that most migrants have moved to Riyadh for economic reasons, it is anticipated that the

migrant will strive to achieve economic success. Nonetheless, he does not subsequently change his way of life. More specifically, the rural migrants, who constitute a sizeable proportion of Riyadh's population, are expected to struggle to be economically integrated into the city. From a sociopsychological point of view, it is understood that they do not undergo drastic changes.

The study will be concerned with the incentives for migration using economic opportunity "push-pull" models to speculate about the motives behind migration. For example, population pressure and unemployment would be a push, and opportunities for jobs in the city would be a pull factor. The rural exodus to cities is explained not only as a response to the economic opportunities available in cities, but also as a response to the declining demand for farm laborers due to farm mechanization in some parts of the country and to years of drought, especially in the northern part, which the country witnessed in the 1950's and 1960's.

The study will focus upon the conditions under which these migrants live and where they concentrate geographically and occupationally. Questions related to this problem will be discussed, such as: What are the characteristics of in-migrants? Do they possess the necessary skill and experience to help them cope with the relatively sophisticated and bureaucratized life in the city? Do they have enough education to help integrate

them into the social, economic, and political aspects of the urban milieu? Do individuals with similar educational backgrounds but with different residential histories tend to have different levels of integration? Integration, however, will be restricted mainly to objective socio-economic dimensions and will not include the socio-psychological aspects of integration, such as the migrant's attitude toward social issues and his involvement in formal or informal organizations. The data, documents, and reports used as references here are limited to socio-economic variables and do not provide information about the sociopsychological issues.

Significance of the Problem:

Of all the relationships studied in Western sociology, perhaps the most important and yet least adequately examined and analyzed are those between urban growth and rural migration. That there exists some relationship between these two variables is undebatable. But the nature and degree of these relationships, and even the conceptualization of these variables have not been clarified to any significant extent by sociological investigations. The present study is an attempt to clarify these two concepts (urban growth and rural migration) and examine the relationship between them. It is my assertion that the relationship between these two variables is a reciprocal one. Each is acting as both a dependent and

independent variable simultaneously. Rapid urban growth and the economic upheavals that are taking place in Riyadh have been playing a crucial role in attracting migrants from rural areas where economic opportunities are fewer than in the city. On the other hand, the massive migration from rural areas has been responsible for the expansion of Riyadh in size and population. This migration has also provided the city with cheap laborers who have helped revolutionize the city's industrial and economic sectors.

A study of this kind, involving rural-to-urban migration, constitutes a significant problem in two ways. First, migration is an index and symptom of social change. In Saudi Arabia, the migration of thousands of nomads and villagers to towns and cities since the 1940's has brought dramatic changes in the social, educational, and occupational structure. On the other hand, this migration is also a product of the social and economic change that is occurring, especially in urban areas. Second, rural migration tends either to create or to solve some social problems following the sudden change in the migrant's environment. The greater the difference between the social and cultural setup of the city and the village, the more likely it is that the migrant will face rapid change and find it difficult to assimilate into the urban environment. In correlation, the urban-reared migrant, will be more likely to assimilate than the rural migrant. Assimilation

is a concept which stimulates the student of migration, yet it has not been clearly defined. In part, researchers have studied this problem in regard to international migration, and they were able to shed some light on the degree to which foreign-born migrants were able to assimilate into the new country. However, little attention, especially in developing countries, has been devoted to internal migration, that is, villagers and farmers leaving their homes and residing permanently in the industrialized city.

This study examines the migration of villagers as well as urban dwellers who left their homes and settled in Riyadh in the last thirty years. As a result of this massive migration, especially from villages and farms, the future of rural communities has been tenuous and in jeopardy. The stream of migration to Riyadh is increasing year after year and will eventually result in over-crowding. Riyadh cannot absorb these migrants into its limited productive and industrial sectors. In addition, rural migrants do not possess the skills and qualifications required for decent jobs in the city. Therefore, it is unlikely that they will easily integrate into the city's social and economic life.

In brief, the study is related to a common purpose, namely to develop a method for measuring economic integration which would permit concurrent testing of socio-economic hypotheses pertaining to rural-urban migration. The study will explain the effects of community of origin

upon socioeconomic status, which may contribute to the degree of integration. It is hoped, therefore, that the results of this study will provide some of the knowledge necessary to help solve the migrant's integration problems, will contribute to developing a general measure of assimilation, will permit direct future application to testing the relationship between residential background and socioeconomic status, and will contribute to the theory of rural-urban migration. More specifically, since it is felt that Saudi Arabia is similar to other developing countries in many ways, it is hoped that the results of the analysis will be of some use in the general study of social change, urban growth, and rural migration in developing countries.

Theoretical Orientation and Hypotheses

It might be useful to discuss the characteristics of migrants to Riyadh in order to see how much these attributes can help or hinder the process of integration into the new urban community. Education is a very important factor and facilitating mechanism in achieving high socioeconomic status. It is closely associated with occupation, income and social prestige. Thus, it seems possible to assume that the migrant's occupational success and his income in the new environment depend largely on the formal educational level he attained in his place of origin. Rural areas in Saudi Arabia lag behind urban

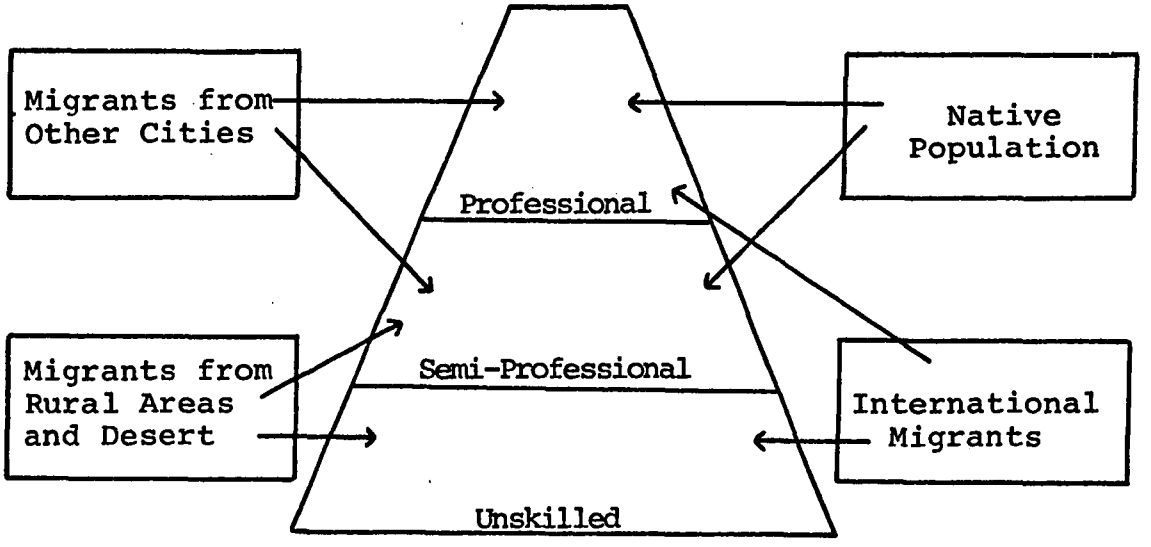
areas in educational attainment. Therefore, it is expected that the rural migrants will have less of the formal education necessary for employment than will his non-migrant or urban migrant counterparts. Not only is occupation a function of differential educational level, but previous skill and experience also play a significant role in determining the type of occupation a migrant will obtain. In rural areas people do not have the opportunity to get the training or the experience required for jobs in the city. Lacking this skill and proficiency, the rural migrants have no choice but to accept lower-status employment in the city.

It should be noted that the more diversified the occupational system of a particular location the more skillful and varied the working population is. Urban migrants have more diversified occupational skill than rural migrants. While farming and herding still constitute the major occupational skills among farmers and nomads, industrial and commercial activities belong to the population of urban areas. The generally existing differences in educational level and types of skills between urban and rural areas suggest that these differences in education and skill will be anticipated among rural and urban-reared migrants. If the rural population lags behind the urban population in education and skills, and these differences are noticed among urban and rural-reared migrants, then it is expected that urban-reared

migrants having these tools will achieve a higher occupational status in the new urban environment than will rural migrants.

Thus, it is anticipated that the basic flows of migrants from differential backgrounds into Riyadh's occupational structure will look like the following scheme:

FIGURE III. THE FLOW OF MIGRANTS AND NATIVES INTO RIYADH'S OCCUPATIONAL STRUCTURE



It is also expected that rural migrants are disproportionately disadvantaged in their income level. They will hold the low-status jobs which, in turn, will be financially and socially less rewarding. S. Lieberson asserts that:

> Since occupation influences many other aspects of behavior the concentration of an ethnic group in certain segments of the economy means the group's

> life chances with respect to other areas of social life are likewise skewed or distinct from the population as a whole. (Lieberson, 1963)

Housing status is mainly determined by socioeconomic status. Since the rural migrants occupy the lower level of social and economic status, we can postulate that the rural migrants are in a disadvantaged position compared to the natives and urban-reared migrants with respect to housing status as measured by any criterion. It is expected that a substantial proportion of these rural migrants will concentrate in areas with poor and rented houses.

In brief, the basic assumption here is that the rural migrants will find themselves in a different socio-economic position from natives or urban-reared migrants. Therefore migration from rural areas requires the migrants to strive more than migrants from urban areas if the former want to achieve a socioeconomic status similar to that of the natives. The degree of structural integration depends on the degree of the differences between place of origin and place of destination. Within the framework of the previous assumption made about the differences between urban and rural migrants in their degree of integration, it follows that the integration problem of rural migrants will be different in its intensity and nature from that of those who migrated from urban areas. Therefore, nomadic society may be conceived as being on one end of the continuum, with Riyadh and other cities on the other end. Villages will be conceived as being in the

middle of this continuum. Likewise, the integration of nomad migrants into Riyadh's complex life will require a movement from one end of this continuum to the other. Migrants from villages must move a shorter distance along the continuum and, therefore, are expected to integrate into the socioeconomic life of Riyadh faster and more easily than nomad migrants, but more slowly than urban-reared migrants.

The general theory, therefore, states that the newcomer with a different social background than exists at the destination will find it more difficult to integrate into the new environment than will a newcomer with a similar and common social background. The discrepancy between two cultures will contribute to a lack of integration. The wider the discrepancy between two cultures, the slower the process of integration. The following hypotheses have been selected as consistent with the above theory.

1. There is a relationship between migrant status (community of origin) and socioeconomic status among Riyadh's population. More specifically natives and migrants from urban areas to Riyadh are likely to achieve higher socio-economic status than are migrants from rural areas or the deserts.

In connection with this hypothesis, four sub-hypotheses are formulated:

2. Natives and migrants from urban areas acquire a higher level of education than nomad or rural-reared migrants.
3. Natives and urban-reared migrants will be occupationally more successful than nomad or rural migrants to the extent that they occupy the higher echelon of the occupational strata.
4. Natives and urban-reared migrants enjoy a higher level of income than nomad or rural migrants.
5. Natives and urban-reared migrants are disproportionately advantaged over nomad or rural migrants in their housing status and area of residence.

It might seem redundant to discuss the fourth sub-hypothesis, since the relationship between occupation and income is very high. However, the social structure in Saudi Arabia is peculiar to the extent that there are many rich people who inherited their wealth, and there are some rich people, such as moneylenders or secretaries to the princes and princesses, who have no official jobs.

In connection with these hypotheses, the study intends to provide a critical review of the relevant literature of theories and the research findings, to demonstrate the integration of our hypotheses with the accumulated knowledge, and, also, to produce further knowledge required to understand the social and economic problems faced by the poor rural migrants of Riyadh.

The Hypotheses in the Light of Past Research:

One insurmountable difficulty has been the lack of basic sociological studies of the cultural and social structure of the regions from which migrants originally come. The only material available for determining the pattern and trends of the process of cultural assimilation is still too scanty to permit an analytical and comparative assessment of the social impact of the migration under consideration. It is true that the literature on urbanization and internal migration in some developing countries is substantial and extensive, but the frame of analysis has been heavily influenced by or dependent on Western thought. This is reflected in the treatment of subjects, such as a migrant's adjustment in his new urban environment, family relationships, causes and effects of migration, the rural-urban dichotomy, and social disorganization. The fact is that an independent study which bases its concepts and methods on national and regional culture is still lacking.

A brief review of current literature concerned with the migrant's socioeconomic characteristics as indirect indicators of structural integration into the new urban community will provide a general idea where social scientists stand on this issue. Several previous studies have indicated urban-reared migrants are far ahead of rural migrants in all indicators of socioeconomic status. Freedman and Freedman found that while twenty-seven

per cent of urban-reared people in the United States had completed no more than a grade school education, sixty per cent of the rural-reared people were at the same level. Thus, the proportion with no more than elementary school education is more than twice as great for the rural-reared as urban-reared people. They also found that the proportion of rural-reared people with some college education is lower than the proportion for urban-reared people. These proportions are nine per cent and nineteen per cent for rural and urban-reared people, respectively (Freedman and Freedman, 1956, p. 54).

Lipset found among the residents of Oakland, California, that here the type of community of orientation is related to education. While sixty-five per cent of the farm-reared migrants did not finish high school, the proportion is fifty-three per cent and forty-two per cent among people oriented in small cities and big cities, respectively. Similarly, only twelve per cent of the rural migrants completed thirteen years of schooling, but the proportion rises to twenty-three per cent among those who were raised in metropolitan areas (Lipset, 1955, p. 225).

Burchinal and Jacobson compared parents of seventh and eleventh grade children in Cedar Rapids, Iowa. These parents have various residential backgrounds. The study demonstrates that parents with farm backgrounds are the least educated, and parents who migrated from urban areas

are more likely to be educated. Even with age and education being controlled, men from rural backgrounds are still under-represented in high status jobs. Men with urban backgrounds have the highest level of occupational status (Burchinal and Jacobson, 1963).

Since occupation is usually a function of education, it is not surprising to find that there is a discrepancy in the occupational levels of rural-reared migrants and migrants from urban areas. Rural migrants, having the lowest level of education and skills, lag behind urban-reared migrants, who usually have the advantage in education and experience. Lipset asserts that the larger the community of orientation, the higher will be the status of the jobs held among the people in San Francisco. He found that among professionals twelve per cent were raised on the farm, and forty per cent were raised in metropolitan areas. In contrast, he found that while thirty-five per cent of the unskilled laborers were raised on the farm, only twenty-one per cent were raised in metropolitan areas (Lipset, 1955, p. 222). Lipset's findings reveal that community of origin plays a significant role in determining a person's occupation. Those who came from rural areas are most likely to have manual work, and those who have urban backgrounds are most likely to be nonmanual workers. Freedman and Freedman also found that rural-reared people in the urban areas are under-represented in all high status occupational strata

except self-employed business. There are only three per cent among farm-reared people who are represented in professional or semi-professional jobs. The proportion rises to thirteen per cent among non farm-reared people. The farm-reared people are most likely to be over-represented in skilled, semi-skilled, and manual work (Op. Cit. 55). Beynon, in his study of the Southern migrants to several industrial communities in Michigan, asserts that these southern migrants are overwhelmingly skilled, semi-skilled, and unskilled workers. He points out that while 4.7 per cent of the total gainfully employed population are professional, only 1.7 per cent of the southern white migrants are in this category. The southern whites are also disproportionately over-represented in unskilled manual work. About sixty-nine per cent of these southern whites are unskilled, but the proportion of the total population in this category drops to 53.9 per cent, and this latter proportion would have dropped lower if southern Negroes were excluded (Beynon, 1938, p. 338). Beers and Heflin conducted a study in Lexington, Kentucky, and concluded that a greater proportion of rural migrants are over-represented in semi-skilled and unskilled occupations. Urban migrants were considerably over-represented in professional, semi-professional, and non-manual jobs (Beers and Heflin, 1945, p. 11). Rose and Warshay in their study of Minneapolis, Minnesota, found that urban migrants are

more likely than rural migrants to be among professionals and see themselves as middle class. On the other hand, the rural migrants occupy manual jobs and consider themselves members of the working class (Rose and Warshay, 1957, pp. 72-76). Benewitz, using secondary analysis of data from the 1951 SSRC survey of occupational mobility in St. Paul, Minnesota, found that male rural migrants were less highly skilled than the urban population when professional and managerial abilities were considered. While 12.4 per cent of non-migrants are professional, only 5.4 per cent of the rural migrants are in this category. Benewitz also compared rural migrants with urban-migrants regarding the last job they held prior to 1951. He shows that among urban migrants, there are 44.2 per cent professional and 6.7 per cent unskilled. The proportion among rural migrants drops to 31.7 for professional employment and rises to 25.9 per cent in the unskilled category (Benewitz, 1956, p. 239).

I expect that the gap between rural migrants and urban-reared people with respect to socioeconomic status will be wider in developing countries, simply because the discrepancy between farms and urban areas is so pronounced. Rural areas in the Third World are backward, and they lag behind urban areas in all criteria of socioeconomic progress. Baali in his study of rural migrants to Baghdad, Iraq, asserts that the lack of industrial skills among migrants has forced them to accept low-wage employment.

Therefore, most of the adult migrants work as janitors, guards, porters, and servants. Baali also noted that the majority of the rural migrants living in Sarifab's quarter in Baghdad has a very low income estimated at fifty-three dollars per month (Baali, 1966, pp. 362-364). Since occupation has a great effect upon income, we could postulate that there must be a discrepancy in income between rural migrants and urban-reared people, with the former having the least advantageous position. Freedman and Freedman's study, mentioned earlier, shows that thirty per cent of farm-reared families have incomes below $2,000 per year, compared to only eleven per cent of nonfarm-reared people in this income category. The proportion having a family income above $7,500 is three per cent among rural people and seven per cent for nonfarm-reared people (Op. Cit. p. 54).

Housing type and housing conditions usually coincide with occupation and income. Thus, it is expected that a substantial proportion of these migrants will have only fair or poor rented houses. Beynon found that more than seventy-two per cent of the migrants in Flint, Michigan, rented their homes, and fourteen per cent did not have running water. In contrast to this, Beynon found that nearly forty-six per cent of all Michigan families owned their homes, and only six per cent in the total population did not have running water (Beynon, 1938).

Leybourne's findings are similar to Beynon's, with respect to the differential rate of housing between migrants and non-migrants. She found that only eight per cent of the migrants in Cincinnati, Ohio, owned their homes, compared to thirty per cent of the natives. She also found that rural-reared families in Cincinnati have a lower room per person ratio because of large families and the frequent concentration of relatives and friends in one house (Leybourne, 1937, p. 244).

It is obvious from these findings that there is a relationship between community of origin and socioeconomic status in urban areas. More specifically, these findings indicate that rural migrants to big cities stand in a distinctive social category on any criteria measured. They demonstrate that rural-reared people are most likely to hold the most disadvantageous socioeconomic positions. This generalization has been asserted by Schwarzweller and Brown in their study of three isolated mountain neighborhoods in eastern Kentucky. They found a positive relationship between social class in the areas of origin and socioeconomic status attained by such migrants in the areas of destination (Schwarzweller and Brown, 1967, p. 18). Zimmer interviewed a random sample of married males in a middle-sized midwestern community in the United States. He investigated different issues and found that urban migrants tend to make a more rapid and more complete adjustment in the new urban community than do rural migrants (Zimmer, 1955, p. 223).

The data on hand will allow me to deal with and analyze the socioeconomic conditions of rural migrants and compare them with those of urban-reared people in Riyadh. Utilizing index of dissimilarity, analysis of variance, and contingency tests, I hope to come up with solid conclusions in determining the differences between non-migrants and migrants from different areas. Of course, this issue is of a simple nature. But we must start with the simple issue because so little reliable documentation concerning the principal streams of migration into Middle Eastern cities is now available.

Beyond this simple issue and within the limits set by the data at my disposal, I hope to probe two related problems that have become crucial in the study of fast-growing cities throughout the Third World.

The first problem is to determine to what extent the city is divided into three sectors like those Abu-Lughod describes for Cairo, that is, one consisting essentially of transplanted villages recruiting homogeneous populations from the hinterland and supplying unskilled labor to the enterprises of the city, and another consisting of the relatively rich, powerful, heterogeneous, "westernized" minority of the population. Between these two extremes lies the third type, the "traditional urbanite" or pre-industrial city, which is rarely recognized by classical urban sociology. The failure to conceptualize the third type as an intermediate type along the urban-rural

continuum accounts for raising irrelevant and meaningless questions about the city in the Middle East. To Abu-Lughod these contrasting sectors represent subcities which, in turn, represent separate social worlds. Nevertheless, the most potent force at work now is the one leading to melting and blending these contrasts and bridging the gap among them (Abu-Lughod, 1969, p. 180).

This study intends to discuss these three types of sectors to see if they appear in contemporary Riyadh, and if so, to explore the underlying factors responsible for the coexistence and coalescence of these three types. The similarities between Cairo and Riyadh in the process of urban growth, in receiving recent massive rural migration, and in many socio-cultural aspects, have encouraged me to examine Abu-Lughod's approach in order to see how much it applies to Riyadh. In fact, Riyadh has expanded and absorbed pre-existing villages, such as Manfoha and Meakal. These villages are by no means different from other villages located in the middle of the desert. Indeed, Riyadh itself contains within its boundaries some sod houses, narrow and curving streets, and other physical manifestations which resemble the pre-industrial city. On the other hand, Riyadh has some modern sections which contain splendid and extravagant hotels, elegant villas, and broad boulevards. My task here is to measure the differences between these three types in Riyadh. Income, monthly rent, room per person ratio, and general conditions of the

houses will be our criteria for this measurement. Districts with a high income are occupied by the members of the royal family, migrants from urban areas, and by the native population. Poor districts are mainly occupied by rural-reared migrants. Since the majority of the rural migrants are not educated, they cannot meet the standards required for city jobs. Being unable to obtain certain jobs in the city, the rural migrants find it difficult to live in the relatively modernized sections of the city. Therefore, they usually find their way to the poorest sections, which are often occupied by other migrants.

Since this dissertation undertakes to study and analyze the socioeconomic conditions of rural migrants and their pattern of settlement in the new urban community, it is worthwhile to review the literature pertaining to rural migrants' settlements in different parts of the world. This certainly will help us understand how and where these migrants settle in their place of destination. Many sociologists have observed that rural migrants concentrate in certain districts, usually the poorest ones. Simple economic duress and the need to be close to friends and relatives are the major factors forcing these migrants to choose these poor districts. According to Charles Tilly, the Appalachian migrants to Northern cities in the United States had been recruited by relatives and friends who had migrated earlier and were already settled in these cities. These migrants have formed their villages within these

cities, with their cultural style being manifested by such things as country music, local bars and hillbilly dances. In these sections, rural migrants transfer their ways of life into the city and preserve their cultural values, and only gradually do they adopt a cosmopolitan way of life (Tilly, 1970, p. 160). The mountaineer migrants to Chicago are another example. Killian points out that they bring their community life with them in the same way that they carry other cultural patterns, such as accent or preferences in food (Killian, 1953, pp. 66-69). Similarly, the migrants from Anatolian villages to Istanbul are living in "gecekondu." They are able to keep their village endogamy and to establish their mutual fund for funeral expenses and transportation fare to and from the home villages (Suzuki, 1964, pp. 210-212). Sewell reports that in the gecekondu of Ankara, there are definite village-of-origin clusters (Sewell, 1964, p. 180). In Cairo, Egypt, the locations of over one hundred village mutual aid societies have been studied. They tend to be close to bus depots in which the rural migrants gather to travel to their home villages (Abu-Lughod, 1961, pp. 22-32). Similar to those reported by Abu-Lughod regarding the mutual aid societies are Sedky's findings indicating that Alexandria also has mutual aid societies (Sedky, 1955, pp. 441-450). In her personal interviews of migrants in Cairo who came from a cluster of five villages in the province of Minufiya in 1959, Karen Petersen supported Abu-Lughod's assertion that

migrants tend to settle in districts which have migrants from the same village. Petersen found that four-fifths of 120 husbands interviewed indicated that most of their neighbors are village migrants like themselves. They reported that at least one of their neighbors is a relative or nonrelative from the same village (Petersen, 1971, p. 568). The Al-Asima quarter in Baghdad is mainly occupied by rural migrants. The low standard of living and the different traditions of these rural migrants have been the reasons for the concentration of poor migrants in poor districts (Baali, 1966, p. 361). Three quarters of Rusafa, on the east bank of the Tigris River, have tribal names. One hundred years ago, these same quarters were on the outskirts of what was the whole city of Baghdad, and they were inhabited by newly arrived tribal groups from rural areas. The same pattern of settlement repeats itself in the internal structure of the Saraif settlement which lies on the outskirts of Baghdad. This settlement was established mainly by farmers coming from the province of Amara in the southeastern part of Iraq. These people have come from eleven tribal groups, and they established themselves in such a way that each tribal group was clustered together (Hilali, 1958, pp. 62-70). Clustering of rural migrants has also been noticed in Tripoli, Lebanon. There are two groups in this city. One is called the Alawites, who migrated from Mount Answariyah in Syria, and the second is the Maronites, who came from Mount Lebanon.

Although these two groups are integral parts of the city, they have certain attributes which distinguish them from the natives. They still have strong and frequent ties with their villages. Each of these clustering groups lives close to the most convenient transportation facility by which their village can be reached. In addition, they operate their own shops, and, to a certain extent, each group has a definite reputation for holding certain types of jobs (Gulick, 1969, p. 149). Riyadh has experienced the same pattern of settlement. Rural migrants have clustered in sub-communities, such as Hellat Al-Qusman, Ghomaita, Salhiya, and Awd. The fact that the prospective migrants needed passage money, information about housing and employment in the city, and socio-psychological support has necessitated this clustering pattern of settlement in the larger urban society. These accommodations are provided or expected to be provided by relatives or people from the same village who are already established in these districts.

The second problem that this thesis undertakes to analyze is the extent to which current migration to the city represents a permanent transfer of people from the countryside, as opposed to a temporary circulation in which villagers spend a portion of their lives acquiring cash in the city but eventually return to take up their claims in the countryside. Joan Nelson has recently reviewed the literature on this issue, showing the wide variations

in permanency of migration from continent to continent and arguing plausibly that the impact on a city of a given volume of migration varies enormously with the extent to which the migration is permanent (Nelson, 1972).

The short-term migrants come to the city for a specific purpose which may be fulfilled in a short period of time. This purpose is usually to earn money to be spent in the village with the migrant's extended family or to be used for bride price. Another reason for this short-term migration is to pursue higher levels of education. In Saudi Arabia, as in other developing countries, villages do not have colleges or high schools. Therefore, the young adults go to the city where they can achieve their educational aspirations. Once the young man completes his high school or college education, he usually stays in the city permanently because employment in the village is limited and promotion to professional or executive levels is not expected. The city also offers him excitement and more opportunities as far as knowledge, employment, and freedom are concerned. After several years, this migrant will return to the village to get married. If he is already married, he usually leaves his wife and children with his parents or close relatives and visits them during holidays and vacations. Later on, the migrant might decide to take his wife and children to the city and leave his parents in the village. However, after a few years, the migrant may feel that his obligation at home necessitates

his return to the village, and he may decide to go back, especially when he feels obliged to take care of his aging parents. While they are in the city, the temporary migrants usually retain very close ties with their families in the village. Churchill reported that one-third of the Beirut Sample Household heads mentioned that they go to their villages during the summer, vacations, or holidays (Churchill, 1954). Commuting in Saudi Arabia, however, is not as easy nor as convenient as it is in Lebanon or the United States. Lebanon is very small, and the United States has sufficient communication facilities. Saudi Arabia is not small and does not have a comfortable transportation system. Thus, it is neither inexpensive nor convenient for the rural migrants from remote villages to travel to their villages frequently. Yet, they still spend their vacations in their villages, which indicates their loyalty to their community of origin. It is observed that the distance is negatively related to the frequency of commuting to and from Riyadh. I have observed that people from Kharj (a cluster of villages and towns located fifty-three miles south of Riyadh) usually commute weekly or at least monthly. Other migrants from the southwestern section of the country (about one thousand miles from Riyadh) limit their visits to their villages to vacations or holidays. When the trip is lengthy and expensive, it is expected that the frequency of visits will be minimized. In addition to the regular visits to their villages, the

rural migrants sustain interests in their village by daily contacts with their countrymen either by visiting each other in their homes or by meeting in the depot. The temporary migrants often meet at the bus station to see people coming from their village and bringing village news or letters from their relatives. Since they are so attentive to village affairs, these migrants are less involved in the city's social, economic or political aspects.

In contrast to temporary short-term migrants, there is another type who plan to stay in the city permanently. As Joan Nelson put it, the majority of this type voluntarily decide to settle permanently in the city to escape certain negative conditions of rural areas (Op. Cit. 1972). In addition to these two types of migration, Riyadh has witnessed a third type. This third type is the so-called impersonally organized migration based on impersonal recruitment. This type, however, is not noticeable among Saudi migrants and is limited to migrants from Arab countries, such as Yemen, Syria and Lebanon. These three types of migration will be explained in detail in Chapter IV.

CHAPTER II

METHODOLOGY

The purpose of this section is to explain the operational procedures of this study. Items in this section will include a description and analysis of the sources and nature of our data, units of analysis and how they are defined, the techniques of the analysis, and how to operationalize the major variables which will help us examine the validity of certain hypotheses proposed in this study.

Information on migration has come primarily from secondary source data--census and vital statistics. Such materials do not seem to be available in Saudi Arabia, which still does not have a published official census. The first attempt to enumerate the population in Saudi Arabia was carried out in 1962 when the Central Statistics Department made a great effort to achieve this goal. The result of this census campaign has not been disclosed. During my visit to Saudi Arabia in 1969, I made an effort to obtain that census data, but I was denied access because the data are still confidential.

Sources and Nature of our Data

1. Doxiadis data: The primary source of our data in this study will be the Doxiadis Household Sample Survey. Doxiadis Associates (an urban planning corporation) conducted a household survey in Riyadh in 1968. Forty enumerators from the Central Statistics Department were recruited to carry out this survey. (The interview schedule appears in Appendix 1). The survey divided the household heads into categories based on their place of origin. The distribution of these household heads is as follows: fifteen per cent natives born in the city, twenty-one per cent urban migrants, 36.8 per cent migrants from villages, 4.5 per cent migrants from the desert, 21.2 per cent migrants from other Arab countries, and 1.5 per cent migrants from foreign countries. The place of origin was simply defined by the place of birth, so that if a person was born in a village and migrated to Riyadh in the first days of his life, this survey considers him a rural migrant. Similarly, if a person was born in a foreign country and migrated with his parents, the survey also classifies him as a foreigner, even if he has Saudi citizenship. Thus, this classification might be subject to criticism. In particular, it does not precisely classify the migrants by place of origin regardless of their birth place. However, it provides a gross classification in terms of the similarity of their place of birth, which is usually their place of origin. Geographical mobility

was very low in Saudi Arabia until the economic development in the 1950's. Thus, the majority of those household heads who migrated to Riyadh is expected to be born at their place of origin. The Doxiadis survey contains, among other things, some information about (a) social, demographic, and economic conditions of the population, and (b) housing conditions of the city's ten districts. These two items will be rather useful in our subsequent analysis in determining the similarities and differences between migrants and non-migrants on the one hand, and the differences among these ten districts on the other.

The survey covered five per cent of all private households in Riyadh and eliminated the collective households, such as prisons, hotels, hospitals, and military barracks. The survey covered 2,558 households, so it is estimated that Riyadh has 51,160 households. The population of Riyadh living in private households is estimated by this survey at 281,000. Thus, the average size of a household is 5.5 (Doxiadis, 1968, p. 102).

The major shortcomings of this survey as a source of migration data were shown to be inherent in the fact that it is limited to the population currently living in Riyadh. No data are obtainable about persons who out-migrated. Data on in-migration are obtainable only for those who moved to Riyadh and were still living there at the time of the survey. The survey also overlooked certain important issues, such as motives for migration (social or

economic), types of migration (permanent or temporary), and certain other sociopsychological questions, such as outlook and attitudes toward the new urban community, which could have been useful in determining the level of the migrant's adjustment. The survey does, however, yield valuable data on the volume and demographic characteristics of the survivors of the total in-migrant group. By a comparison of the size and characteristics of this group with that of the surviving non-migrant group with respect to different socio-demographic dimensions we will be able to determine the similarities and differences between migrants and non-migrants with regard to these dimensions. These similarities and differences will be used as our criteria to determine the level of integration. Thus, if a migrant achieves a demographic and socioeconomic status similar to that of a non-migrant, we will consider him more integrated than a migrant with a lower socioeconomic achievement. It is expected here as mentioned earlier, that migrants from urban areas will be more integrated than rural-reared migrants.

2. The second source of data used in this study comes from a survey conducted by the Center for Research and Economic Development located in Riyadh, henceforth referred to as CRED. It made a small-scale survey in 1969 for 112 Saudi Arabian industrial laborers working in Riyadh's factories. Although small in size, this sample represents fifteen per cent of the Saudi industrial workers

in Riyadh, totaling 753 working in forty-two factories. The preliminary data of this survey were obtained in the Arabic language. My first task was to translate this information into English and code it. A detailed description of the classification will be illustrated in the subsequent pages.

3. Along with these two sources of data, I made a three month trip to Riyadh in the summer of 1971, and I had a chance to meet different people. Some were migrants, and some were born in Riyadh. Various visits were also made to key informants and specialized authorities to gather information which might help describe the trends of Riyadh's urban growth and the patterns of rural migration. As mentioned earlier, these sources of data (the Doxiadis as well as the CRED data) combined with the author's long time observation in the city could help carry out this study in analyzing critically the socioeconomic conditions of migrants and in comparing them with those of non-migrants.

Techniques of the Study

Utilizing the Doxiadis data first, I intend to follow its division of the city into ten districts and the population into six categories with some modifications. These modifications will include eliminating some categories and combining some subdivisions. For example, some of our analysis has eliminated people born in foreign countries, because the present study is mainly concerned only with internal migration. A total of 579 households with 2,491

members were eliminated in some of our subsequent analysis. Thus, the original sample was reduced to 1,979 households having 11,562 members. It is possible to classify the remaining cases from the original sample into four categories: natives, urban migrants, migrants from villages, and migrants from the desert. The number of heads of households which fell into each category was as follows: 383 natives, 538 urban migrants, 942 rural migrants, and 116 nomad migrants. The large number of migrants enabled the elimination procedure to be carried one stage further. The non-migrant households were eliminated in part of this analysis, so the comparison is limited to the migrants themselves in order to find the differences in the level of integration between migrants with different residential backgrounds. An additional comparison will be carried out between urban-reared migrants and natives born in Riyadh to discover if the difference between migrants and non-migrants is due to migration per se or to residential history.

While our units of analysis will be mainly the households in most of the following analysis, in Chapter Three I will be using districts as the units of analysis in an attempt to examine some hypotheses pertaining to rural-urban dichotomy within the city.

The material collected from the Doxiadis survey was subsequently recoded, punched, and processed through computers at the Computing Center of The University of

Michigan. Unfortunately, Doxiadis Associates have only the simplest statistical descriptions of the population of Riyadh and do not propose any further analysis of their data. They have been unwilling or unable to give me access to the original interview schedules or tapes, but they have supplied me with a computer output including only cross-tabulations of several variables.

Due to the inadequacy of the Doxiadis data for the purposes of our research, I intend to supplement the Doxiadis cross tabulations with the following:

1. Indirect Standardization: The technique of indirect standardization will be used by applying the rates of some standard population to the distribution of a population we wish to study. For example, we might use indirect standarization to compare the income levels of migrants and non-migrants, controlling for differences in occupation.

Example of indirect standardization:

Assumed Known: A. Income by occupational distribution

B. Occupational structure by residential background

Assumed Unknown: Income distribution by residential background

Question Posed: Is the variation in income a function of occupation or is it a function of residential background?

More specifically, the use of indirect standardization will allow us to see whether the variation in income levels is a function of residential background per se or whether it is

attributable to other intermediate variables, such as level of education, occupation, and length of residence.

2. The index of dissimilarity will be used to compare two or more percentage distributions, e.g., comparison of the social and economic characteristics of various districts. This index indicates the percentage of one population that would have to redistribute itself in order to have the same percentage of distribution as another group (Lieberson, 1963, p. 30). Thus, complete similarity, or absolutely no differences between two groups, would give the minimum index value of 0; complete dissimilarity would yield the maximum value index of 100 (Duncan and Duncan, 1965). The higher the value the index the greater the difference between groups. This type of ecological analysis of treating individuals in a particular group or houses in a specific district as if they were alike might lead us to commit the ecological fallacy. Although these individuals or houses are far from homogeneous, they have certain social and economic characteristics in common, which make me willing to take a risk and face the problem of ecological fallacy.

The Doxiadis data will also be supplemented by information taken from the survey of CRED. The unit of analysis, however, will be shifted from the households to the individual migrant whenever we use this survey. I was able to obtain the preliminary data of this survey, which include information about 112 industrial workers in Riyadh,

representing fifteen per cent of the city's total Saudi industrial workers. Because my main interest is in finding out the variation of the level of integration among migrants from different settlements, I classify the respondents into four categories: natives 3, migrants from cities 39, migrants from towns 28, and migrants from farms or villages 42. The very small number of natives in this survey will not enable us to make any conclusion in our comparison of migrants and non-migrants. Thus, the three cases representing individual workers born in Riyadh were dropped from our analysis, and we are left with 109 cases. So we will limit our analysis to the migrants themselves whenever we utilize this survey. In other words, this survey will be useful when we compare migrants from cities against migrants from towns or villages in different social or economic dimensions.

The size of the population was the main criterion that I used for a particular locality to be classified as city, town, or village. For convenience, the term "village" will refer to a locality of less than 5,000 inhabitants; the term "town" refers to a place of more than 5,000 and less than 20,000; and "city" refers to a settlement of 20,000 or more. It is clear, however, that sheer size when used as the sole criterion for distinguishing urban from rural areas will furnish only an arbitrary classification. The sheer size should be correlated with the socioeconomic characteristics of a particular settlement in

order to enable us to reach a definite rural-urban classification. Because Saudi Arabia does not have quantitative data about those settlements, we relied on mere personal observation. It is noticed that the sheer size of a settlement in Saudi Arabia is an indication of how well developed a particular place is. The larger the settlement, the more likely it is to be more developed than a small community. It follows that migrants from these larger settlements are probably more educated, more skilled, and, thus, more willing to integrate into Riyadh society than are rural migrants.

Variables and Measurement Procedure

To assure an appropriate analysis of the data, specific predictions and a detailed set of testable hypotheses were formulated. These hypotheses will examine the relationship between levels of structural integration and different independent variables, such as length of residence in the city and place of origin. We also will evaluate certain social conditions which some groups may experience more than others and which may retard or accelerate their level of integration. The type of measurement of integration is behavioral as indicated by achievements in socioeconomic sectors. Four variables were used to measure behavioral integration. These variables are type of occupation, educational attainment, income, and housing conditions. O. D. Duncan and S. Lieberson assert

that ethnic differentials in socioeconomic status are indicative of incomplete absorption and assimilation (1959, p. 370). They also point out that it is possible to determine the degree of similarity between the occupational distribution of a particular migrant group and the native population, and then use the result as an indicator of the migrant's assimilation (Ibid. 374). Assimilation, however, is the most elusive concept employed in social science to study race or ethnic relationships. Ethnic segregation is not a function of a simple socioeconomic factor of cultural difference, or of community of origin, but is rather a result of these factors combined with the situation faced by the migrant upon his arrival and the process of his movement and resettlement in the new urban community.

Our data have provided information about four variables which can be utilized as prediction or index of integration. These variables are: (1) Educational attainment--the respondents were classified into three categories: illiterate, literate, and those with a high school diploma or above. (2) Occupational achievement, measured by the type of the respondent's present occupation--ten types of occupation were coded by the Doxiadis survey. These types are: professionals, executives, clericals, salesmen, peasants, miners, transportation workers, craftsmen, services and recreation workers, and army. The relationship between occupation and residential background will be examined. Education will be controlled to find the

effect of residential background upon occupation when we hold education and length of residence constant. (3) Income, measured by the monthly salary of the household--this will be classified into various levels ranging from very high to very low. (4) Housing status, measured by rent, person per room ratio, durability of the house, and general conditions of the house which are classified as good, fair or poor. Durability is determined by the materials from which the house is built, such as mud, cement bricks, stone, reinforced concrete or other.

It is my viewpoint that if a migrant achieves a higher level of education, it will help him understand different ways of living, and this might free him from the rigidity inherent in his former closed society. Since the trends in Saudi Arabia today stress achievement rather than ascription, the type of occupation has been, by and large, determined by the level of education. The type of occupation (e.g., handicraft versus professional) will undoubtedly be a factor in determining the level of integration. With professional or clerical jobs, the occupant will enhance his chances to meet people, enlighten himself, and broaden his knowledge about the society in which he is living. Income also plays a major role in the degree of integration. Unlike the humble life that characterizes the village, city life constantly demands money for the purchase of food, clothes, land or recreation. Thus with a higher income, the migrant can surmount many problems which will

emerge in the city. These three factors--education, occupation, and income--are interrelated, and together, as well as separately, are determinants that contribute to the degree of integration.

CHAPTER III

ECOLOGICAL ORGANIZATION OF RIYADH

The ecological aspects that will be discussed and analyzed here are: the spatial arrangement of the city, its density, and housing conditions of the city's ten districts. Before discussing these aspects in detail, it is worthwile to provide a brief description of the historical development which the city has undergone in its recent urban growth.

Riyadh, in its transformation from a small town (similar to the preindustrial type) to a relatively modern one, has gone through two periods. The first period started in 1919 and ended in the 1940's. The second period started in the early 1950's and proceeded to the present time. While the city has witnessed expansion during these two periods, the pace of expansion has obviously been different. It was slow during the first period and fast in the second one (Doxiadis, op. cit. 168). In the first period, when King Ibn Saud's reign achieved political stability, efforts were shifted toward urban development. But the lack of money and modern technology had crippled any effort to expand the city on a large scale. Thus, the growth of the city was slow and limited. This period,

however, witnessed the erection of the royal quarter in Murabba to the north of the city and Hillat Al-Ahrar to the east of the city. The expansion of the city to the south and west was minimal. In the second period the growth of the city was explosive and rapid. This period has brought ten times as much urban growth as Riyadh had accumulated in her entire history. Population increased from 30,000 inhabitants in the 1930's to about 300,000 in 1968. The expansion of the city to its present level has been enhanced by the affluence resulting from oil revenues and the utilization of modern technology. Moreover, the advancement in transportation facilities has encouraged many residents to sell their homes in the central areas of the city and build new and modern houses in the suburbs. The peripheral areas are now experiencing a higher rate of growth than the central areas. However, unlike American cities, this pattern of growth has not come as a result of a depopulation of central areas, but through a complete saturation of central areas, which forced people to spread farther and farther out. Population growth has recently been more axial than central. Population expansion occurred mostly in the northern and eastern sides of the city in the 1940's. Later on, the population began to spread out in all directions. This outward growth of the population is not hampered by any natural barrier, for Riyadh is flat, and land is abundant. In the past, the city-dwellers were hesitant to move from the city center because there was no

adequate transportation to carry them to their jobs. But since cheap public transportation (jitney) has become available and many people are able to own cars, they are no longer as hesitant to settle in outlying areas of the city. It costs the passenger only a dime to ride in the jitney with other passengers from the central area to outlying districts. The jitney is running most of the day which makes it convenient for people to commute from one district to another.

Spatial Arrangement of the City: Land-Use Patterns

The primary source of data used to analyze the ecological organization of Riyadh was Doxiadis' survey, which provides information about the physical and socioeconomic structures of different areas in the city. This information could be helpful in analyzing the spatial arrangement of the city and in comparing the city's ten districts with respect to their physical features and socioeconomic conditions. The testing of the study's hypotheses was also abetted by Sjoberg's study of preindustrial cities, in which he delineated the arrangement of the city within its societal setting, emphasizing some features that distinguish it from the modern industrial city. The spatial arrangement of present-day Riyadh partially reflects the description accorded the preindustrial city. Aside from the rich suburbs on the western and northern sides of the city, Riyadh's peripheral communities are characterized by a type of housing similar to

that described for the outskirts of the preindustrial city. The houses are constructed of nondurable materials, such as mud or mudbricks, with few buildings exceeding two stories in height. The streets are narrow, curved, and unpaved. The outskirts on the south and east sides (Meakal, Manfoha and Salhiya), which are inhabited by rural-oriented people, are developing, but in a rather unplanned fashion. They still resemble, to a large extent, the villages or towns from which these rural people came. On the other hand, the outlying districts on the north and west sides (Olaisha, Matar, Malaz, and Nasiriya) are the most prosperous and modern areas in the city. These modern areas are no different in their physical features from the suburbs of western industrial cities (Figure 1).

Unlike American cities, where the central business districts are devoid of residences, the central area in Riyadh is one of the most populous in the city. It hosts more than 24,000 persons in its small area estimated as a square mile. The city as a whole is about fifty square miles, and it has 300,000 inhabitants, averaging 6,000 persons per square mile. Based on Doxiadis' data, the land-use patterns within the C.B.D. can be illustrated in the following table.

TABLE 2: BREAKDOWN OF LAND-USE PATTERNS WITHIN C.B.D.[3]

Type	Percent
1. Commercial areas	9.5
2. Administrative uses	1.4
3. Mosques	2.0
4. Green and open space	8.3
5. Educational uses	1.8
6. Residential areas	60.0
7. Main roads and squares	17.0
	100.0%

Total C.B.D. is about one square mile.

Table 2 demonstrates that sixty per cent of the central business area is taken up by residences. In Riyadh, it is traditional for a storekeeper to live above, behind, or close to his shop. Thus, the sorting of land-use patterns appears, to some extent, more vertical than horizontal. That is, there is little or no territorial separation of activities. The buildings on almost every block use the ground floor as a store and the upper floors as a residence. Rare are the buildings which do not have shops on the ground floor. Grocery stores, gas stations, business offices, and private buildings are intermixed all over the city. Even the central area, as noted above, which is the only

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[3]Doxiadis does not disclose what rules were followed in land-use patterns with the multiple-function buildings. Is it the predominant use or the specific use? If Doxiadis has followed the former, certain uses of the buildings were overnumerated at the expense of other uses.

place with a commercial identity, has sixty percent of its total area being used for residences.

Perhaps the most differentiated kinds of land-use patterns in Riyadh are the very lowest and highest residential types--with respect to their quality--which, ironically, stand next to each other. A good example of these contrasting dwelling units are those on University Street or Matar Street in District 9. Here, we find the most modern and extravagant houses, which are occupied mostly by high-income people who migrated from urban areas or from other developed countries. Next to these modern houses we also could find squatter areas with tents and shacks inhabited by the recent, impoverished immigrants from the southern part of the Arabian Peninsula. These recent immigrants come to Riyadh in search of unskilled employment, and large segments of them do not have permanent jobs. They are still living in these temporary tents or huts, which lack electricity, gas, water, and other amenities. In the absence of low-cost housing, these migrants cannot be accommodated in the central area or newly-established houses in the suburbs. As a result, they have to choose a marginal existence in these empty spaces, which have not been legitimately claimed or have not yet been developed.

Compounding the squatter problem in Riyadh is the problem of high land prices. Land prices in Riyadh are not under government control, but rather are at the mercy of

real estate brokers. The owner of strategically located land usually will not sell it, but will keep it for future sale at swollen prices when the demand soars. Land values have skyrocketed in Riyadh since the expansion of the city in the 1940's. These land values decrease from the Central Business District toward the outer areas of the city, with the exception of land along main roads, such as Matar, Khazzan and Washm. Land prices in the commercial section of the city center range from $450 to $700 per square meter. Land prices continue to be high along Faiysal Street and Saud Street, but drop gradually as one moves along these streets toward the peripheral areas. In the residential section of the Central Business District, prices slide down from $100 to $25 per square meter. In the residential areas outside the city, land prices are different from one area to another. In Districts 7 and 8 (Malaz, Murabba and Olaisha) the prices range from $40 to $15 per square meter. The prices are at their lowest in District 4 (Manfoha and Otaiga). Since the central part of the city is the most accessible to other parts of the city, it is expected that it will have the highest value of all the sectors in the city. Many businessmen find the central part more accessible and therefore, are willing to pay more in order to live near the Central Business District. Poor households, by and large, are not able to compete with the well-to-do businessmen in buying parcels of land, houses, or stores in the city center or in the relatively modern districts on

the north and west sides. Therefore, they choose the peripheral areas on the south and east sides of the city, because the competition for land there is not high and the supply of land naturally increases in proportion to the distance from the center.

In addition to high priced land in Riyadh, home building is a very serious problem. The average annual income of the rural-reared migrants does not exceed $500, and the land price and the construction of a house are beyond the family's means. Rent is also sky-rocketing, and there is no way to predict when the rent is going to decline. Nor does the prospective Riyadh home owner have the advantage of obtaining a mortgage for a home, since there is no mortgage system in the country. To obtain a loan, the person must pay twenty per cent per annum in interest, which the poor rural migrants cannot afford.

Riyadh as a Preindustrial City

The preindustrial city described by Sjoberg has a common property with others all over the world. Unlike most modern industrial cities, where the upper class lives in the suburbs and poor people live in the central area, the land-class arrangement in preindustrial cities is just the opposite. It is the elite who inhabit the more accessible areas in the city center; and it is the lower class people who fan out toward the peripheries. In other words, there is an inverse relationship between socioeconomic status and the distance from the center of the city in

preindustrial cities. If there are slums in the pre-industrial city, they usually exist in the outlying areas rather than in the transition zone, adjacent to the central business district, as described by Park and Burgess (Thomlinson, 1969, p. 163). A lack of or inadequacy of transportation facilities made it necessary for people in Riyadh to live at or near the city center if they were to have access to the city's opportunities. Thus, the elite, having the upper hand, chose to live in or close to the center. Conversely, the more disadvantaged the person, the more likely it is that he will have to fan out from the center to the outskirts.

Certain features of the spatial arrangement of preindustrial cities, described by Sjoberg, partially characterize present-day Riyadh. According to Sjoberg:

> Typically, all or most of the preindustrial city is girdled by a wall . . . Walled cities have been the generalized pattern throughout the Middle East from North Africa to Central Asia, and in India and China during much of their history . . . . Although crowding in the center is alleviated somewhat by the spacious dwelling units of the wealthy, the urban poor, except those in the outskirts beyond the walls, live closely packed. Given scanty transportation media, people reside and work where they have access to the city's special facilities, and because the technology does not allow many multi-storied structures, buildings are set closely together to permit a maximum number of people to partake of the advantages of life within the city . . . . The usual street, as opposed to the main thoroughfares, is narrow, unpaved and poorly drained and apt to turn to mud during periods of rain, making transportation slow and uncomfortable. (Sjoberg, 1960).

Although the wall around the city of Riyadh with its seven gates was demolished in the 1950's, the population

density of the area once enclosed by the wall has the highest density of all of Riyadh's different areas. Prior to the 1940's, Riyadh was little more than a small town, a place of religious activities and a place for the king and his royal family. It fell into the category of preindustrial cities of 30,000 inhabitants. The loyalty to these sub-communities inside the wall is still the operating mechanism which deters many people from moving to the fringes of the city. As mentioned earlier, many of the residents in the central area live very close to their work. Consequently, there is a high density in both the residential and business structures at the center, most of which are under three stories in height.

Although Riyadh with its 300,000 inhabitants can be classified as a middle-sized city, the majority of its population is made up of either rural migrants or traditional urbanites who are no different from the populations of the preindustrial cities in their way of life.

From the standpoint of function, Riyadh, like other preindustrial cities, exhibits less specialization of function than do industrial cities in western countries. Riyadh incorporates all activities ascribed to the societal capital of a preindustrial country, namely religious, political, commercial and educational. Sjoberg has observed that in a preindustrial city, the central area is the site of the most prominent governmental and religious edifices and usually the main market area. He points out that because

political and religious activities have far more status than economic activities, the main market, though often set up in the central sector, is subsidiary to the religious and political structures there (op. cit. p. 96). This description applies to present-day Riyadh. The chief mosque lies in the city center as its hub. The city government's offices and the Supreme Court are on the other side of the central plaza. These governmental and religious buildings crowd around an open plaza called "Justice Square" into which converge a number of important streets. Just two hundred meters from the central plaza lies the central market (Mogaibra), the largest in the city. However, this commercial structure is different from the commercial structures in industrial cities. While the commercial structure in industrial cities, as Sjoberg puts it, tends to loom over all other activities, in Riyadh, it is the religious and political edifices which tower above all others and which are the most resplendent.

In addition to the prominence of the political and religious activities in the central area of the preindustrial cities, this central area is described by Sjoberg as the residence of the elite. According to him, the dwellings here are luxurious and present a blank wall to the street--a reflection of the demand for privacy (ibid. 98). This description applied to Riyadh in the years before the 1940's when modern transportation facilities were non-existent. The royal family and the elite lived in the centrally

located areas. The fringe areas belonged to the poor people who could not compete with the rich in the expensive central areas. Now, the same description applies only partially to Riyadh. Public transportation, such as trains, buses, or street cars, is not operating in the city. Only private cars or taxis are used by the city's population. A substantial number of the elite still live in the central area because they are so much attached to this sub-community, which is the land of their ancestors. Those people who moved to the modern western and northern suburbs (where a long distance separates their home from their work) have to buy a car, not only because it is a necessity, but also because these people look upon the car as a symbol of social and economic prestige. Sjoberg's thesis also applies to the peripheries on the east and south sides of the cities. These peripheries--Awd, Ghomaita and Otaiga--are the areas of concentration for rural-reared people, most of whom have migrated to the city from the desert or from rural areas.

In further describing the specific land-use patterns which contrast the preindustrial city from the industrial type, Sjoberg points out:

> Although sharp ecological difference of land use along certain lines, such as class ethnicity, and occupation, is characteristic of the feudal society, absent are a number of forms of land use specialization so typical of industrial cities. Frequently a single plot of land serves multiple functions in the non-industrial-urban milieu . . . the dearth of land use specialization is also attested to by the fact that the residential units

> of artisans and merchants often serve simultaneously as their place of work, the living quarters being behind or just above the shop (ibid. 103).

The Doxiadis data show some evidence that this latter pattern of land use is prevalent in Riyadh. These data show a high residential population density for Riyadh's centrally located districts. (Figure 4) As mentioned earlier, sixty per cent of the central business district is utilized for residences. The density is also high in areas containing manufacturers or industrial establishments, such as Rail Street or Kharj Street. In Riyadh, especially in the central area, there is little physical separation between place of work and residence. Some artisans or shopkeepers live very close or behind their stores, and the laborers sometimes live in or above the factories. There is no major daily flow of population living in the central area because there is hardly any distance that requires commuting from home to work. But the daily flow of population between home and work reaches its peak in the modern districts, where the clerks and merchants live far from their work.

Internal Structure of Riyadh

Any effective plan for the improvement of a transportation system and other facilities or for rearrangement of the city's physical structure in the future should take into consideration the present pattern of land use within the city and the factors that have produced that pattern.

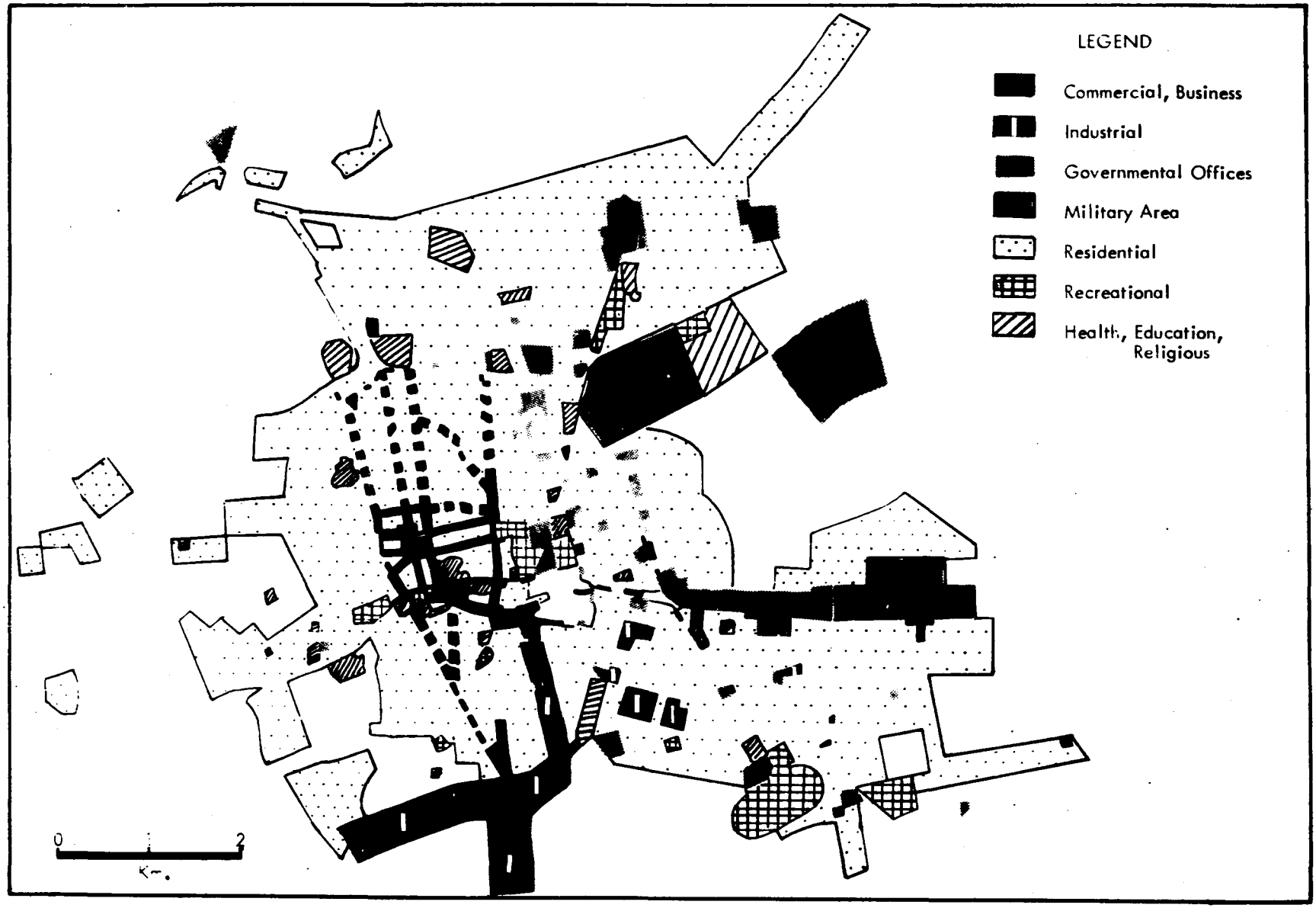


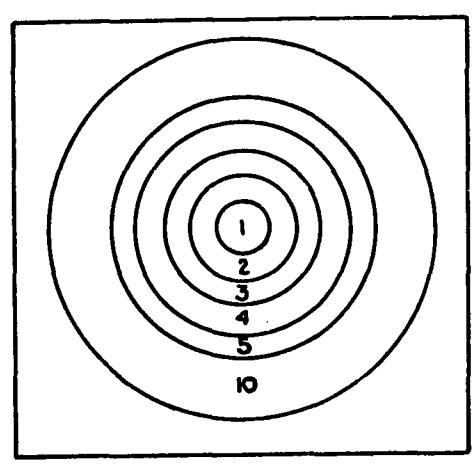
FIGURE IV LAND-USE PATTERNS IN RIYADH

The forces underlying the land-use patterns can be understood if we discuss three theories which deal with the spatial arrangement and the land-use patterns in the city. These theories are the concentric-zone theory, the sector theory and the multiple nuclei theory.

1. The Concentric-Zone Theory

The concentric-circle theory was constructed by E. W. Burgess and Robert Park and indicates that the land-use pattern in the city can be best understood in terms of a series of five concentric circles or ovals.

FIGURE V. THE CONCENTRIC-ZONE THEORY



1. The central business district: This is the center of commercial, social and civic activities.
2. The transition zone: This zone surrounds the first zone, and it is known as a zone of deterioration in housing and facilities. It is usually inhabited by people of the lowest class, who cannot afford to move from the city center. This area is also known for its

high crime rate, social disorganization, and by the fact that it is the red light district.

3. The zone of the independent working class: This zone contains two-family homes from the lower working class who managed to escape the zone of deterioration. They live here in order to be close to work.
4. Medium class residential zone: This is made up of single-family dwelling units. It is exclusively restricted to residences. It usually contains some high-rent apartment buildings.
5. High class residential zone: This is usually located beyond the city limits in suburban areas (Harris and Ullman, 1951, pp. 222-232).

According to the proponents of the concentric-circle hypothesis, urban space has social implications, location and socioeconomic status being interrelated. The concentric-zone hypothesis indicates that residents of each zone exhibit certain characteristics different from residents in another zone. As cities expand, each inner zone tends to extend its area by invading the next zone causing a succession of populations or distinctive land use. When people are economically successful, they move from the center to the outer residential neighborhoods (Burgess, 1929, pp. 114-123).

The concentric-circle theory indicates there is a positive relationship between distance from the central core of the city and socioeconomic status: the farther out,

the higher the status. This observed positive relationship between the distance from the central core of the city and the socioeconomic status might fit some American and western cities where the poor live in the interior areas of the city and the rich live in the suburbs. However, this theory does not apply to Riyadh where the poor people live on the peripheries of the south and east sides. Middle and upper class people live in the central areas, especially prior to the 1950's when roads were not built and facilities were not available. From Doxiadis' data there appears to be no successive zone of increasing income as one moves from the center toward the outlying areas. On the contrary, the data indicate that the average monthly income is about $300 in the centrally-located districts, and it drops to its lowest ($150) in the outlying areas on the south and east sides. There is a slight difference between the income of the central district and those modern suburbs on the north and west sides with the former having a slight advantage over the latter.

Despite the inability to delineate precise zonal patterns based on other indicators of socioeconomic status, such as education or occupation, there do appear to be some changes in certain socioeconomic characteristics as one moves from the center of the city to its periphery. While socioeconomic status is expected to be lower once we move southward or eastward the socioeconomic status in general rises when we move to the north or west. This

means the class division does not necessarily coincide with the average income. While traditional urban districts have a higher average income than modern districts, the latter is observed to be advantaged in certain socioeconomic dimensions, such as education, occupation, modernity, car ownership, dress, and life style.

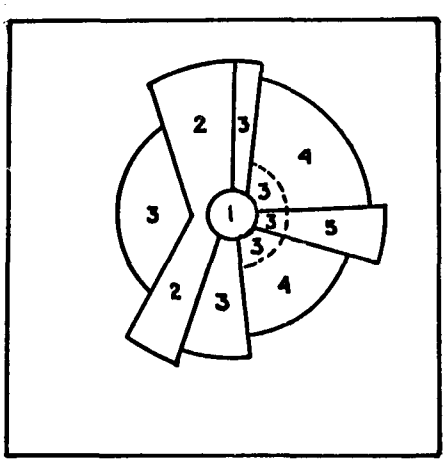
Although the concentric-zone theory does not fit Riyadh's ecological structure and patterns of growth, it encourages other speculations and probably different explanations about the growth of Riyadh as well as the growth of other cities in other countries. In other words, the growth of Riyadh as of other African and Asian cities still needs another ecological investigation. These cities in the Third World have different people, different cultures, and unique civilizations. Hence, sociologists should take into consideration the social, cultural, political, and ethnic peculiarities of these countries. That is, ecological factors are not the only underlying forces which shape the spatial arrangement of a city. It is rather a constellation of many factors that produce a city in its present picture.

2. The Sector Theory

The sector theory or axial development theory points out that the growth of a city takes place along main transportation lines. It visualizes the city as divisible into pie-shaped sectors. Each sector develops along a main transportation line, street, or highway. This

theory portrays change rather than prevailing conditions. Homer Hoyt has formulated this theory (Hoyt, 1939, pp. 112-122). The theory states that the entire city is considered as if it were a circle and various areas as if they were sectors radiating from the center of this circle; similar types of land use originate near the center of the circle and migrate outward to the periphery (Hoyt, 1936).

FIGURE VI. SECTOR THEORY



While the concentric-zone theory is used by Burgess and other ecologists to explain prevalent conditions within each area in the city, the sector theory is used to explain the residential movement within the city. However, both of these theories have provided the same principles of reasoning and are not much opposed to each other. Ecologists agree now that neither theory adequately explains the growth. But ecologists now favor the sector theory because it takes into consideration the effect of

transportation lines on shaping and determining the growth patterns more than the concentric-circle theory does (Sirjamaki, 1964, p. 196).

In tracing the trends of expansion in Riyadh during its recent development, one might favor the sector theory, which seems more applicable to Riyadh than the concentric-zone theory. Looking at Figure 2, it appears that Riyadh has expanded along transportation lines. Shortly after the airport was established six miles from the city, the government constructed the Matar Road which connects the airport with the city. The construction of this road has attracted the development of administrative and residential buildings. Most of the ministries in Saudi Arabia are located on the west side of this road. On its east side lie the new and modern houses for civil as well as military personnel. Similarly, the construction of Diriyah Road and Nasiriyah Road has influenced the development of new houses which were built to accommodate the royal family and the Royal Guard. To the east and northeast of the city, the construction of the railway and highway which connect the city with the Eastern Province gave impetus to the development of factories, parks, stadiums, garages, shopping centers and residences in these areas. In the southeast, Kharj highway, which connects the city with the agricultural regions, has encouraged many people to choose their homes or stores along this highway. The industrial area on the southeast side began to develop recently, and its

development was aided by the construction of Al-Janoob Road and by its closeness to the railway lines. While the city has been expanding in all directions along the transportation lines, it is evident that the main expansion was that along the Matar, Nasiriyah, and Dhahran roads in the north, northwest, and northeast, successively. These three areas have the main administrative buildings as well as the residences of the upper- and middle-class people.

3. The Multiple-Nuclei Theory

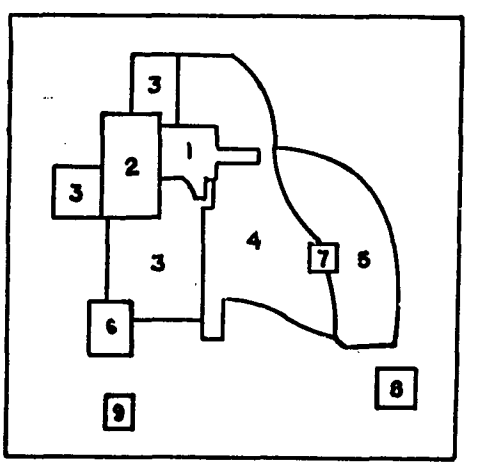
The multiple-nuclei theory states that some cities are not built around a single center but around several discrete nuclei. In some cities, like London, these nuclei have existed from the very origin of the city. In other cities, like Chicago, these nuclei have developed through the historical evolutions of the city stimulated by migration and specialization. The number of the nuclei which result from the historical development and from the process of decentralization and specialization varies from one city to another. The larger the city the greater the number of these specialized nuclei within the city (Harris and Ullman, 1951, pp. 227-230).

Although the central business district, "Justice Plaza," is the main and focal point of Riyadh's commercial activities, there are many other central business districts in different areas of the city. Two of these, Kuwaitiya and Hillat Al-Ahrar, conform somewhat to the multiple-nuclei theory--a theory which is founded on the premise

that metropolises develop multiple commercial and residential nuclei.

Most residential clusters in Riyadh can be identified by their central mosque and their local market, which is surrounded by major roads. Each of these clusters is called "Harah," or sub-district. Riyadh, according to Doxiadis' survey, has twenty-four harah. Each of these harah has semi-autonomy. Yet "Mogaibra" and "Justice Plaza" in the main central business district are recognized as the focal points in the city where merchants from different sub-districts converge to buy wholesale and then sell retail within their own "harah."

FIGURE VII. MULTIPLE NUCLEI THEORY



To sum up, the three theories on city growth and structure discussed above should not be viewed separately. Rather, each theory should be considered a sequential development towards a holistic theory of growth and

structure. Most cities exhibit a combination of some aspects of these three theories of spatial arrangement patterns. To Harris and Ullman, the concentric zone theory is not a rigid pattern inasmuch as growth pattern reflects expansion within sectors or development around separate nuclei. The sector theory aspect has been applied particularly to the movement from the center to the outskirts. While both of these theories (the concentric-zone and the sector theory) emphasize the decline of central residential areas in values and prestige as new modern construction takes place in the outlying areas, this assumption might not hold in Riyadh. The movement from the center to the peripheries was not a result of the deterioration in the inner zones but was a result of the high price of land in the city center. Both of these theories assume that there is but a single core in the city around which land use is arranged. This assumption might be valid inasmuch as people usually converge around the center to minimize the difficulties they anticipated at being at a distance from the city. But because it is physically impossible for the population to concentrate in one single center and because of the existence of separating forces, separate nuclei emerge. These separating factors are high rent, the size of the population, and the necessary placement of large and attractive recreational facilities in less crowded areas (Harris and Ullman, 1951, p. 232).

General Features of the Districts in Riyadh

The characteristics of districts within a metropolitan area are never monolithic. There is usually a variety of physical and socioeconomic characteristics in these districts. Accordingly, people with high socioeconomic status will choose rich and modern districts, and low-class persons will inhabit the poor and slum areas in the city. It follows that people will be living near other people of the same class, sharing the same level of income and style of living. By studying the distribution of income in Riyadh, we can divide the city areas into three categories: low, medium and high. This division coincides with the three divisions that comprise the city, namely ruralized, modern, and traditional urbanite sectors, successively (Figure 2). In other words, there is a curvilinear relationship between the district's income and the physical conditions of the district. Traditional urbanite districts, such as the central areas, have the highest income. Ruralized districts, such as Manfoha, Otaiga, and Awd, have the lowest income. Modern districts such as Malaz, Matar and Nasiriyah have income between the two extremes but closer to the traditional urbanite districts than to the rural districts. Each of these three income categories shares common geographic and ecological sites. It takes the passerby only a minute to observe the differences among these districts in their housing conditions, style of buildings, density, and other general features of the districts.

The long history of Riyadh, which goes back more than twelve centuries, and its rebirth at the dawn of this century represent this paradox. The city has old houses which were built hundreds of years ago, and it also has palaces and modern buildings. This is exactly similar to Cairo's situation described by Abu-Lughod (op. cit. 1969).

Before we present our data about the city's districts it might be useful to provide a brief and general description about these three contrasting sectors that comprise the city of Riyadh.

1. Rural districts: These districts include the eastern and southern sides of the city and can be identified in Figure 2 (Districts 2, 4, 5, 6). These districts are located at the periphery of built-up Riyadh. They were either villages annexed to the city's administration and absorbed recently within the city limit, or they have been built recently by the rural-oriented migrants who settled in Riyadh in the last three decades. Meakal, Manfoha and Otaiga are good examples of annexed villages. Ghomaita, Hillat Al-Otban and Hillat Al-Qusman are typical of the ruralized districts recently built by the migrants.

Similar to what Abu-Lughod found in Cairo, the housing in these ruralized districts is grouped mainly in small village-like clusters, and the buildings are primarily one or two stories in height and are made of bricks or mud bricks. In fact, these districts resemble Arabian villages more than they resemble the modern section of Riyadh in

their physical and socioeconomic features. In these districts, streets, with the exception of thoroughfares, are not lighted or paved. They are narrow and crooked. Commercial advertisements are limited and confined to the main thoroughfares, indicating the low buying power of people living on the minor streets in these areas. It should be noted here that the migrants who settle in these areas have to face an urban existence that proceeds at a different pace. The concentration in these areas and the contrast among the city's three sectors might hinder the process of assimilation. In the first place, the arrival of new migrants with no skill or education tends to increase the already large supply of unskilled labor, and this means they will accept lower wages. The low wages they receive will not be sufficient to improve their living and integrate them into Riyadh's urban society. Secondly, the great concentration of population and the continuous arrivals of these rural migrants might make it difficult for the city to accommodate all families in dwellings with basic minimum requirements for health. With these difficulties facing the new migrant, relatives and friends play a crucial role in alleviating his social and economic problems and in providing the newcomer with some sources of security.

2. Traditional urbanite districts: These are districts 1 and 3 in the old section of the city (Figure 2). The physical characteristics of these two districts are

neither predominantly modern nor still rural. Most of the people who live in these sectors are either natives of Riyadh or have been in Riyadh for a long time. The people here are of various classes. The dualism in socioeconomic system still prevails, i.e., traditional occupations, such as moneylending or blacksmithing coexist with professional and executive occupations. However, it seems unlikely that this dualism will be sustained because trends indicate that this sector is moving toward the modern side of the continuum. In this sector, many modern buildings for residential and commercial purposes have been constructed along the main streets in the last 15 years. Apartment blocks have also been built recently. These modern apartments are large, contain three to six rooms, and are in buildings having four to six floors. These apartment blocks usually have fairly sufficient sanitary facilities, and they meet the minimum health requirements.

3. Modernized districts: These are the newly developed areas on the north and west sides, such as Malaz, Matar, Olaisha, Nasiriyah, Murabba and Badeah in districts 7, 8, 9, and 10 (Figure 2). The dwellings here are mostly luxurious in design, architecture, and facilities. Each house usually has spacious areas for receptions, and they are mostly 1-2 stories in height. The houses are constructed of reinforced concrete, stone, or cement blocks. The life style in this sector is different from that in the rest of the city. This different life style is manifested

by the high proportion of literate people, a lower fertility rate, smaller family size, car ownership, the westernized dress of the children, and the general facilities of the houses. The residents here are well-educated and work as professionals or semi-professionals. Their visits to the mosque are less frequent than the visits of other people in different sectors. While the number of mosques in this modern sector is at a minimum, the number reaches its maximum in the old section of the city. The average density is one mosque per 312 acres in Malaz (one of the modern areas). The average density is one mosque per 55 acres in the old part of the city. This variation in the number of mosques between the two sectors might be due to the variation in the density of population. For as mentioned earlier, the old section is more dense and requires a mosque for each block. Doxiadis' data indicate that the mosque in the old section serves an area with a radius of 75 meters, but in Malaz the mosque serves an area with a radius of 300 meters. Nevertheless, it should be emphasized here that District 1 in the old section has thirty mosques and hosts 24,000 inhabitants, a ratio of one mosque per 800 persons. The modern section, District 9, has only twelve mosques for its 37,000 inhabitants, a ratio of one mosque per 3,083 persons. In other words, even when we control for population, the average mosque density remains higher in the old section than in the modern one. The small size of most mosques in

the modern section cannot accommodate its large population, indicating that not all eligible people in this area go frequently to the mosque. I have observed that the mosques in the modern section have fewer attendants than the mosques in the rural or in the old sections. One might think that people in the modern districts attend the mosque less frequently than people in other districts because they are at work during the daytime, but their absence from the mosque was also noticed during the evenings and on weekends when they do not work. Thus, the Doxiadis data, along with my observation, indicate that attending mosque is more frequent among tradition-oriented people than it is among modern people. Such an indication confirms the widely accepted notion about the negative correlation between religiosity and modernity.

Districts and Housing Status

The ecological anatomy of Riyadh will be analyzed in terms of differentiation and similarity among its ten districts with respect to housing conditions. These districts or sub-communities represent contrasting features of the village, the preindustrial city, and the modern metropolis. These contrasting features seem to present different social worlds with each sector having its own identity. We will treat district as our independent variable and try to find the relationship between district and certain dependent variables, such as income, person per

room ratio, rent, and housing conditions. Housing status is important in this study because it can permit a definitive statement of the differences among these districts in various physical and socioeconomic dimensions. It is assumed in this study that housing status depends mainly on the respondents' background. This means that educational attainment, family income, and ethnicity will determine the type of housing which the respondents enjoy. As mentioned before, ruralized districts, having recruited their population from rural areas would be expected to have a low housing status. These rural-oriented people are less educated, less skillful, and they have settled recently in the city. Therefore, they will find it difficult to establish modern and well-equipped housing. We can hypothesize that there is a relationship between district and housing status. Since rural migrants are disproportionately over-represented in districts 2, 4, 5, and 6, it is anticipated that these districts are more likely to have bad housing conditions. Conversely, districts 7, 8, 9, and 10 are expected to have good, modern housing because these districts are the residences of well-educated and well-to-do families. Since we have information about districts, we will compare districts with each other along specific dimensions including income and physical conditions. Our data have failed to provide information about the respondent's address which could have helped locate ethnic groups in certain districts. Nevertheless, ethnic

segregation, which is common in both industrial and pre-industrial cities, is manifested in Riyadh in the clustering of an ethnic group in a certain district.

Because ethnicity (defined in this study as the place of origin of the respondent) is found to be highly related to socioeconomic status in Riyadh, Shevky and Bell's approach applies to our study. Shevky and Bell are known to have developed the general and commonly used approach of social area analysis. This approach deals with the assumption that important differentiations, e.g., income or occupation, result in residential clustering of like population. If these dimensions, i.e., income, occupation, or ethnicity, are significant for residential location, then it is expected that population identified by these dimensions should be residentially segregated. Spatial segregation indicates differential access to local area facilities by different populations of the urban society. If rural migrants are residentially segregated, their probability of assimilation is reduced through the lack of contact with the host population. This lack of contact might retard or impede the migrant's chances of economic integration. Lieberson found most facets of assimilation in American cities to be correlated with residential segregation (Lieberson, 1961). McElrath points out:

> In urbanizing societies a large proportion of migrants come from distant areas, crossing social and cultural boundaries as well as geographical space on their way to the city. Communities in such societies contain substantial subpopulations of diverse ethnic and

> national origins. Insofar as these differences are reflected in differential access to opportunity, the society is differentiated by ethnic status (1968, p. 36).

It is observed in Riyadh that rural-reared migrants with their low socioeconomic status have settled in the poor districts. Urban-reared migrants and the royal family with their high socioeconomic status occupy the most modern and recently built sectors. Natives of Riyadh live primarily in the old section of the city, which ranks between the first two categories with respect to socioeconomic status. It is thus noticed that once we move away from the central core of the city there is a corresponding decrease in natives and an increase in migrants. In order to test the preceding hypothesis about the relationship between district and housing status, the index of dissimilarity was utilized. Duncan points out that the index of dissimilarity, Δ, is the maximum of the set of k values of (Xi - Yi). If xi and yi are the uncumulated percentages of income in district 1 and district 2, respectively, then,

$$\Delta = \frac{1}{2} \sum_{i=1}^{k} \left| xi - yi \right|$$

or simply the sum of the positive differences between the two percentage distributions (Duncan, 1955).

Five indicators were used to compare the districts with each other with respect to socioeconomic status. These indicators are housing materials, henceforth, referred to as durability, housing conditions, person per room ratio,

rent, and income. Table 3, shows the magnitude of the index of dissimilarity, henceforth referred to as Δ. The higher the value of Δ, the larger the differences among districts. The table shows that Δ confirms our previous assumption that districts 2, 4, 5, and 6 (ruralized districts) are similar in their physical structure. The Δ is at its lowest value when we compare these four districts with each other, and the Δ reaches its highest magnitude when we compare these four districts with districts 7, 8, 9, and 10 (modern districts). When we compare these ruralized districts with districts 1 and 3 (traditional urbanite) the value of Δ is still over thirty per cent, but it is lower than the differences between ruralized and modern districts. The table, however, does not demonstrate that Δ among districts 7, 8, 9, and 10 is lower than any Δ between these modern districts and other districts in other sectors. District 9 is especially different from all the rest, and district 7 is similar to districts 1 and 3, because they are adjacent to each other and are mainly occupied by the native population or by migrants who have been in Riyadh a long time. Since districts 1 and 3 belong to the traditional urbanite sector, we found that Δ between these two districts is very low.

Doxiadis has provided information about durability of the houses for each district. This information indicates that eighty per cent of the houses in ruralized districts are made of mudbricks and only three per cent of

Table 3. Index of Dissimilarity Among the City's Ten Districts with Respect to Durability of the Houses*

District	1	3	2	4	5	6	7	8	9	10	The City as a whole Σ
1		6.8	21.2	39.6	39.1	34.6	17.5	20.8	51.4	15.6	12.6
3			23.4	38.4	38.7	34.6	16.2	20.3	55.2	10.4	15.5
2				18.4	17.9	13.3	11.0	41.6	72.2	19.2	16.8
4					8.6	10.1	25.5	57.0	88.7	36.4	33.0
5						5.5	25.7	59.0	89.6	36.6	34.2
6							20.7	60.0	85.5	32.6	30.2
7								35.1	65.7	13.0	12.0
8									39.6	22.5	25.5
9										53.1	55.7
10											7.0

*This table and the four subsequent tables are arranged according to similarity of districts, with the cluster of similar districts being circled.

the houses in these districts are made of reinforced concrete or cement blocks. In the modern districts, less than forty per cent of the houses are made of mudbricks, and more than forty-five per cent are made of reinforced concrete or cement blocks. In the traditional urbanite sector, slightly over fifty per cent of the houses are built of mudbricks, and over forty per cent of the houses are made of cement blocks or reinforced concrete.

Table 4 shows the variation of Δ among the districts with respect to housing quality. Housing quality was trichotomized as good, fair, or poor on the basis of the buildings' external appearance. Buildings that were built with permanent materials and that appeared to be in good structural order are classified as buildings with a good quality. Buildings with fair quality are those with semi-permanent materials and were of fair structural order. Those buildings that were built with semi-permanent materials and that were in poor structural order, with a low degree of maintenance were considered to be in poor condition (Doxiadis, op. cit. 310).

Doxiadis' data indicates that the largest number of buildings in good condition are those houses located in the modern and traditional urbanite sectors. The proportion of good houses is 47%, 45%, 35% in the traditional, modern and ruralized sectors, successively. There is no significant variation among districts with respect to the proportion of bad houses. However, the large proportion of bad houses

Table 4. Index of Dissimilarity Among the City's Ten Districts with Respect to Quality of the Houses

District	1	3	2	4	5	6	7	8	9	10	The City as a Whole Σ
1		3.7	26.7	15.5	9.8	19.9	7.6	14.1	38.4	12.7	10.1
3			26.9	12.0	9.6	16.4	7.2	13.9	34.7	9.2	6.4
2				16.5	36.4	17.1	34.1	40.8	59.5	18.6	28.7
4					20.0	5.0	17.6	24.3	43.1	2.9	12.3
5						24.4	4.7	7.3	33.2	17.9	12.5
6							19.8	23.7	42.5	7.3	11.9
7								6.8	30.9	15.5	7.9
8									25.8	22.2	12.1
9										41.0	30.8
10											10.2

found in district 9 might distort our conclusion. The fact that should be emphasized here is that Doxiadis includes those temporary squatter settlements in district 9, and this has contributed to the rise of the proportion of bad houses in this district. These temporary shack houses were built up by recent migrants with no authorization from the city government. They are temporary settlements expected to be removed as soon as the land is needed. Because of these settlements with their inadequate living conditions, the index of dissimilarity, therefore, is the largest between district 9 and other districts. Since most of the royal family live in district 8, and since the majority of the population in district 2 are recent migrants, we can see that Δ between these two districts is also very high. The Δ between districts 10 and 4 has a very low value. Such a low value was not expected between two contrasting districts. Probably, the similarity between these two districts with respect to general housing conditions was due to the fact that they are adjacent to each other and were built almost at the same time. Strange as it seems from the two previous tables (Table 3 and Table 4), there is no strong relationship between the type of materials used in the house and the quality of the houses as it is determined by external appearance.

Table 5 measures the index of dissimilarity among districts with respect to density (persons per room ratio). Person per room ratio is an appropriate measure of the

Table 5. Index of Dissimilarity Among the City's Ten Districts with Respect to Person Per Room Ratio

District	1	3	2	4	5	6	7	8	9	10	The City as a Whole Σ
1		13.0	9.2	8.8	14.3	7.2	8.4	11.9	13.9	9.0	6.0
3			13.2	16.8	15.7	15.1	9.9	9.1	15.3	15.2	11.8
2				6.2	10.0	5.1	6.6	10.4	13.2	13.0	5.1
4					10.6	5.1	9.7	12.7	15.3	13.2	8.3
5						10.3	9.0	10.3	15.6	15.0	8.9
6							6.4	12.0	14.7	12.3	7.2
7								7.1	12.0	13.4	5.0
8									6.6	10.4	6.7
9										9.7	8.3
10											8.3

quality of housing and an index of the general standard of living. This index reveals low density in Riyadh (1.37) compared to what Hacker found in Amman, Jordan, (2.6 to 5 persons per room) (Hacker, 1960, p. 99). Interestingly enough, we notice in Table 5, that the variation of densities per room among districts is not significant. The highest value of Δ in this table is that between districts 3 and 4 which is 16.8. Such a value cannot be considered a crucial one. The low value of Δ's in this table might be explained by two facts. First, the rooms in the old and ruralized sectors are smaller than the rooms in the modern ones. If our data had taken into account the residential floor space per person, the index of measuring density would have been more accurate. Accordingly, the variation in density among districts might have been significant, with the modern ones having the lowest density and the rural ones having the highest density. Doxiadis has indicated that the differences in density between the old and the newly developed sectors are striking. While the density may reach 300 inhabitants per hectare (2.5 acres) in the old section, it drops to 45 inhabitants per hectare in the modern one. This is due in part to the large space that villas in the modern section usually occupy and in part to the vacant plots lying in the modern section. Second, there is a heavy concentration of recent migrants who have settled temporarily at the marginal area of the modern districts, such as those

settlements behind the Ministry of Defense and those on the University Street and north of Petromin. Doxiadis' survey has included these settlements and regarded them as parts of the modern sector and this might distort the result and, thus, increase the density rate in the modern districts to make it equal to the densities in other sectors.

Table 6 shows that the index of dissimilarity is very low among districts 2, 4, 5, and 6 with respect to family income. This supports our hypothesis about the similarity in economic status among these four districts which host the rural migrants. The index of dissimilarity between districts 1 and 3 is also low, as we expect, because these two districts are located in the old section where the natives live. When we compare districts in the old section against districts in the ruralized districts the index of dissimilarity becomes as large as three times of the index of dissimilarity among districts within their own sector. The table also shows that there is no major difference among the modern districts when compared with each other. However, the index of dissimilarity rises slightly when we compare these modern districts with other districts in the old or rural sectors. Doxiadis' data indicate that while the monthly family income is $170 in rural districts, it is $300 in the old section and a little below $300 in the modern one. The data also indicate that eleven per cent of the inhabitants in both old and modern sections earn more than $700 a month, but that three

Table 6. Index of Dissimilarity Among the City's Ten Districts with Respect to Family Income

District	1	3	2	4	5	6	7	8	9	10	The City as a Whole Σ
1		8.9	14.7	26.8	25.6	27.4	19.3	17.2	16.2	19.3	15.9
3			10.3	22.4	21.2	20.6	15.9	18.8	10.7	15.0	11.1
2				12.9	10.9	13.8	12.6	20.2	12.2	16.6	6.7
4					4.1	5.8	10.2	21.1	17.2	11.8	11.3
5						6.6	6.2	19.9	16.0	18.5	10.1
6							11.6	19.3	15.4	13.6	11.5
7								13.7	10.3	10.0	7.4
8									11.4	20.0	13.5
9										17.4	8.4
10											9.0

per cent of those living in ruralized districts fit this income category. These findings clearly support our assumption that there is inequality in the distribution of income among these three sectors with the rural districts having the most disadvantageous position.

Table 7 indicates that Δ's between district 9 and other districts have the largest values. These large values are certainly attributable to this district's two social extremes. On the one hand, the district has the highest-rent houses, occupied by white collar people. On the other hand, it also houses the temporary low-rent shacks. Doxiadis' data indicate that about ten per cent of the inhabitants in the old section and five per cent in the rural section have high-rent houses. In the modern section, more than fifteen per cent of the houses belong to the high-rent category. The major reason for the discrepancy in rent between the old rich section and the modern section is that houses in the modern section have gardens and are larger and more modern. In addition to this factor, the houses in the modern section are rented to foreign professionals who are expected to pay more because they earn more.

Discussion of the findings. The physical conditions and income status in these districts are significantly different. The modern sector (districts 7, 8, 9, and 10) consists largely of suburban villas with elaborate facades

Table 7. Index of Dissimilarity Among the City's Ten Districts with Respect to Rent

District	1	3	2	4	5	6	7	8	9	10	The City as a $_{\Sigma}$ Whole
1		13.7	36.7	39.7	27.2	29.0	32.3	25.4	52.5	37.1	28.0
3			23.4	32.8	13.5	16.8	19.6	24.5	45.0	23.4	15.0
2				24.9	15.1	18.6	25.2	21.3	31.8	10.3	8.8
4					20.3	16.0	25.7	40.5	56.7	16.2	27.2
5						4.8	14.4	26.4	46.9	10.2	11.3
6							17.9	29.9	50.5	18.5	14.9
7								16.1	32.7	12.7	6.4
8									32.3	28.7	18.3
9										42.1	35.6
10											12.3

and balconies. These villas reflect the more privileged socioeconomic origins of their inhabitants, mainly urban-reared migrants and members of the royal family. This group marks the appearance of the newly-emerging urban middle class that has become the dominant socioeconomic group in the area. This middle-class group, however, lacks the self-consciousness which characterizes the middle class in the United States or Europe. Class identity in Riyadh is not as strong as kinship ties. Nevertheless, it is expected that the observed gradual shift to the urban way of life will enhance the class identity and dilute part of the traditional kinship attachments.

In the old section, high-rise apartment houses have recently emerged to cope with the increasing demand for living space. Many old houses have been converted to apartment houses. The apartment buildings are modern and clean, but the floor space of the residences has significantly decreased. The appearance of tall, modern buildings results from the urgent and inevitable demand for land space in the old section of the city. Residential units have to share buildings with commercial activities. With high competition for the scarce land in this section, it is expected that this area will witness a mixed land-use pattern and a varying configuration of urban functions. In ruralized districts, housing is similar to what exists in the village. The houses typically consist of one or two stories. They are rural in all characteristics of style

and, indeed, are located at the periphery of built-up Riyadh. For example, within district 2, the unskilled workers are employed in small body shops, in restaurants, or in temporary jobs with no definite contract between the workers and the managers of the firms. Some of these districts, however, have some skilled or semi-professional workers who have been in Riyadh for a longer period of time or who have a skill or a high level of education. The physical features of these poor districts reveal the magnitude of the problem of migration from rural to urban areas and give a clear idea of its negative socioeconomic consequences. The urban housing problem appears to be the most crucial one, whereas it is actually a clear manifestation of a problem which is far larger and more complex, and which urgently needs to be solved or at least mitigated.

It is an error, however, to jump to a simple dichotomy and divide the city into two clear-cut sectors: one, ruralized and poor, and the other, modernized and rich. This dichotomy views the modern and urban areas as being sharply contrasted with each other, sometimes to the extent that they are seen as polar opposites. It is true that there are differences among the city districts and their respective populations. I do not claim otherwise. As a matter of fact, the dissimilarities have been made evident in the previous tables. However, important similarities can also be observed. The differences between districts receive heavy emphasis in the literature and the

similarities are thereby obscured. Riyadh's population, regardless of neighborhoods, has much in common. In fact, in many respects, the people are rather more similar than dissimilar. Dress, number and time of meals, marriage customs, and visiting patterns are observed to be similar in all districts. The assumption that only rural migrants live in poor districts and that natives and urban migrants live in the rich districts can no longer be accepted as self evident, despite the fact that the concept of the rural-urban dichotomy has preoccupied American sociologists. For example, Philip Hauser asserts that there are many cities in Asia which retain village characteristics, in contrast with Western cities. He points out that there are two distinctive areas in these Asian cities: a) the Western type area, and b) the indigenous areas which are not so much distinctively urban as they are agglomerations of villages containing the majority of the city's population (Hauser, 1957, p. 87). The hypothesized rural-urban dichotomy, even if viewed as a continuum, involves a false assumption of continuity. There are many rural migrants who are living in the center of the city and in the modern districts. Some rural migrants voluntarily choose to live in rural districts in order to be close to their own group. This type of neighborhood is a new traditional form which is neither typically rural nor typically urban. Thus, the local and national loyalties among these rural migrants coexist without any appearance of discrepancy or

inconsistency. Epstein's model implies that one might be rural in some aspects of his behavior and urban in other aspects (Epstein, 1968, pp. 224-240). In other words, the individual migrant does not adopt the totality of the urban way of life. He can, thus, select behavior patterns suitable to the sets of relations in which a situation involves him at a given moment. It is also observed that many urban-reared migrants, especially those with no education, inhabit the poorest section of the city. The natives, however, can be found only in the traditional urbanite or modern sectors.

It is worth mentioning that the expansion of the city has taken place at the expense of these poorer districts. Many sections in these low-income districts have been converted to commercial and industrial zones. Modern schools, hospitals and paved thoroughfares are being constructed in order to help bridge the gap between the rural and modern sectors and to bring living conditions in these districts up to the modern level. Rural migration, however, at least until the end of this century, will counteract modernization by reinforcing some rural patterns within the city. But even with this massive rural migration, coalescence among the ruralized, traditional urbanite and modern sectors will occur eventually, for rural migrants cannot halt the process of continuous modernization taking place all over the country. Moreover, it is crucial to understand that there have been some improvements in living

standards in rural areas which will help to curb rural migration to the city and to convince the rural population to stay at home. Even if there is a continuing migration to the city, the difference in socioeconomic conditions between the village and the city will have been minimized.

CHAPTER IV

MIGRATION TO RIYADH

Introduction

This chapter will focus on (1) the impact of recent economic development in Saudi Arabia upon migration from different parts of the country to Riyadh, (2) motives for this migration--economic, social, and psychological, (3) types of migration--temporary and permanent, (4) age-sex structure of those migrants compared to non-migrants, (5) household size and its relationship to rural-urban cultural background.

Internal migration is not a phenomenon peculiar to a particular country or to a specific time period. Indeed, throughout history there has been ample evidence of such migration in all societies. Historical evidence indicates that population redistribution in the Arabian Peninsula has always been a common phenomenon. Different tribes have left this peninsula for many parts of the world. At the dawn of Islam in the seventh century and during the expansion of the Islamic State in subsequent centuries, many tribes left the Arabian Peninsula for Iraq, Persia, Syria, Egypt, North Africa, Spain, and other parts of the world. There are thousands of families in the countries

mentioned above who can still trace their ancestors to the noble tribes of Arabia. Nevertheless, this emigration had fluctuated depending on the economic prosperity and the political stability of the peninsula. The last large-scale movement was the emigration of many families from Najd (the central part of the Arabian Peninsula) to neighboring Arab countries--Kuwait, Iraq, and Syria--which virtually ended forty years ago. In recent years with the regulations on international migration, the Arabian tribes have limited their movement to the interior of the country. The nomads keep moving from one pasture to another during the rainy seasons and settle temporarily around oases during the summer. Now, with the discovery of huge amounts of oil, the economy has been changed to industrial and commercial, rather than pastoral or agricultural. Hence, many people in rural areas have sought different employment to meet their everyday needs.

The role of internal migration in redistributing the population from areas of lesser opportunity to areas of greater opportunity has been well documented in the literature of migration. For example, Simon Kuznets points out that population redistribution is an indispensable link in the mechanism of modern economic development. (Kuznets, 1964). This means that regional gains in population through migration is positively correlated with regional economic growth. The internal migration recently taking place in Saudi Arabia has been characterized by a

movement from rural areas to urban settlements. Large cities and oil industry centers are the targets of migrants from the desert, the villages, and the small towns. Riyadh, therefore, is a good example of a big city, complete with relative economic affluence and a high rate of employment, which attracts many migrants. Two related points will be explained in this section in an attempt to illuminate the nature and causes of this migration: the characteristics of rural areas and the pressures resulting from population growth due to improved medical care.

First, I will discuss the characteristics of rural areas which have forced their inhabitants to seek alternative areas, usually urban agglomerations. The nomads in Saudi Arabia depend entirely on the limited rainfalls. They move with their animals from one pasture to another within the tribal territory. The oscillation of the rainfall necessitates the nomads' continuous movement in search of pastures. During the long dry summer, the nomads move with their animals to neighboring oases where they set up camps near the water. The summer is not considered a productive period for these nomads because of temperatures that often approach 120°F. As soon as the autumn rains come, the grass grows, and water is no longer the immediate necessity of life. At this time of the year, the tribes leave the wells to seek pastures and to hunt deer and other game. Hunting is very popular among the nomads, and they now carry it out in jeeps and pick-up trucks instead of on

camels. This is the only way that the nomads can get their meat, because they are far from the meat markets in towns, and they cannot afford to kill their camels or sheep. They usually wander in the desert pursuing grass and game for seven months, starting in October and ending in April. This period is the nomads' Utopia. In spite of this harsh life, the tight and cooperative social and economic system of the nomads has survived. The chief of the tribe conscientiously administers the tribe's affairs. He is usually the arbiter in solving the tribesmen's disputes. He also helps the destitute members of the tribe, especially during the lean years.

Since the drought, which lasted seven years from 1958 to 1965, agricultural and pastoral conditions have changed. Pastures deteriorated; most animals perished; and the nomads became very poor. Instead of weaving his Abat, a kind of cloak, and making his own carpets and shoes as in the past, the Bedouin nomad began to depend wholly on market goods available in urban areas. The losses of animals and wealth had far-reaching effects on the Bedouins' economic and social life. Many of them could not stand the situation in the middle of the desert. After becoming poor and hopeless, they broke from their tribes and migrated to the cities. Some of them have turned to the cultivation of land on a small scale, but due to the lack of experience in agriculture, they either go back to the desert when the pastures get green, or migrate to urban settlements.

Another group is known for its tendency to migrate from rural areas to large cities, namely the village and farm dwellers. The semi-isolated village in Saudi Arabia used to have economic autonomy. The village produced only its own subsistence rather than commercial products. The production was to satisfy the immediate needs of the village. However, handicraft and small industry in the village could not compete with the big firms of the city nor with goods imported from foreign countries. The big firms are able to produce goods at a lower cost, of a higher quality, and with greater variety. The city also appeals to the villagers because it offers higher wages, and it can provide a chance for all members of the family to work.

The second point to be explained in this section is that there has been a considerable population increase resulting from the development of medical services. The mortality rate has been declining sharply, and the fertility rate is still very high. The pressure of population is felt acutely in rural areas where unemployment or underemployment is more pronounced. These conditions have induced rural people to seek alternative areas where the employment rate is higher. The economy of the country has been switched to industrial urban centers. There is now little demand for farm workers. As a result of these changes, the rural people migrate to urban areas, especially to Riyadh, in search of better living conditions. The

development of communication and transportation systems has helped connect rural areas with large cities and has brought the cost of a journey within the means of much of the rural population. National newspapers and radio and television broadcasting systems have penetrated most parts of the country. The rural inhabitants are becoming aware of the opportunities and the better way of life in the city. This, too, helps to motivate them to leave their land in favor of urban centers.

Motives for Migration

The preceding section has depicted the trends of migration from rural areas to urban centers. In this section, the focus will be on why these rural-reared people evacuate their land and go to the cities. Many of these migrants voluntarily left their villages to seek greater social and economic opportunities in urban industrial centers. Others have fled the desert or the village because the population growth rate has been greater than the increase in opportunities. Still others went for different reasons, i.e., to follow their relatives or merely to enjoy the excitement of life in the city.

The motives for this migration have been classified into "push" and "pull" factors. The "push" comes from the decline in the need for farm labor (due mainly to drought), from pressure on the land, or from farm mechanization. The "pull" factor emerges because the city attracts many people

to work in different sectors. There is the lure of better living conditions, of higher wages, and of greater chances for better jobs (Kempinski, 1961, pp. 70-73). It is noticed that these two factors ("push" and "pull") are mutually dependent. The "push" factors are those factors that push the destitute peasants, forcing them to evacuate their land and leave for the city and its "pull" factors, such as expected employment, relatives, friends or better living conditions. However, pure "pull" factors could be traced when migration occurs between two places, both having sufficient occupational opportunities to support their populations. Similarly, pure "push" factors can be recognized when migration occurs between two settlements with job shortages. When there is a high disparity in the number of opportunities offered by two places, the volume of migration will be large. For example, if place A exhibits job surplus over its population and if place B has a shortage in employment, we should expect migration from B to A to increase.

The drought that prevailed for many years was responsible for ruining crops and starving animals in rural areas. The poor farmers, having no sophisticated tools to drill for underground water, and the nomads, having no experience in reclaiming and developing the pastures, and the small town dwellers, having lost their profitable contact with the nomads and the farmers, have been forced to leave their places of origin for urban localities which

are expected to have higher rates of employment. Vance states that:

> As new areas develop and old ones decline, workers must migrate in order to develop the new resources and to relieve the older communities of surplus workers. The "push" of stranded communities resulting from shifting work opportunities are accentuated by the "pull" of new developments in industry. (Vance, 1951, p. 191)

Economic factors have been viewed by many scholars as the primary motives causing people to move from one place to another. Economics can be a "push" factor where employment opportunities are stagnant and a "pull" factor where jobs are expected to be available. Donald Bogue points out that there are three key variables involved in migration flows: employment, income, and rapid population growth. Migrants flee from areas with high rates of unemployment, low income, and high rates of population growth with no corresponding increase in opportunities. Tilly asserts that there are three factors which affect the magnitude of migration. These factors are occupational information, job opportunity, and cost. He indicates that the volume of migration is positively correlated with occupational information and with job opportunity available at the destination. The volume of migration is negatively correlated with the cost of mobility. Thus, when the cost of migration is high, the magnitude of migration is low. If two places are close to each other, with one having a high rate of employment and the other having fewer occupational opportunities, provided that job information

was dispersed widely, migration will be at its greatest (Tilly, 1970, p. 154). Beshers also emphasized the significance of the dissemination of knowledge of jobs as the basic constraint on the movement of individuals (Beshers, 1967, p. 136). These factors of migration emphasized by Bogue, Tilly and Beshers are applicable to migration in Saudi Arabia. Opportunities in Riyadh are greater than they are in other parts of the country. Information about these opportunities has been disseminated either by the mass media or by word of mouth. Having kin and friends in Riyadh increases the flow of information about job opportunities in Riyadh and lowers the cost of migration. The trip to Riyadh now is becoming less costly. Highways have connected the capital with most parts of the country. Once the newcomer arrives at Riyadh his relatives or friends will provide for his immediate needs until he gets established. Thus, these three factors--opportunity, information, and low cost--have promoted both geographical and occupational mobility in Saudi Arabia.

The three key variables, emphasized by Bogue and mentioned earlier, are obviously applicable to Saudi Arabia. Rural areas in Saudi Arabia are characterized by low-wage jobs, low incomes, high fertility rates, and relatively low mortality rates. The attractiveness of urban employment lies not only in the higher wages but also in the fact that workers are paid regularly, month by month, in contrast to agricultural workers, whose payment comes

seasonally. The payment in rural areas is also unpredictable because of possible changes in the weather and the fluctuation of world market prices.

There is no doubt that the incentive for migration in Saudi Arabia is primarily and preeminently a desire for cash and material wealth not available in the desert or in the village. There is little incentive to work in the village, since payment is either low or irregular. In Riyadh, there can be a higher-wage employment and a possibility of a new and higher standard of living. Churchill asserts that sixty-five per cent of the rural migrants to Beirut, Lebanon, had been motivated primarily by economics (Churchill, 1954, p. 49). Similarly, El-Saaty and Hirabayashi indicate that sixty per cent of the migrants to Alexandria, Egypt, had been similarly motivated (El-Saaty and Hirabayashi, 1959, p. 72).

Both our data sources (Doxiadis and CRED) have failed to investigate the motives for migration to Riyadh. Nevertheless, this massive rural migration, which was unprecedented in Saudi Arabian history, occurred mainly during the drought that prevailed in the Arabian Peninsula in the 1950's and the 1960's. This period coincides with the time when Riyadh, "the target of migrants," became the sole capital of the country and the headquarters of the government. Men were needed from different parts of the country to work in various governmental and private sectors. Thus, we can be certain that economic motives were behind

rural migration to Riyadh. Nevertheless, it is difficult to believe that the factors mentioned above are the sole generators of migration, because Riyadh has become increasingly aware of the serious and miserable social conditions of those who migrated from the southern part of the Arabian Peninsula and who are still living in temporary shacks on the city's peripheries. Since these adverse conditions have failed to curb the migration flow to Riyadh, other motives for continuing this migration should be investigated.

Bogue also acknowledged that non-economic factors are significant as motives for migration. Social and psychological factors should be considered as important reasons for migration. The presence of relatives or friends in Riyadh has encouraged rural people to migrate to the city. In his study of migrants to Wilmington, Delaware, Tilly indicates that migration under the auspices of kinship was the most common among groups which have the least skill in dealing with impersonal urban life (Tilly and Brown, 1967, p. 143). Help or hope for help from relatives and friends makes the migrants dream that the problems anticipated on their arrival at the city will be solved. According to Beshers, rural areas have a social structure organized around kinship patterns, so it is expected that kinship will play a significant role in patterns of migration (Beshers, 1967, p. 139).

To sum up, the motives for migration to Riyadh can be classified into "push" and "pull" factors which have economic, social, and psychological implications. The "push" factors could be briefly stated as follows:

a) Successive years of drought and the subsequent absence of sufficient water to farm the land.

b) Inadequate facilities in the village schools and other civil services.

c) The absence of highly-esteemed jobs sought by well-educated persons. Opportunities for individual advancement are more slender in the village than in the city. Low-wage jobs in the rural areas have discouraged young educated people from returning to the village.

The "pull" factors can be summarized as follows:

a) Concentration of governmental, commercial, and industrial activities in cities where employment is more available and advancement is more possible.

b) Riyadh has institutions of higher education, including several colleges and a university, where high school graduates from different areas converge.

c) Information about job opportunities in Riyadh has been circulated widely in the village as well as in urban areas by those who have already migrated to the city.

d) The cost of migration is not high enough to deter rural-reared people from moving to Riyadh. The already established relatives and friends who migrated previously have helped lower the cost of migration for the new migrants.

e) Once migration has begun, it tends to generate its own momentum. People follow their friends and relatives who preceded them to Riyadh.

The city in general, has many places where the individual can engage in different activities. The poor man can get rid of the heavy burden of the social hierarchy and

pass among the crowd. There is the possibility of becoming wealthy and famous. The city attracts individuals looking for fame as well as individuals running from village gossip.

Types of Migration

Riyadh has witnessed three types of migration in recent years.

1. Circular migration--This is the short-run temporary migration of the lone working males who intend to work in the city for a specific period of time and then go back with some cash to their place of origin. Economic motives are usually the determinant factors of this type of migration.
2. The delayed family migration. The family joins the breadwinner after he is established in the city. Social factors, such as the attachment to relatives and friends, are behind this type of migration.
3. Labor-contract migration--This type is arranged by some organizations or by the labor markets which usually recruit low-wage workers to work in various sectors of the economy.

These three types of migration are not mutually exclusive but overlap a great deal. Examples of this overlap will appear subsequently as we analyze these types in detail.

1. Circular migration or the short-run type--This is the movement of young males who leave their villages intending

to make enough money to return to their birthplace to open private businesses or to buy land, water pumps, and other farm equipment. Since they do not intend to stay in Riyadh permanently, and since they have no long-range occupational goals, they simply work at available jobs which will supply them with their most immediate needs and desires. Thus, they usually enter the urban class structure at the bottom. But their social status is expected to rise with their length of residence, education, and experience. This pattern of migration is basically dictated by economic motives and by the instability of the work that new migrants usually experience. This type was more common in the 1950's when Riyadh became the headquarters of the government. Ministries, directorates, and other government offices were transferred from the Western Province to Riyadh. Thus, a large number of laborers was needed to build roads, houses, and office buildings. Thousands of migrants poured into the city, and the great majority of these were young males. They came in groups and lived together hoping to save money and go back to their villages. Among these migrants were many married men, but very few were accompanied by their wives and children. At first, they migrate by themselves, or as what MacDonald and MacDonald termed "birds of passage." Similarly, Ravenstein's law about migration presupposes that the migrant separates himself voluntarily from his family and community and moves like an isolated social

atom to join those who preceded him. The type of migration which has been the model in Ravenstein's migration theory is characterized by the fact that the migrant usually moves alone or is accompanied only by his closest family. The movement of the whole tribe does not exist in Saudi Arabia anymore. The movement consists predominantly of workers moving to find better job opportunities.

Because these migrants are transient and because migration to Riyadh is so recent, it is rather difficult to predict or to investigate what course of integration into Riyadh's society these migrants are following. I have observed that many of these migrants, after becoming established and working in Riyadh for many years, decide to bring their families to live in Riyadh permanently, especially if conditions at the destination turn out well and/or conditions at the point of origin deteriorate. Once they acquire a stable job, they decide to settle down, and they begin to simply disappear into Riyadh's population. Whether these rural people will continue to flee the desert and villages and settle in Riyadh is still an open question. But the indication is that the answer will be positive for the "desert" migrants and negative for the "village" migrants. The harsh life in the desert and the trivial profit that nomads obtain from their animals cannot compete with the lucrative work common in Riyadh or in the industrial oil centers. Thus it is expected that the nomads will continue to flee the desert

to settled areas. The gradual improvements in the village, however, will no doubt encourage many villagers to stay at home and, accordingly, will decrease their rate of rural-to-urban migration.

2. The second type is the long range migration, such as the delayed family migration and the chain migration. Mass migration to Riyadh and the frequent visits by many villagers to their hometowns have brought rapid inflation to the village as the money earned in Riyadh flows into the village's stagnant economy. Therefore, it becomes cheaper for the lone male migrants to bring their nuclear family to the city, than to support two houses, one in the village and another in the city, traveling between them several times every year.

It is worthwile to mention here that the delayed family migration has helped bridge the gap in sex ratio inequality. Historically, the migration to Riyadh has been dominated by young males seeking temporary employment. A single female traveling alone without a man of close blood relationship is still inconceivable in a society like Saudi Arabia, which takes extremely restrictive precautions to safeguard the honor of the family and of the clan as well.

Similar to the delayed family migration is the chain migration which is exemplified in the various forms of sponsorship by close relatives and friends who preceded the prospective migrants to Riyadh. The early migrants provide

the prospective migrants with "feedback" about opportunities in Riyadh and also provide them with financial aid and general advice about conditions at the destination. These services are provided either by the primary groups for Saudi migrants or by the officials for international migrants. Chain migration is not peculiar to Saudi Arabia. It is observed in other parts of the world as well. In the United States, for example, Tilly indicates that migrants from Appalachia were recruited by relatives and friends at the place of destination. These newcomers would in turn recruit more migrants from back home (Tilly, 1970, p. 160). Alden Speare points out that some companies in Taichung, Taiwan, recruit their new workers by asking their current workers to inform their relatives or friends of vacancies in the company's work force. This is the cheapest method of recruiting workers (Speare, 1972, p. 16). Chain migration among international migrants had not only generated its own momentum and led to the growth of Riyadh's population, but it also produces what MacDonald and MacDonald called "chain occupation" (MacDonald and MacDonald, 1954). "Chain occupation" takes place when a particular group of migrants specializes in certain occupations and can orient the new arrivals of their people on the basis of their own skill and experience. The majority of tailors in Riyadh have come from Aden, and the majority of the construction and restaurant workers are from Yemen.

3. Labor-Contract Migration-- This type is the most common type among foreign immigrants, especially those from Arab countries. One restriction on immigration from other countries requires prospective foreign immigrants to have a job in Riyadh before they enter the country. The "Wasta," or the agent, finances the immigration and provides employment. While internal migration occurs under the auspices of kinship or friends, external migration to Riyadh usually takes place under the wasta's auspices. The wasta can buy these foreign migrants continuing protection from the officials and from the public as well. The wasta has his own business, such as construction work, a restaurant, or a factory. He is the middle man between prospective immigrants and Saudi officials. The wasta, as a godfather, plays a major role in helping immigrants to enter the country, find a job, and get acquainted with their countrymen. Interestingly enough, the wasta system is not self-perpetuating. As soon as the immigrants, who had depended on the wasta, become acquainted with Riyadh's society, they fend for themselves and stay away from him. On their arrival they usually work in temporary or seasonal jobs, but they gradually find stable and decent work. The ability of these immigrants to achieve autonomy has decreased the power of the wasta, who had been landlord, money lender, counsellor, and foreman to them. The wasta does retain his position in the general community, however, because there is a constant flow of new immigrants.

Riyadh, like many cities, has a mixture of these three types of migration. The first was the most common among Saudi migrants in the 1950's. The second type is more dominant among Saudi migrants at the present time. The third has always been the most prominent among migrants from other Arab countries.

Age Composition

The age composition of a population reflects certain demographic characteristics of its population, such as patterns of migration and past fertility rate. The age distribution will be discussed in this section to see if migration has played a significant role in increasing the proportion of Riyadh's population aged 15-39 years. A central issue related to this subject is whether different types of migrants to Riyadh are differentiated from the native population and from each other with respect to age, sex, and household size. Age differentials are important because they account for differentials in socioeconomic characteristics. For example, the fact that migrants to Riyadh have a higher rate of employment, in proportion to their population, than the native population is significant in itself, but it is important to know whether this high rate of employment is a function of age and sex. The study will also attempt to answer certain relevant questions, such as: How much does the age and sex composition reveal peculiar

features typical of highly urbanized areas? Is the population pyramid cylindrical in structure? Do we have a high dependency ratio, and if not, why? Is there a marked bulge in the age structure, and if so, in what age categories for males and females? The literature has depicted a bulge of age structure in the categories of the twenties and thirties. This is certainly due to the selectivity of migrants who tend to be young adults (Bogue, 1955, p. 483). To Bogue and Hagood, more migration will occur among young adults than among other age groups. They point out that in the United States the native white migrants coming from rural areas were selected more intensely for age than those coming from urban areas (Bogue and Hagood, 1953). Freedman also indicates in his study of migration to Chicago that the more rural the background the higher the concentration in younger ages (Freedman, 1951). The Indian data from 1935 to 1950 show that the age groups of 20-24, 25-29, and 30-34 years occupy the first three positions in the ranking of all age groups (Beshers and Nishiura, 1960). Basing her conclusion on the 1947 census, Abu-Lughod found that forty-five per cent of Egypt's population belonged to the 15-50 years age category, but this percentage goes as high as fifty-two per cent in big cities with the percentage declining with the decline in city size (Abu-Lughod, 1964, p. 482). The great majority of migrants to Alexandria, Egypt, came as adolescents or young adults (El-Saaty and Hirabayashi,

1959, p. 72). Similarly, in Riyadh we should expect that the migrants are heavily concentrated in the younger age groups. The studies above have demonstrated that migrants are by no means a cross section of the population. Migrants as well as immigrants are found to be young adults in the age of productivity and reproductivity. Rates of migration are found to be the highest for those persons in their early twenties. Migration from rural areas in Saudi Arabia has skimmed the cream as the young adults and better educated leave their villages for urban centers, leaving behind them the dependent members of the family, such as children and elderly people. Because of this massive rural-to-urban migration, the proportion of young male adults living in the village has been declining in Saudi Arabia for the last three decades. Conversely, the proportion of population in the productive age (15-54) is expected to be high in Riyadh, which is considered the destination of those young migrants. Thus, Riyadh, like other capitals of the world, is expected to contain a sizeable proportion of young adults as a result of this migration.

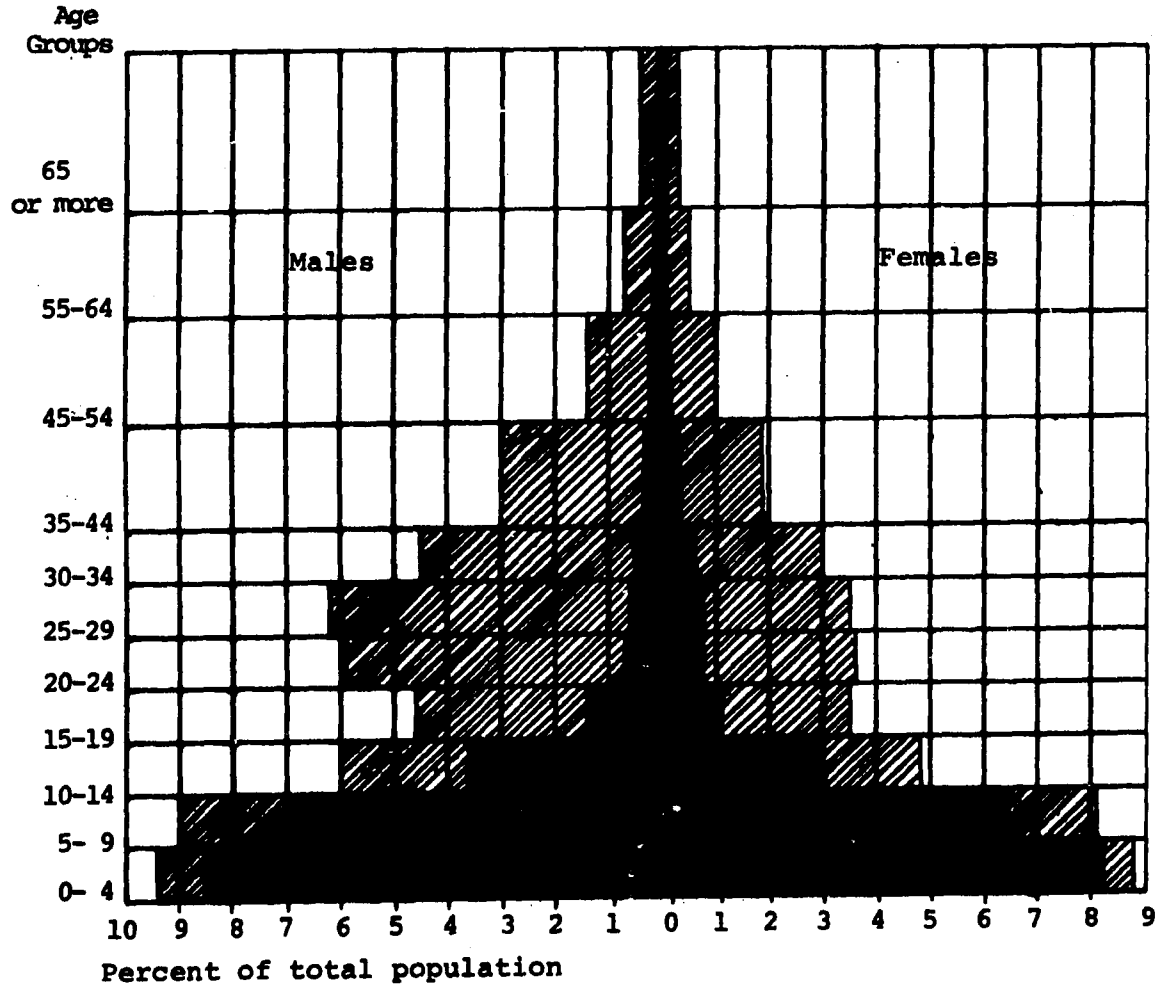
The Analysis: The age composition of Riyadh's population is illustrated in Figure 8 as it appears in the age pyramid and is given in the corresponding Table 8. It is noticed that Riyadh's population is very young. More than forty-five per cent of the population is comprised of children under 15 years of age. Less than five per cent of

Table 8. Relationship between Place of Origin and Age

Age Group	Born in Riyadh	Saudi Migrants	Foreigners	Total
Children 0-14 years	78.3*	18.9	26.7	46.3 (6516)
Productive Age 15-54 years	19.7	72.9	70.9	49.2 (6921)
Old People 55+	2.0	8.2	2.4	4.5 (626)
Total	100% (6166)	100% (5406)	100% (2491)	100% (14063)

*This extremely large proportion of children among the natives is attributable to the fact that any person born in Riyadh was considered a non-migrant. Thus, the children of Saudi migrants and foreigners, who are second generation migrants, were treated in Doxiadis' sample survey as if they were from Riyadh.

FIGURE VIII. RIYADH--AGE-SEX POPULATION PYRAMID



Source: Doxiadis Sample Survey, 1968.

the population is above 55 years of age. A high fertility rate and the recent influx of migrants, presumably young adults, probably account for Riyadh's young population and leave the city with a small proportion of older people. Recent migration to Riyadh for work in factories and government offices draws young adults more heavily than other age groups. As we notice in the population pyramid, Riyadh has more than its share of young male adults and less than its share of old people. The "population pyramid" for the city as a whole places two histograms--one for males to the left and one for females to the right of a vertical axis divided into horizontal bars representing five year intervals below the age of 45 years and representing ten year intervals above 45 years. The wide base as it appears in this pyramid may indicate a high infant mortality rate as well as a rising fertility rate. The concentration of the migrants in the early adulthood range puts a great bulge in the 15-29 year intervals. We also could notice that the age bands from 15-29 have an excess of males, due to the migration of lone males, unmarried or unaccompanied by their families.

The index of dissimilarity was executed, as it appears in Table 9, in order to determine how much homogeneity we have when we compare migrants to non-migrants on the one hand, and migrants to other migrants on the other hand. Table 9 demonstrates the fact that different types of migrants resemble each other with respect to age

Table 9. Index of Dissimilarity Among Groups with Different Place of Origin with Respect to Age

Origin	From Riyadh	Cities	Villages	Desert	Foreigners	Riaydh as a Whole Σ
From Riyadh		57.2	61.3	56.4	51.9	32.0
From Cities			7.3	10.8	15.2	25.2
From Villages				10.1	20.4	29.3
From Desert					23.8	26.0
Foreigners						22.9

distribution. This resemblance in age structure is due to the fact that migrants are disproportionately overrepresented in the adolescent and young adult ages. The value of the index of dissimilarity reaches its highest level when we compare the non-migrants to any type of migrants. On the other hand, the Δ drops sharply to its lowest level when we compare Saudi migrants to each other. When we compared the migrants from foreign countries with other gouups, we found the value of Δ lies between the two extreme values mentioned above.

The sample survey of CRED supported our findings about the youth of the migrants. It shows that the peak age at migration to Riyadh for all migrant industrial workers was 15 to 19 years. The adjacent age periods of 20 to 24 and 25-29 hold the next highest proportions. The CRED found that more than eighty-two per cent of the migrants belonged to these three age categories when they first migrated to Riyadh. Among these migrant workers more than seventy per cent were between 15 and 29 years old when the survey was conducted. Thus, these findings support our previous hypothesis that the migrants are predominantly young adults. Such findings are consistent with those in previous studies (Bogue, 1955, Bogue and Hagood, 1953, El-Saaty, 1959, and Freedman, 1951).

The implication of these findings can be summarized as follows:

(1) Since the migrants are predominantly young adults, it implies that most of them are on the threshold of family life and parenthood and are expected to have a higher fertility rate and subsequently to increase the population growth rate. Thus, the population of Riyadh will continue to increase in the short run even if the migration net is zero because of a favorable age structure.

(2) Since a high proportion of these migrants belongs to the young adult age, a large proportion of them are also potentially very productive from an economic point of view. As Freedman points out, the youth of the migrants indicates that they are at the beginning of their productive occupational careers and have a full span of working years in which to participate in building the economy of the city (Freedman, 1951, p. 207). As we noticed in the preceding table, few of the migrants belong to age categories above 55 years of age. These older age groups encounter difficulties in securing employment in urban society. The elderly people are placed at a decided disadvantage in the competitive and complex urban labor market. Furthermore, the contemporary economic structure of Riyadh has been built to absorb young adults with little place for the elderly, uneducated people. The small proportion of the migrants in the age categories 0-14 and 55 and above means that a large proportion of these migrants are in the productive age categories, and accordingly, the dependency ratio of these migrants is very low. In other

words, only a small proportion of these migrants is economically dependent on the others.

(3) It might be inferred from the fact that the preponderant majority of the migrants are young adults that economic motives were behind their migration. We doubt, however, that economic motives are the sole factors attracting these migrants to Riyadh.

Sex-Ratio

Sex ratio is the number of men for every one hundred women. An individual's sex is important because it has defined the person's role and status in all societies throughout human history. The sex distribution affects the level of fertility, and accordingly, the growth or decline of the population in a given society. For example, a city with an extreme imbalance of the sexes is not expected to have the same fertility rate as another city with a more balanced sex ratio. In like manner, the sex ratio affects the manpower resources of any society. In a society where labor division is markedly based on sex, the sex ratio can play a significant role in the economic and social structure of the society.

Riyadh has a sex ratio of 133. That is, there are one hundred and thirty-three males for every one hundred females. The question here is whether or not this high sex ratio is common in cities all over the world, or whether it is an isolated case peculiar to Riyadh. A comparison with other large cities in developing countries indicates that

Riyadh's sex ratio is not atypical. Nearly all of the large cities in these countries have high sex ratios. The United Nations' study of trends in the world's rural and urban populations from 1920 to 2000 indicates that African cities have a sex ratio of 110, and South and East Asian cities have 114 men for every hundred women. The sex ratio for some selected cities is represented in the following table.

TABLE 10: SEX RATIO OF SOME CITIES IN AFRICA, ASIA AND LATIN AMERICA*

City	Country	Sex Ratio	Year
Nairobi	Kenya	187	1962
Bombay	India	147	1958
Karachi	Pakistan	132	1961
Delhi	India	129	1958
Istanbul	Turkey	117	1965
Caracas	Venezuela	96	1961
Lima	Peru	94	1961
Mexico City	Mexico	92	1960

*Sources: U.N. Ecosoc., 1969, pp. 16-17.

The table shows that, unlike Latin American cities where there is an excess of females, African and Asian cities have an excess of males. The selective migration of a specific sex is responsible for this discrepancy between Latin American cities on the one hand, and African and Asian cities on the other. The permissive attitude of Latin Americans toward the lone female migrating to the city is in contrast to the strict attitude of Asians, especially Muslims, who rarely accept the idea of the female migrating alone. Since the mines in West Africa

employ only males, the migration to mining centers has been executed exclusively by males. This, of course, has resulted in a high sex ratio in these centers. Thus, African and Asian cities are inconsistent with Bogue's model of urbanization. Bogue's model indicates that for many years the city has been known to have a female excess. On the contrary, Riyadh has as many as four men for every three women for the population as a whole, and three men for every two women in the productive age groups (15-54). The sex ratio of Riyadh could have been a little higher if our data had included the collective houses. Such collective houses as military barracks, hotels, and hospitals are predominantly composed of males. The sex ratio of Riyadh resembles, to a large extent, the United States' industrial cities during their early stages of growth when they were the targets of large numbers of adult immigrant males. Traditionally, migration to Riyadh was a movement of young males who went to the city to pursue higher levels of education or to work in temporary jobs where they could get some money and return to the village. Religious traditions have prohibited the migration of females not accompanied by a blood relative male. It is also unaccepted in Saudi Arabian society for a woman to migrate and work in domestic services. This, however, is common in some Latin American and other Arab cities.

The male excess in a city is an indirect and rough measure of temporary migration. Nelson points out that when

men significantly outnumber women, a large part of the explanation lies in a pattern in which large numbers of single men, or married men not accompanied by their wives and children, leave the village and migrate to the city for a period of time (Nelson, op. cit., 29). The sex ratio of Riyadh, however, is not extremely high. This means that a more permanent migration to the city is taking place, in which the wives and children follow the early migrant males. We do not have information about the trends in the masculinity ratio of Riyadh in different periods. But our projection is that this sex ratio will decline. Countries where census data have been collected for many decades provide us with a few more clues. By and large, urban areas which have been heavily masculine in the past tend to achieve more balanced sex ratios. Zachariah, after examining the sex ratios by age and length of residence in Indian cities, found that there was a decline in the sex ratio among the migrants during the 1950's (Zachariah, 1968, p. 125).

The Analysis: The sex ratio in Riyadh was found to be 108, 130, 278 for the non-migrants, Saudi migrants and foreign immigrants, successively. The sex ratio for Saudi migrants from different rural-urban backgrounds hardly varies from one group to another. It is 128, 130, and 131 for the nomad migrants, rural-reared migrants and urban-reared migrants, successively. The sex ratio for the three types of Saudi migrants is also found to be similar in these

three age categories. Thus, for simplicity of representation, these three groups were collapsed and henceforth are referred to as Saudi migrants.

Table 11 demonstrates that there is a wide discrepancy in the sex ratio between non-migrants and foreigners, with the Saudi migrants' sex ratio being in the middle of the continuum. While the high sex ratio among the migrants can be attributed to the selective migration of males, we cannot explain why the sex ratio rose sharply to 161 for the non-migrants in the old age category. Such old age groups among the natives are expected to have a slight excess of females over males because of the differential mortality where women usually live longer than men. Thus one might think that the male excess in this age category is due to an error in the coding or in the sampling, and females were underreported. The extremely high sex ratio among foreigners is attributable to two factors. First, foreign immigrants from developed countries look upon Riyadh as a conservative city with no entertainment or recreation facilities. This has discouraged these foreigners from bringing their wives and children. Second, Riyadh has thousands of male workers who migrated from Yemen and South Yemen. They work in low-wage jobs and can not afford to bring their families to Riyadh. The sex ratio is expected to have a balance in the younger age category (0-14) even among the migrants, but our table shows otherwise. Among the migrants, the sex

ratio is still high in this young age group. This male excess results because only the male children (usually between 12-15 years old) migrate from villages and small towns to pursue higher levels of education in the city. Girls in this age category are expected to stay in the village, and they can not migrate without their families. The high sex ratio of foreigners in this young age group is certainly due to the fact that a very large number of children (aged 10-14) from neighboring Yemen and South Yemen migrate to Riyadh in order to work in domestic services.

TABLE 11: SEX RATIO OF THE SPECIFIC AGE GROUPS FOR RIYADH'S POPULATION WITH DIFFERENT PLACE OF ORIGIN

Age Group	From Riyadh	Saudi Migrants	Foreigners	Total
0-14	108.3	131.8	155.8	113.2
15-54	103.9	132.5	323.6	155.5
55+	161.2	112.0	150.0	126.9
Total	108.5	130.5	278.2	132.8

A brief summary of our findings can be stated as follows:

(1) The sex ratio for all migrants to Riyadh was considerably higher than that of the non-migrants.

(2) The foreign immigrants have the highest sex ratio among the city's population.

(3) There were no significant variations in the sex ratio among the Saudi migrants with different rural-urban background.

(4) The sex ratio in the productive age category reaches its highest level among foreigners, and it rises slightly among Saudi migrants, due to the selective migration of young male adults.

In general, the investigation has demonstrated that there is an imbalance in the sex ratio among Riyadh's population. Such findings confirm the previous results. Nonetheless, while some studies, especially those concerning American cities, have found this imbalance in the sex ratio to be in favor of females, our findings indicate the opposite. It is the males who outnumber females, as the sex ratio is 108, 130, and 278 for non-migrants, Saudi migrants, and international migrants, successively.

Marital Status

Riyadh does not follow the general pattern of other cities in the world in having a high proportion of divorced and widowed people. In Riyadh, the proportion of divorced and widowed people to the total population in the marriage age categories (15 years and above) is 2.4% and 3.7%, respectively. This low rate of divorce can be explained by two factors. First, although it is easy to dissolve the marriage union in Saudi Arabia, there is a social stigma attached to both husband and wife when the divorce occurs. Family and friends of the husband and the wife play a significant role in reconciliation whenever there is a dispute in the marriage. When there is friction between the wife and the husband, their families feel obligated to intercede in an attempt to protect the marriage union.

Second, it is highly expected by friends, relatives, neighbors, and society as a whole that the divorcee, as well as the widow, should remarry.

Riyadh follows the line of other cities all over the world in having a high percentage of single people in the marriage age category. Twenty-six per cent of Riyadh's adult population has never married (Doxiadis, 1968). This high percentage of single persons among Riyadh's adult populaton is due partially to rural-urban migration executed by single young adults and partially to the fact that urban people frequently marry at older ages than their counterparts in rural areas. Now, marriage takes place at later ages because of the tendency of men, as well as women, to pursue a high level of education. Marriage in Saudi Arabia now is very costly. It requires the man to pay the cost of the wedding ceremony and to provide his bride with jewelry and other gifts. He is also expected to bear some other responsibilities which require more money, such as buying furniture and appliances for their new home. Therefore, a man with a low income usually resorts to his relatives for help in order to cover these expenses. These two factors--the desire to pursue higher levels of education and the high expense of marriage--are not the only reasons for the delay in marriage. The exercise of personal choice and the intention of setting up a separate home after the marriage are also significant factors deterring many from marrying at an earlier age.

Since Saudi Arabia does not have vital statistics, such as birth registration or marriage division registration, I have had to rely entirely on my own observation in discussing age at marriage, the incidents of polygamy, and the cost of marriage. I have observed that the average age of marriage for a male is 25 years, and the average age for a female is only 20 years. This wide disparity in the age of marriage, however, has narrowed since girls have become involved in higher education and in governmental jobs which sometimes result in the delay of the marriage for females, too.

It is worth mentioning that there is a drastic decline in the rate of polygamy. Polygamy has been virtually abandoned, especially among young people. The most important factor in this sharp decline in polygamy is no doubt the change of the woman's role. The wife, who is more educated than her mother and grandmother, has bitterly opposed the idea of a second wife. The children also reject the idea of their father marrying another wife besides their mother. The marriage, which is very expensive for a man with an average income, has deterred many men from having more than one wife. With the transformation of Saudi Arabian society from agricultural and pastoral to industrial, men have realized that children are becoming a heavy cost instead of a lucrative investment. Above all, polygamy is becoming a symbol of backwardness and conservatism, and monogamy is a symbol of modernism.

Since more people have become educated, they have recognized that Islam is not absolutely permissive toward polygamy. On the contrary, Islam has allowed polygamy under strict conditions as the Holy Koran says:

> Marry more than one wife, but if ye fear that ye cannot act equitably toward so many, marry only one . . . Ye can by no means carry yourselves equally between women (4:3).

Household Size:

An explicit and accurate definition of household was given by Etienne Helin. This definition reads:

> Unit containing one or more persons, consisting either of an individual living alone or of the co-residence of two-individuals or more who live habitually together in the same habitation whether or not they have any family connection (Helin, 1972, p. 321).

As mentioned earlier, Doxiadis' survey of Riyadh covered all private households and excluded collective households. Also excluded from the survey were informal boarding houses where the household consists of a large number of members (11 persons or more), all of them males and with no relation to the person designated as "head" of the household (Doxiadis, op. cit., p. 102).

Doxiadis shows that the average household size in Riyadh is 5.4. This is rather large compared to the average household size in the United States, which is 3.3 (Statistical Yearbook, 1966, p. 712), or the mean household size in England and Wales in 1961 which is 3.04 (Laslett, 1972, p. 138). Saudi Arabian culture discourages persons

from setting up their own small houses and leaving their extended family. In Riyadh, especially among the non-migrants, there are many adults who continue to live with their parents even after they marry and have many children. The divorced, widows, and widowers tend to move eventually into their close relatives' houses. The large number of children that Arabian couples usually have is certainly another factor that makes the household size larger in Saudi Arabia than in the United States. Nevertheless, it appears from Table 12 that household size in Riyadh is not significantly different from the household size in various countries in the Middle East. However, unless more conclusive data are available we cannot come up with a simplistic conclusion that Riyadh has a smaller, equal, or larger household size than Middle Eastern countries. Yet, we can be certain that the household size in Riyadh is significantly larger than it is in Britain or the United States.

TABLE 12: AVERAGE SIZE OF PRIVATE HOUSEHOLD AMONG VARIOUS COUNTRIES IN THE MIDDLE EAST*

Country	Household Size	Year
Egypt	4.8	1960
Morocco	4.8	1960
Iran	5.0	1966
Tunisia	5.1	1966
Iraq	5.2	1957
Jordan	5.3	1961
Pakistan	5.4	1960
Sudan	5.5	1964
Turkey	5.7	1965
Syria	5.9	1961

*Statistical Yearbook 1970, pp. 718-728.

Comparison of the average household size among different groups within the city of Riyadh itself is equally important. Such a comparison is the main concern in this section in an attempt to discover if there is a significant variation between migrants and non-migrants with respect to household size. Since migrants are young adults in their early life cycle, it is hypothesized that migrants of every type belong to smaller households than their counterpart non-migrants. It is expected that the proportion of people living as members of one person or two person families will be higher among migrants than among non-migrants. As mentioned earlier, the migrants, who constitute eighty-five per cent of the heads of the households, usually migrate to Riyadh alone or with their immediate family, leaving behind them in the village other members of the extended family. This is demonstrated by Table 13, which shows that while only 4.7 per cent of the non-migrants are living alone, this percentage rises to 8.3 for Saudi migrants and 21.6 for international migrants. The CRED survey indicates that sixty-six per cent of the industrial workers in Riyadh are single and that seventy-five per cent of these workers are unmarried or married with no children.

Table 13 also shows a discrepancy between the average household size of the migrants and the non-migrants. The average size is 6.5, 5.7, and 3.8 for non-migrants, Saudi migrants and foreigners, successively. Saudi migrants with

Table 13. Relationship Between Household Size and Place of Origin*

Household Size	Born in Riyadh	Saudi Migrants	Foreigners	Total
One Person	4.7	8.3	21.6	10.7
Small (2-4)	27.7	32.0	44.2	34.1
Medium (5-8)	45.4	42.2	29.7	39.9
Large (9+)	22.2	17.5	4.5	15.3
Total	100% (383)	100% (1596)	100% (579)	100% (2558)
Average Size	6.5	5.7	3.8	5.4

$X^2 = 190.9$ D.F. = 6 Sig Level = 0.0

*Origin of the head of the household

different rural-urban backgrounds show only slight differences. Thus, we treated them in this section as one group. In this table, Riyadh's population was grouped according to the size of the household into four categories--single, small (two to four members), medium (five to eight), and large (nine members or more). The Chi-squared test was utilized to see if there is a significant variation between migrants and non-migrants. The difference was found to be significant at the .01 level. Therefore, our hypothesis, suggested early in this section, was accepted. It was found that while 34.4% of the non-migrants are single or belong to the small size group, this percentage increases to 40.3 and 65.8 among Saudi migrants and foreign migrants, respectively. Conversely, the non-migrants are over-represented in the large size group, and the migrants are underrepresented. The explanation of this discrepancy in the household size between Saudi migrants and non-migrants can be attributed to the following facts: (1) Since the extended family system is still prevalent and highly valued in Saudi Arabia, it is expected that a substantial proportion of the native population in Riyadh is living in the extended family type, where three generations live in the same dwelling unit. The migrants, however, being young and in the earlier stages of their life cycles, are not expected to have a large family size. However, these migrants had been living under the extended family system in their place of origin. It was understood from the

previous discussion that when these migrants moved to Riyadh they were alone or accompanied only by their nuclear family, leaving behind them the rest of the extended family. Migrants also tend to postpone their marriage for some years until they secure favorable employment conditions. This, however, does not necessarily reflect differences in social and cultural values toward family size. Rather, it is mainly due to the influx of the recent migration of young adults who are single or married with not many children. The small household size among the foreign migrants, however, is due to the two factors mentioned above, namely the selective migration of young adults and their favorable attitude toward a small family size.

CHAPTER V

SOCIOECONOMIC CHARACTERISTICS OF RIYADH'S POPULATION

Introduction

The purpose of this chapter is to analyze a series of variables reflecting social and economic status and to discuss the relationship between these variables and the migrant status measured in this study by the place of origin. Socioeconomic status is measured by three criteria: educational attainment, occupational achievement, and income. Occupation and income are expected to be a rough measure of the migrant's economic integration into Riyadh's society. Educational attainment is considered a prediction, but not an index of economic integration.

The migrants share the experience of moving from a familiar to an unfamiliar environment. However, the magnitude of this transition depends on the cultural level of the place from which the migrants come. However, even those urban-reared migrants who come from a city similar to Riyadh must, as Freedman puts it, leave behind them the matrix of familiar associations and interpersonal relationships which have defined their daily routine. To Freedman, all migrants are expected, to a greater or lesser extent,

to face certain problems that might hinder their success in the new urban environment (Freedman, 1964, p. 180). In our study the method used to analyze the role of the migrants in their new environment is to examine the relationship between the migrant's place of origin and his current socioeconomic status. This is the method most frequently used by students of differential migration. By comparing nonmigrants with migrants, we should be able to understand the socioeconomic structure of the city as a whole and the socioeconomic position of each group. Within this context several hypotheses were formulated as they appear in Chapter I. One hypothesis suggested in Chapter I is that migrants will tend to experience different socioeconomic positions, not only when compared to their nonmigrant counterparts, but also when compared to other migrants of different origins. However, this hypothesis should be amended to state that migrants from urban areas resembling Riyadh are expected to resemble the nonmigrants rather than the rural-reared migrants. Because of their different cultural background the migrants are expected to have different socioeconomic status. The classifications "nomad," "rural," and "urban" have been introduced to represent three different types of origin on a continuum, with the nomads being least similar to the native population of Riyadh, and the urban migrants being the most similar. The hypothesis examined here is that the socioeconomic status of migrants varies in relation to their environment

and their cultural background so that the culturally intermediate rural migrants are also expected to occupy intermediate socioeconomic status between the nomads and the urban migrants.

The rural and the nomad migrants start out with less education, less urban experience, and they usually suffer more job instability and get less information about available jobs. The urban-reared migrants, with their higher level of education and greater technical skills, are more likely to be in demand for professional or semi-professional careers. They are also more able to organize their lives in the new urban environment because it is similar to their community of origin. Thus, the urban-reared migrants, being well-educated or possessing more skills, might have secured a job in the city well in advance (Tilly, 1970, p. 155). The urban migrants do not have to wait months in the city to find a job. They are familiar with the city and its bureaucratic system, and this knowledge makes it easier for them to be integrated into the city's occupational structure. Regarding the conditions given above, it is predicted that rural migrants, as well as the nomad migrants, will be disproportionately numerous in the lower portions of socioeconomic status. Conversely, the natives and urban migrants are more likely to be more successful and to occupy the highest echelon of the socioeconomic hierarchy.

The three criteria of socioeconomic status will be analyzed separately in the subsequent sections in an attempt to see the variation of different types of migrants in each of these socioeconomic dimensions. We also intend to determine the extent to which the differences in occupational and monetary success are associated with factors other than place of origin.

Educational Attainment

It might be worthwhile to begin this section with a brief statement about the educational system in Saudi Arabia. This educational system consists of four levels. Elementary schools (1-6) are located throughout the rural as well as urban areas. Middle schools (7-9) are generally restricted to the cities and towns. High schools (10-12) are located in the cities but are nonexistent in the villages or towns. Colleges are located in the largest cities--Riyadh, Jeddah, Mecca, Medina, and Dhahran.

Education is discussed first because it is expected that educational attainment will play a significant role in determining other socioeconomic variables. This means that differences in levels of education will be related to occupational and monetary achievement. Richard Lang has found a close relationship between formal educational level and other social factors, so that differentials in education may be expected to reflect other social differentials of consequence (Lang, 1936). Freedman indicates

that education could be considered a rough index of the individual's preparation to make satisfactory adjustments to some of the problems of complex urban life (Freedman, 1951, p. 215). The relationship between educational level and community of origin will be examined in this study in an attempt to see whether the migrants are positively or negatively selective groups compared to the nonmigrants. In this section, the attempt is made to examine our sub-hypothesis number 2, as it appears in Chapter I. The ad hoc hypothesis states that rural and nomad migrants are less educated than their nonmigrant or urban migrant counterparts. It is a statistical fact that in most countries of the world there is a positive relationship between the size of a locale and the literacy rate. The greater the size of a settlement the higher the literacy rate. Bogue's model of educational attainment asserts that the urban population has a considerably higher average educational level than the rural population. The variation in the literacy rate between rural areas and cities is more pronounced in developing countries. For example, in 1940 Mexico had a thirty-five per cent literacy rate in settlements of less than 10,000 persons, and a seventy-seven per cent literacy rate for cities of 10,000 or more. Likewise, in 1940 Panama had fifty per cent and ninety-four per cent literates for localities below 10,000 and cities above 10,000, respectively (Casis and Davis, 1961, p. 522). Within this perspective, Riyadh and other

cities in Saudi Arabia are expected to have a higher rate of literacy than the desert or rural areas. It follows that the native population and urban migrants in Riyadh are more likely to have a higher level of education than their nomad or rural migrant counterparts, who are at best expected to finish elementary schools while living in the village. Nevertheless, the village boys usually strive to achieve a higher educational level after they migrate to the city. It is expected, therefore, that the variation in educational level between urban-reared people and rural-reared people is, to a large extent, a function of the presence or absence of schooling in their home towns.

Education in Saudi Arabia is free for all people at all educational levels. The government-sponsored schools and colleges in Riyadh and the government stipends paid to college students have no doubt encouraged the children of rural migrants to enroll in schools and colleges. Thus, it is anticipated that the differences in education between rural and urban migrants is fundamentally a generational difference and that the gap in educational level will be reduced inasmuch as the children of rural migrants might someday approach the level of education attained by the children of the native population or the children of urban migrants.

In this section the educational level of Riyadh's population is evaluated in terms of the data available. Our data have classified all persons twelve years of age

or more according to their educational level into three groups; illiterate, literate, and high school graduate. The second and third groups are mutually exclusive. Thus, the literate here includes only those who can read and write but did not finish secondary schools (Doxiadis, op. cit., p. 94).

The percentage distribution is illustrated in Table 14 and demonstrates that the illiteracy rate is 48% for the natives, 46% for migrants from cities, 64% for migrants from villages, 76% for migrants from the desert, and 44% for migrants from foreign countries. This distribution shows that the nomad and the rural migrants have a higher illiteracy rate than other groups. The urban migrants and foreigners have the lowest illiteracy rate, and they also have the highest percentage of high school graduates. It is surprising to find that foreign immigrants have an illiteracy rate as high as forty-four per cent. However, this is due to the fact that a high proportion of these foreigners migrated from neighboring Arab countries, such as Yemen and Oman, which have a higher rate of illiteracy than Saudi Arabia. The high proportion of high school graduates found among foreigners is explained by the fact that a substantial proportion of them have come from Lebanon, Syria, and Egypt as well as from non-Arab countries, which definitely have a higher literacy rate than that of Riyadh. Surprisingly enough, the natives have a lower proportion of high school graduates than the rural migrants. The reason that rural migrants have a slightly higher proportion of high school

graduates than the natives is mainly because of the selectivity of the migrant movements. The educated persons in the villages are more likely to migrate to the city than the illiterates in order to achieve their educational and occupational aspirations. Moreover, education is a function of age. In Riyadh, it was found that the older the person the more likely he is to be illiterate. Doxiadis indicates that the literacy rate is only nine per cent among old people, but it rises sharply to seventy-six per cent among the young generation. It has been demonstrated in the previous chapter that the migrants are heavily concentrated in the young adult age groups. Consequently, they have a favorable position with respect to educational attainment. The migrants also have a higher sex ratio than the native population. The sex ratio is significant for educational attainment in a country such as Saudi Arabia where the societal structure is patriarchal. The illiteracy rate for Riyadh's male population twelve years old and above in 1968 was thirty-eight per cent. The percentage of females who were illiterate in that year was seventy-eight per cent, roughly twice the males' percentage. The discrepancy between males and females is more pronounced for high school graduates. While nineteen per cent of the males finished high school, the percentage for females drops to 5.5 (Doxiadis, op. cit., p. 94). Given this situation and bearing in mind that the migrants are disproportionately young and predominantly

Table 14. Percentage Distribution of Educational Level, by Place of Origin for Riyadh's Population 12 Years Old and Over.

Education	Nonmigrants	Migrants From			
		Cities	Villages	Desert	Foreign Countries
Illiterate(0)	48.3	46.0	64.2	74.5	44.0
Literate(6)	45.1	34.2	27.6	23.6	31.1
High School(12)	6.6	19.8	8.2	1.9	24.9
Total N =	100.0 (1623)	100.0 (1626)	100.0 (2626)	100.0 (318)	100.0 (1891)
Mean =	3.5	4.4	2.6	1.6	4.8
S.D. =	3.7	4.6	3.8	2.9	4.9

Table 14A. Analysis of Variance Table

Source	Sum of Squares	Degree of Freedom	Mean Square	F-Ratio	Sig. Level
Between groups	7716	4	1929	109.5	.001
Within groups	142286	8079	17.6		
Total	150002	8083			

males, it is clear why rural migrants have a slightly higher proportion of high school graduates than the natives. Urban migrants, on the other hand, are more educated, and they have a higher proportion of high school graduates than the native population. This superiority of urban migrants over the natives in education is not only attributable to their being well educated young male adults but also to the fact that public schools for boys in other large cities of the Western Province and Qaseem district were founded before public schools in Riyadh. The increasing level of education without a subsequent increase in opportunities in these cities and the dispersion of information about occupational opportunities in Riyadh have been the main motives for migration from these cities to the capital. Thus the migration of young educated men from these cities has given these urban migrants a favorable position over the native population with respect to educational attainment.

However, we cannot compare the migrants to Riyadh with those in their communities of origin because our data are limited to one locale: the community of destination. The degree of the migrants' selectivity is quantitatively unknown, even though we could be almost positive that the migrants are better educated than those whom they left behind in the village or city. The selectivity of migrants over the people at origin has been documented by many scholars. For instance, Lee has indicated that migrants are by no means a cross section of the population. He

found that the best educated people have a propensity to migrate. As the level of education increases, so does the rate of migration (Lee, 1966). Roussel found a positive correlation between level of education and the probability of migrating from the land in the Ivory Coast. He found that in 1968, more than fifty per cent of the young people from 15-29 in possession of primary school certificates had migrated to towns. The percentage of illiterates who migrated to towns did not exceed eight per cent for boys and eleven per cent for girls (Roussel, 1970, pp. 229-46). Tilly also indicates that urban-reared migrants are superior to the general population in education, skill, and occupational desirability. To Tilly, these urban migrants are young adults, and they tend to be above average in education and occupational skill in the communities they have left behind as well as in the city to which they have moved (Tilly, 1970, p. 156). The previous findings by Lee, Roussel, and Tilly support the assumption that educated people migrate more than illiterate persons.

In Table 14A, one-way analysis of variance was executed to test the differences among these five groups with respect to educational level. It was found that the differences were significant at $p \leq .001$ level. Since our rejection value is 4.62 and since the F- ratio we have in Table 14A is 109.5, we reject the null hypothesis which states that $\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$ namely, the group means are the same with respect to education. However, it is

possible, for example, that $\mu_1 \neq \mu_2 = \mu_3 = \mu_4 = \mu_5$. Thus, to obtain more information, we may contrast each pair of these groups to see if these groups are pairwise different. Since these contrasts are not independent of each other we had to use Scheffé significance level, and hence, adjust the critical value of F to make it larger in the following way:

Scheffé critical value for F =

$(K-1)F_{.001,\ K-1,\ f} = (5-1)\ 4.62 = 18.48$

Where K is the number of groups,

f is d.f. for error and

.001 is the critical level (α) of the test.

Table 14B shows that the difference between each pair of the groups, with the exception of the difference between nomads and rural migrants and the difference between foreigners and urban migrants is significant at $P \leq .001$ level. We could state, therefore, that these five groups are significantly different on the whole and that they are also significantly different from each other with the exception of the differences between the groups mentioned above. These findings confirm our suggested hypothesis which states that there is a relationship between community of origin and level of education. Yet, while the findings support our proposition that the nomad and the rural migrants are disproportionately disadvantaged compared to other groups with respect to literacy rate, the findings negate our proposition about the supremacy of the natives

Table 14B. F-ratio Comparing Five Groups with Different Origin with Respect to Educational level

Origin	Cities	Migrants From Villages	Desert	Foreign Countries
Nonmigrants	40.0*	42.2*	52.0*	90.5*
Migrants From Cities		183.0*	117.3*	8.8
Migrants From Villages			16.0	305.3*
Migrants From Desert				158.9*

* The asterisk indicates that the contrast is significant at $p \leq .001$ level, using Scheffé significance level.

over other groups. It was found that the native population is overranked by foreigners and urban migrants with respect to both literacy rate and the proportion of high school graduates. The natives are also slightly overranked by rural migrants with respect to the proportion of high school graduates.

In brief, the findings about educational differentials can be summarized as follows:

(1) Education was found to be highly related to sex and age. Males and young persons are found to be more educated than females or older people.

(2) The urban-reared migrants are generally better educated than the native population or other Saudi migrants.

(3) The nomad migrants tend to be drawn disproportionately from the least educated people. Therefore, as with Saudi migrant groups, educational attainment varied with the rural-urban continuum, so that urban migrants are the best educated, nomads are the least educated, and rural migrants are in the middle between nomad and urban migrants. This is also supported by the CRED data which indicate that the proportions of those who have five years of schooling or more among the Saudi industrial workers in Riyadh in 1969 were 9.6%, 10.7%, 20.6% for migrants from villages, towns, and cities, successively.

(4) The foreign migrants have the highest literacy rate, and they also have the highest percentage of high school graduates. Thus, the relatively high educational level

of foreigners and urban-reared migrants is consistent with the theory of "resembling environment."

Occupational Achievement

Governmental sectors employ a considerable proportion of Riyadh's labor force. The employment in these sectors has been controlled since 1958 by the Department of Employment, which advertises dates for competitive examinations. All qualified persons are admitted to take the examination. These examinations are secretly coded, so that the evaluation committee members cannot recognize any of the examinees. The open vacancies are awarded by merit. Thus, occupation has become based, to a large extent, on achievement rather than ascription in Saudi Arabia, and the major actual factor influencing occupation is expected to be the level of education. The higher the educational level of a given origin group the higher one might expect their occupational level to be. Equal to this statement is that people with similar educational levels are more likely to be similar in their occupational levels, regardless of their place of origin. Education was held constant, and our respondents were treated as if they had the same level of education in order to see if migration per se has a significant effect in determining the occupational level. It is hypothesized, therefore, that there are no significant differences between migrants and nonmigrants with respect to occupation when we control for education.

In this section three related points will be discussed. These points are the relationship between education and occupation, the relationship between occupation and place of origin, and the relationship between occupation and place of origin holding education constant. Many scholars have indicated that the level of education is significantly related to occupation. Shannon and Krass point out that education and occupational status of first job and present job have been related for various samples of Anglo, Negro, and Mexican-American migrants as well as for nonmigrants (Shannon and Krass, 1963, pp. 37-42). Omari in his study of two hundred Negro migrants in Beloit, Wisconsin, asserts that the highest grade completed in school by a migrant is highly associated with his socio-economic status in a positive direction (Omari, 1956, p. 51). Tilly also asserts that men with a high level of education and more technical skills are more likely than other groups to belong to national professional networks which distribute information about jobs (Tilly, 1970, p. 155).

In Table 15, occupation was treated as our dependent variable and the values of 6, 3, and 2 were assigned to professional, semi-professional, and blue collar, successively. The rationale behind these different values is based on the variation of these occupational groups with respect to income which corresponds to a ratio of 6:3:2. Table 15 demonstrates the fact that occupation is highly related to

Table 15. Percentage Distribution of Occupation

By Educational Level

Occupation	Educational Level		
	Illiterate	Literate	High School or More
Professional(6)	1.6	9.1	62.3
Semi-Prof.(3)	16.0	39.2	27.0
Blue Collar(2)	82.4	51.7	10.7
Total	100.0	100.0	100.0
N =	(1653)	(1399)	(719)
Mean =	2.2	2.8	4.8
S.D. =	.60	1.13	1.62

Table 15A. Analysis of Variance

Source	Sum of Squares	Degree of Freedom	Mean Square	F-Ratio	Sig. Level
Between groups	3281	2	1640	1452	.001
Within groups	4257	3768	1.13		
Total	7538	3770			

eta^2 = .44 The amount of variance explained

education in Riyadh. While the illiterate group is over-represented in the blue collar jobs (as many as 82.4 per cent of them belong to this lower occupational category), they are underrepresented in either professional or semi-professional categories. Conversely, the high school graduates are overrepresented in professional jobs and underrepresented in blue collar jobs. The literate group occupies the middle occupational status between the two extremes--the illiterate and the high school graduates. Nevertheless, the fact that there are 1.6% among the illiterate group who hold professional jobs and that there are 10.7% among high school graduates who belong to the blue collar category indicates that occupation is not exclusively based on educational achievement and raises the possibility that ascription still accounts for some occupations in Saudi Arabia. To test the differences among these three educational groups with respect to occupation, analysis of variance was used as it appears in Table 15A, and it was found that the differences are significant at $p \leq .001$ level.

Since it was demonstrated in the previous section that the rural-reared and nomad migrants have the lowest educational level among Riyadh's population, it would be unrealistic to expect them to compete effectively with the native or the urban-reared migrants with respect to occupational achievement. The discussion here will focus on our sub-hypothesis number 3 as it appears in Chapter I.

The ad hoc hypothesis states that there is a relationship between migrant status and occupational achievement. More specifically, the direction of this relationship was predicted as the native population and urban migrants are more likely to have a higher occupational status than rural or nomad migrants.

Before examining this hypothesis, we ought to give a brief statement to describe the occupational picture of Riyadh after it became the headquarters of the government in 1954. Prior to the 1950's the overwhelming majority of working people were involved with traditional work such as handicraft, retail commerce and minor services. The gradual transition from traditional labor to mass production and governmental bureaucratic employment has influenced Riyadh's population by facilitating a continuous upward mobility. The emergence of new white collar jobs, such as professional and semi-professional occupations, has resulted in the emergence of a new middle class group. This signals the emergence of the dependent employees and payrolled clerks and the decline of family and home-oriented labor. The gradual rise of these modern jobs means that occupation rather than inherited wealth is the main source of income. It also means that one's job has become based on his achievement more than on ascriptive criteria. Similar to what Khalaf and Kongstad (1970, p. 38) found in Beirut, Lebanon, the rising middle class group in Riyadh possesses two attributes associated with its upward mobility.

First, their income has risen sharply compared to their earning in the past or compared to that of other segments of the population. Second, their style of life has been modernized with regard to housing, food, age at marriage, and number of children.

Upward mobility, however, is not limited to those who grew up in urban centers. Once the natives and urban migrants move to a higher occupational status, new positions will become vacant for rural-reared migrants. Actually the rural and the nomad migrants may be working at the lowest occupational level in Riyadh, but they are still at a higher level than those people whom they left behind in the village or the desert. The change in Riyadh's occupational structure has helped the rural and the nomad migrants, to a certain extent, to integrate economically into Riyadh's society. Jobs are available for anyone who has the skill or the qualifications. The rural migrants have realized that opportunities are available for them if they want to advance to a higher occupational position. In examining the occupational distribution, we expect to find that many of the rural migrants with a higher level of education have reached a higher level in the occupational hierarchy. Table 16 shows that there are fifty-five per cent who have full-time jobs among the productive age groups (15-54) for both males and females. This percentage might seem very low but this is due to the fact that females seldom have official jobs in Riyadh. The percentage of working men

Table 16. Percentage Distribution of Employment Rate, by Place of Origin

Employment Rate	Place of Origin			
	Nonmigrants	Saudi Migrants	Foreigners	Total
% of employed persons to the group total population	7*	35	66	27
% of employed persons to the group population in the productive age groups(15-54)	37	48	81	55**
% of the productive age group to the group total population	20	73	82	49

* This extremely low percentage is mainly due to the fact that the children of migrants who were born in Riyadh were classified in our data as being among the native population

** This percentage is for both sexes together. We do not have separate percentages of employed males and females in proportion to their respective population for each migrants and nonmigrants. However, we do have these percentages for the city as a whole. These percentages are 86.5 for males, and only 4.7 for females.

in the productive age categories jumps to 86.5, and this percentage drops sharply to 4.7 for females. Women in Riyadh and other Saudi cities participate in the labor force to a much lesser extent than they do in the rural areas. The women on the farm or in the desert participate extensively in farming, herding, dairy labor, and handicraft. This is in contrast to Bogue's model which asserts that women in urban areas are more participant in the labor force than women in rural areas. The traditional economy of the desert and the farm necessitates active participation of the women, hand in hand with their male counterparts. In urban areas, where handicraft is dying out, women, with their low level of education, cannot compete with the more educated men. Moreover, the conservative attitude prevalent in urban areas in Saudi Arabia against the woman working outside her house and the inconvenience of the veil which women in urban areas usually wear have dissuaded many women from invading the job market.

The variation in the sex ratio between migrants and nonmigrants can explain the significant differences among these origin groups with respect to employment. As mentioned in Chapter IV, the sex ratio is 108, 130, 278 for nonmigrants, Saudi migrants, and foreigners, successively. Since official jobs are almost monopolized by men, it is therefore expected that the higher the sex ratio of a particular group, the higher the rate of their employment.

Since we do not have information about occupation classified by place of origin for males and for females, we cannot control for sex in order to see if the rate of employment still varies among these origin groups when we hold sex constant. However, the wide discrepancy in the employment rate between males (86.4%) and females (4.7%) for the city as a whole no doubt reflects the significance of the sex ratio as an important factor in this variation of employment rate between migrants and nonmigrants.

Age is also a significant factor which certainly contributes to this variation of employment rate among these three origin groups. Table 16 shows that while there is seven per cent employed among the native population, this percentage rises to thirty-five and sixty-six for Saudi migrants and foreigners, respectively. However, these figures might be misleading. As we already explained at the bottom of Table 16, the very low proportion of employed persons among the nonmigrants is due to the fact that all children born in Riyadh were classified as nonmigrants even if their parents had recently migrated to Riyadh. Thus, the low rate of employment among Riyadh's native population is due to (1) their lower sex ratio compared to the migrants, and (2) to the large number of migrants' children born in Riyadh but classified as nonmigrants.

Occupational Differentials: The analysis of employment rate in the preceding section has indicated that the

migrants are in more favorable positions than the native population. We have indicated that the variation in employment rate between migrants and nonmigrants is mainly a function of age and sex. An analysis of occupational differentials of the migrants and nonmigrants will reveal precisely the role of each group in the economy of the city, and it should uncover whether the higher proportion of migrants in the labor force to their population is a function of their willingness to take poorly paid and poorly esteemed jobs. The analysis of occupational differentials of each group not only illuminates the functional position of these groups in the economy of the city but also will reflect some aspects of their social status.

Occupation in this study has been collapsed into three broad classifications: (1) professional, including both professional and executive jobs; (2) semi-professional, comprised of clerks and salesmen; (3) blue collar jobs, which includes farming, mining, transportation work, handicraft, services, and service in the army. In addition to these broad classifications, the frequency distribution for each of these ten occupational groupings will appear in Table 24 at the end of this chapter. We had to collapse these occupational groups into three broad divisions because certain occupational categories, such as farming and mining, have only a small number making it hazardous to draw any conclusion. Our classification, though too broad, corresponds fairly to socioeconomic classifying schemes

used by sociologists. Freedman points out that this division into three types appears to correspond to a rough division of occupation in terms of "high," "middle," and "low" status (Freedman, 1951).

Since occupation was used in this study as an indicator of socioeconomic status, it was assumed that the proportion of a particular group in a particular occupation would represent a rough criterion of the group's social status. Lieberson as previously quoted, indicates that the type of occupation an ethnic group occupies has repercussions on other aspects of social life that are distinct or skewed when compared to the overall population (Lieberson, 1963). Questions to be answered here are: (1) Do the migrants or a specific group of migrants constitute a distinctive group with respect to their occupational status as compared to the native population? (2) How does the theory of "resembling environments," formulated by Jane Moore, apply to occupational achievement in Riyadh? Jane Moore found that the occupational status of the migrants to Stockholm was "higher" the more the place of origin resembled Stockholm (Moore, 1938). Here the question will be: Is the rural-urban cultural continuum directly related to occupational status of the migrants to Riyadh?

Table 17 shows that while the urban-reared migrants are overrepresented in professional jobs compared to the natives or Saudi migrants, the nomad migrants are

Table 17. Percentage Distribution of Occupational Status, by Place of Origin for Riyadh's Employed Population

Occupation	Place of Origin				
	Nonmigrants	Migrants from Cities	Migrants from Villages	Migrants from Desert	Migrants from Foreign Countries
Professional(6)	10.1	21.5	9.2	3.8	21.5
Semi-Prof.(3)	42.0	37.7	38.3	15.9	8.6
Blue Collar(2)	47.9	40.8	52.5	80.3	69.9
Total	100.0	100.0	100.0	100.0	100.0
N =	(445)	(671)	(1104)	(132)	(1419)
Mean =	2.82	3.23	2.75	2.31	2.94
S.D. =	1.17	1.51	1.14	.82	1.62

Table 17A. Analysis of Variance Table

Source	Sum of Squares	Degree of Freedom	Mean Square	F-Ratio	Sig. Level
Between groups	150	4	37.68	19.2*	.001
Within groups	7388	3766	1.96		
Total	7538	3770			

* F- ratio increases to 31.4 when we exclude foreigners and limit our analysis to Saudi origin groups.

overrepresented in the blue collar jobs. The difference between urban migrants and the natives (which is more pronounced in the professional occupations, with the former having a more favorable position than the latter) is consistent with Blau and Duncan's findings, which indicate that migrants are positively selective. Based upon the results of a national representative sample of over 20,000 American men ages 20-64, Blau and Duncan concluded that migrants tend to achieve higher occupational levels and to experience more upward mobility than non-migrants (Blau and Duncan, 1967, p. 272). However, it is clear from our table that the natives as well as urban migrants are more concentrated in professional jobs than the nomads or the rural migrants. The natives are also more concentrated in semi-professional work (clerk and sales) than any group of the migrants. The nomad migrants are found to be negatively selected with respect to their occupational status in Riyadh. They are found to be more numerous than any group in low-status jobs which are considered typical of the low paid and unskilled workers on the marginal existence of the urban occupational structure. The rural-reared migrants have a middle position between the urban and the nomad migrants with respect to their occupational achievement. This is consistent with the resembling theory, and it confirms the rural-urban cultural continuum. The foreigners are found to be underrepresented in the semi-professional groups, and they are

overrepresented in the two extremes of the occupational hierarchy. Foreigners are overrepresented in professional occupations (21.5 per cent of them are in this category) because Riyadh receives hundreds of the best educated and most well-trained foreigners who work in high esteemed professional jobs. The migration of the blue collar workers from Yemen, Oman, and South Yemen hoping to work in construction and other low-status services explains why foreigners are also overrepresented in low esteemed occupations.

In Table 17A, one-way analysis of variance was utilized, and we found that the F- ratio is significant at $p \leq .001$ level. Thus we accept our suggested hypothesis stating that there is a relationship between occupational level and place of origin. The contrasts between each two of these five origin groups was illustrated in Table 17B, in an attempt to find out whether they are pairwise different. Because of the similarity between the natives and rural migrants, the F- ratio between these two groups is negligible. Urban migrants are found to be significantly different from each of the other four groups because they enjoy the most advantageous occupational position among Riyadh's population. While the nomad migrants are significantly different from foreigners and urban migrants, they are not significantly different from the natives or the rural migrants.

Table 17B. F-ratio Comparing Five Groups With Different Origin With Respect to Occupation, Using F-Ratio Test

Origin	Migrants From Cities	Migrants From Villages	Migrants From Desert	Foreign Countries
Nonmigrants	23.0*	0.8	13.7	2.5
Migrants From Cities		49.6*	48.1*	19.5*
Migrants From Villages			11.7	11.8
Migrants From Desert				24.8*

*The asterisk indicates that the contrast is significant at $p \leq .001$ level using Scheffe significance level.

We can summarize the occupational differentials as follows:

(1) In terms of work status, Saudi migrants as well as foreigners have a higher rate of employment than the native population.

(2) In terms of occupational status the urban migrants have the most favorable position, and the nomads have the lowest occupational level among other groups. The striking similarity between the natives and the rural migrants no doubt reflects the selectivity of rural migrants, who usually come to Riyadh to pursue a higher level of education and then obtain a relatively good position. The foreigners are numerous in the two extremes of occupational status, the highest and the lowest. So it is difficult to designate them as of a higher or lower occupational status than other groups.

(3) Occupational status is directly related to the rural-urban cultural level of the place of origin. The more urban the place of origin the higher was the occupational status of the migrants in terms of concentration of professional and semi-professional occupations.

Control Variables: Before any conclusion can be drawn about the relationship between occupation and place of origin it would be wise to test this relationship when we control for education. It is assumed that the differences among Riyadh's origin groups are a function of the variation in educational level. This means that once

the level of education is held constant, the differences in occupational achievement will vanish and the groups will be equal. The null hypothesis states that there is no relationship between occupational achievement and the place of origin when education is controlled. The test, therefore, will be restricted to those who have the same educational level. Respondents will be classified according to their occupation with three separate analyses for illiterate, literate, and high school graduates.

Table 18 illustrates the percentage of occupational distribution for different origin groups who have completed high school. As we notice in the table, there is a striking similarity between nonmigrants and both urban and rural migrants. The very small number of the nomads in this high educational category necessitates a precaution before drawing any conclusion. The foreign migrants, however, exhibit a striking overrepresentation in professional jobs. This might be due to the fact that some of these foreigners have academic qualifications much beyond high school diplomas. Such high qualifications enable them to be overrepresented in white collar occupations. The noticeable differences between foreigners and other origin groups have no doubt resulted in a large F- ratio which is significant at $p \leq .001$ level, appearing in Table 18A. Nevertheless, when we exclude the foreign migrants from our analysis, the F- ratio among the remaining groups drops to 1.4. Such a value of F- ratio, which is not significant,

Table 18. Percentage Distribution of Occupational Status, by Place of Origin for Riyadh's Employed Population, Controlling for Education (High School only)

Occupation	Place of Origin				
	Nonmigrants	Migrants From Cities	Villages	Desert	Foreign Countries
Professional(6)	45.8	49.0	36.3	25.0	81.8
Semi-Prof.(3)	47.9	36.2	54.0	50.0	8.9
Blue Collar(2)	6.3	14.8	9.7	25.0	9.2
Total	100.0	100.0	100.0	100.0	100.0
N =	(48)	(196)	(124)	(4)	347
Mean =	4.31	4.32	3.99	3.50	5.36
S.D. =	1.59	1.68	1.55	1.73	1.37

Table 18A. Analysis of Variance Table

Source	Sum of Squares	Degree of Freedom	Mean Square	F- Ratio	Sig. Level
Between groups	253	4	63.26	27.8*	.001
Within groups	1623	714	2.27		
Total	1876	718			

* When we exclude foreigners from our analysis the F- ratio drops to 1.4 which is not significant at $p \leq .01$ level.

indicates that the differences among the Saudi population who finished high school are not of a great magnitude with respect to occupation.

Table 19 is limited to those who can read and write but who never finished high school. We could notice that there is a similarity among the natives, the urban migrants, and the rural migrants, with the urban migrants having a slight advantage over the other two groups with respect to the professional category. The nomads and foreigners in the educational level "literate" have a striking similarity, for both are underrepresented in the professional jobs and both are overrepresented in low-status occupations.

One-way analysis of variance was used, and it was found that the differences among these five groups was considerably significant at $p \leq .001$ level as it appears in Table 19A. The contrasts between each two of these groups were illustrated in Table 19B. It was found that F- ratio is significant between foreigners and each of the remaining groups, with the exception of the nomads. The F- ratio is barely significant when we contrast the rural or the nomads with the urban-reared migrants.

In Table 20, the percentage distribution of occupation for different groups is limited to those who cannot read or write. It is observed that all groups are overrepresented in the blue collar jobs, with the nomads and foreigners having the least advantageous positions. The other groups (the natives, the urban

Table 19. Percentage Distribution of Occupational Status, by Place of Origin for Riyadh's Employed Population, Controlling for Education (Literate only).

Occupation	Place of Origin				
	Nonmigrants	Migrants From Cities	Villages	Desert	Foreign Countries
Professional(6)	9.1	15.5	9.0	4.3	5.0
Semi-Prof.(3)	56.6	50.2	42.6	19.6	19.2
Ble Collar(2)	34.3	34.3	48.4	76.1	75.8
Total	100.0	100.0	100.0	100.0	100.0
N =	(219)	(277)	477	(46)	(380)
Mean =	2.93	3.12	2.78	2.37	2.39
S.D. =	1.08	1.31	1.12	.88	.92

Table 19A. Analysis of Variance Table

Source	Sum of Squares	Degree of Freedom	Mean Square	F- Ratio	Sig. Level
Between groups	102	4	25.41	21.06*	.001
Within groups	1681	1394	1.21		
Total	1783	1398			

* F- ratio drops to 8.2 when foreigners are excluded from our analysis. This value is still significant at $p \leq .001$ level.

Table 19B. F-ratio Comparing Five Groups with Different origin with Respect to occupation Contolling for Education (Literate only).

Origin	Cities	Villages	Desert	Foreign Countries
Nonmigrants	3.7	2.6	10.0	33.5*
Migrants From Cities		16.5*	18.6*	70.9*
Migrants From Villages			6.0	27.2*
Migrants From Desert				0.02

* The asterisk indicates that the contrast is significant at $p \leq .001$ level using Scheffé Significant level. The adjusted critical value of F is 16.26

Table 20. Percentage Distribution of Occupational Status, by Place of Origin for Riyadh's Employed Population, Controlling for Education (Illiterate only).

Occupation	Place of Origin				
	Nonmigrants	Migrants From			
		Cities	Villages	Desert	Foreign Countries
Professional(6)	1.7	2.5	2.8	2.4	0.3
Semi.Prof.(3)	22.5	21.7	30.4	12.2	2.6
Blue Collar(2)	75.8	75.8	66.8	85.4	97.1
Total	100.0	100.0	100.0	100.0	100.0
N =	(178)	(198)	(503)	(82)	(592)
Mean =	2.20	2.32	2.41	2.22	2.04
S.D. =	.64	.72	.76	.69	2.66

Table 20A. Analysis of Variance Table

Source	Sum of Squares	Degree of Freedom	Mean Square	F- Ratio	Sig. Level
Between groups	45	4	11.27	33.6*	.001
Within groups	553	1648	.34		
Total	598	1652			

* F- ratio drops to 3.7 when we exclude foreigners from this analysis. This value is not significant at $p \leq .001$ level.

migrants, and the rural migrants) exhibit another striking similarity with respect to their occupational levels. The F- ratio in Table 20A, which is significant at $p \leq .001$ level, has come mainly from the differences between foreigners and the remaining groups. When we exclude foreigners from the analysis the F- ratio drops to 3.7, which is not significant at $p \leq .001$ level, indicating that the differences among the Saudi population who are illiterate are not significant.

The findings in these previous tables seriously question the validity of the assumption that place of origin has a causal relationship with occupational achievement. Since most of our previous findings indicate that there are no significant relationships between place of origin and occupation when we hold education constant, we cannot reject the null hypothesis of no relationship. Yet, we cannot accept the null hypothesis in its totality because the foreign migrants were always significantly different from other groups even when we controlled for education. The alternative hypothesis, therefore, should state that there are significant occupational differences by place of origin within the Saudi population with education appearing to account for most of these differences.

Length of Residence: This section will be limited only to the migrant groups because it is assumed that the native population have spent their lives in the city. The length of residence might be an important factor in determining

socioeconomic achievement. The relationship between socioeconomic status and length of residence has been explained and proved to be positive by many scholars. Beynon found a significant relationship between the length of residence of Southern migrants in Flint, Michigan, and their adjustment (Beynon, op. cit., p. 336). Beers and Heflin found a high correlation between length of residence and high status employment (Beers and Heflin, 1946, p. 13). Omari's study of two hundred Black migrants in Beloit, Wisconsin, demonstrated that length of residence in Beloit was more highly correlated with socioeconomic status and community satisfaction than with other variables (Omari, 1956, pp. 47-53). These previous studies have shown a strong link between length of residence and the migrant's economic adjustment to the urban environment. With a longer period of residence in the city, the migrant is expected to acquire better housing facilities and a higher occupational level. Unfortunately, our data have failed to provide information which could have been used to find out about the effects of length of residence on socioeconomic achievement. Our knowledge is limited to the number of years spent in Riyadh by each migrant group. The years spent in Riyadh were not crossclassified by socioeconomic dimensions. Thus, length of residence cannot be treated in our analysis as an intervening variable between community of origin and socioeconomic status. Nevertheless, Table 21 shows there is a striking similarity

Table 21. Percentage Distribution of Length of Residence in Riyadh for the Migrant Population

Years in Riyadh	Place of Origin			
	From Cities	From Villages	From Desert	Foreigners
5 or less	45.5	44.1	51.4	77.6
5-10	23.5	26.3	19.8	14.2
11-17	18.2	16.0	15.3	7.2
18 and more	12.8	13.6	13.5	1.0
Total	100.0	100.0	100.0	100.0
N =	(1961)	(3067)	(379)	(2153)
Mean =	8.3	8.3	7.9	4.6
S.D. =	6.2	6.2	6.3	3.6

Table 21A. Analysis of Variance Table

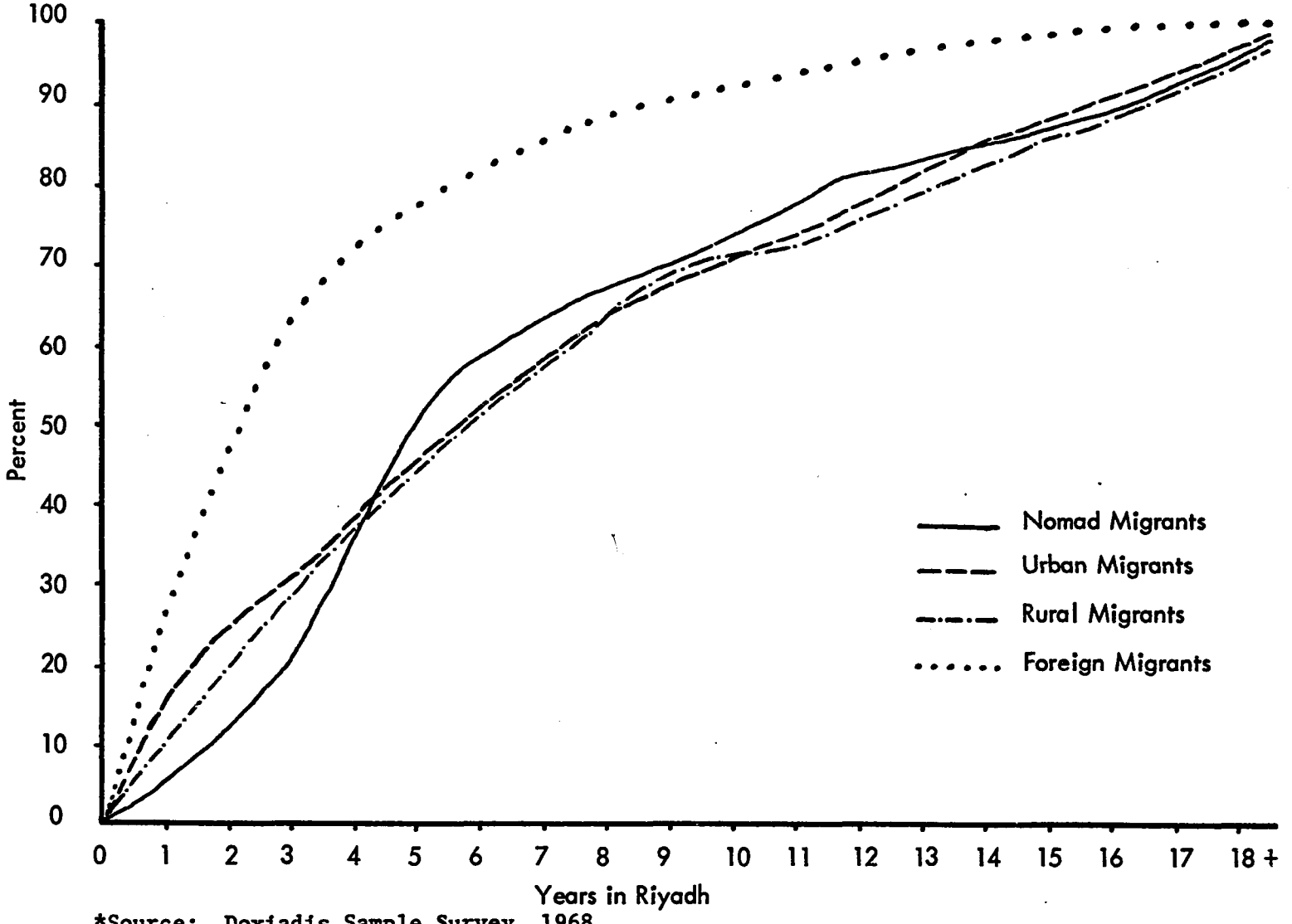
Source	Sum of Squares	Degree of Freedom	Mean Square	F- Ratio	Sig. Level
Between groups	20,711	3	6904	219.7*	.001
Within groups	237,474	7556	31.43		
Total	258,185	7559			

* When we exclude Foreigners F- ratio drops to 0.64 which is not significant.

among Saudi migrants with respect to the duration of residence in Riyadh. There are only slight differences among Saudi migrants with respect to all intervals. Foreigners, however, have a high proportion of recent arrivals, as 77.6 per cent of them have been in Riyadh for five years or less. The reasons for the recent arrival of many foreigners are that Riyadh has only recently been opened for international migration and that foreigners are mostly transfer migrants. They are unwilling or unable to stay permanently in Riyadh.

Table 21A shows that the F- ratio is significant at $p \leq .001$ level. But when we limit our analysis to Saudi migrants, the F- ratio drops to a negligible value which is only 0.6. Figure 9 illustrates the cumulative per cent of migrants by origin and by years in Riyadh. This figure shows that international migrants have been in Riyadh for a shorter period than Saudi migrants who are not significantly different from each other with respect to years spent in Riyadh. Thus, the length of residence, if used as an intervening variable between place of origin and occupation, might not provide us with significant results. Our data also did not provide us with other variables, such as life cycles, which could be used in this context as a control variable. Until we have these variables, we should emphasize the importance of education as an intervening variable between community of origin and occupational achievement.

FIGURE IX: CUMULATIVE PERCENT OF MIGRANTS BY ORIGIN AND YEARS IN RIYADH *



*Source: Doxiadis Sample Survey, 1968.

Income

Income is another item of socioeconomic status which with education and occupation forms socioeconomic status. In this section the main concern will be to test the relationships between (1) education and income, (2) occupation and income, (3) place of origin and income, and (4) place of origin and income, standardizing for education and for occupation. We will test our sub-hypothesis, number 4, mentioned earlier in Chapter I. This sub-hypothesis states that there is an association between migrant status and income, with the natives and urban migrants being more likely to have higher income than the rural or the nomad migrants.

Since income is highly related to education and to occupation, we should expect that the differences in education and the differences in occupation mean differences in monetary success. More specifically if we found that the nomad and the rural migrants lag behind the urban-reared people in educational and occupational achievement, we should expect them to have less favorable monetary positions than urban-reared people. In order to determine the extent to which income corresponds to migrant status, we should discuss first the relationship between education and income on one hand, and the relationship between occupation and income on the other. The data in Table 22 have been extracted from the CRED survey of Saudi industrial workers in Riyadh in 1969. The table shows that the

TABLE 22: RELATIONSHIP BETWEEN EDUCATION AND INCOME

	Monthly Salary by Saudi Riyal (Riyal = 25¢)				
Education	200	201-300	301-400	401+	Total
Illiterate	53.9	36.8	5.3	3.9	100.0 (76)
Literate	27.3	42.4	12.1	18.2	100.0 (33)
Total	50	42	8	9	109

$\chi^2 = 10.88$ $p \leq .01$

literate workers are more represented in high income categories and less represented in low income groups than their illiterate counterparts. The Chi-square test was utilized, and it was found that the difference is significant at $p \leq .01$ level. Thus the relationship between education and income has been proven.

The relationship between occupation and income is illustrated in Table 23. It is clear from the table that while there are 13.3 per cent of professionals whose monthly income is 3000 Saudi Riyals or more, the percentages of the semi-professionals (clerks and salesmen) and blue collar workers in this high income category are 1.2 and 0.8, respectively. On the other hand, the blue collar workers are overrepresented in the low-income categories, as 59.1 per cent of them earn only 200 Riyals or less. The semi-professionals are less represented in this low-income

Table 23. Percentage Distribution of Monthly Income, by Occupation (Income by Saudi Riyal. Riyal is = 25¢)

Monthly Income	Occupation		
	Professional	Semi-Prof.	Blue Collar
200	4.7	22.0	59.1
400	9.8	29.3	25.9
600	18.5	24.4	7.0
850	18.8	13.0	3.6
1400	34.9	9.1	3.6
3000	13.3	1.2	0.8
Total	100.0	100.0	100.0
N =	(601)	(984)	(2145)
Mean =	1208	585	370
S.D. =	803	430	354

Table 23A. Analysis of Variance Table

Source	Sum of Squares	Degree of Freedom	Mean Square	F- Ratio	Sig. Level
Between groups	330,329,000	2	165,165,000	734.3	.001
Within groups	838,329,000	3,727	224,934		
Total	116,866,000,0	3,729			

eta^2 = 0.28 The amount of variance explained.

category than the blue-collars, and the professionals are the least represented in this low-income group. It is puzzling, however, to find 4.4% among the blue collar workers whose monthly income is 1400 Saudi Riyals or more. This high income might be attributable to the fact that Doxiadis has classified soldiers and officers under one category--the army--and did not make separate categories for these two occupations. Although most officers are known to have medium or high income, the majority of the army consists of soldiers who belong to the low income category. Therefore, we treated "army" occupations in this study as if they were blue collar workers.

Table 23A shows that F- ratio is significant at $p \leq .001$ level, indicating that the relationship between occupation and income is a strong one.

Since it has been proven in the previous sections that migrant status is related to education and to occupation, and in view of the fact that education and occupation are highly and directly related to income, the next question would be how migrant status is related to income. The average monthly income by Saudi Riyal is 490 for the non-migrants, 836 for urban migrants, 480 for rural migrants, and 325 for the nomads (Doxiadis, op. cit., 1968). There is no information about international migrants, so we will exclude them and limit our analysis in this section to Saudi origin groups. Since the average income for each group is the only information we have about income, we

will use the technique of indirect standardization to see if this difference in the average income is a function of education and of occupation, or if it is due to migrant status.

Table 24 illustrates the occupational structure for each sub-group. As shown at the bottom of the table, item A denoted the actual average income for each origin group. Since these average incomes are not comparable (because one origin group may have a few highly paid professionals whose incomes have increased their group's average over those of other origin groups) the standardization for occupation is necessary. The average income for each occupational category of the total sample is available. Thus, the technique of indirect standardization could be employed by applying the total mean income for each occupational group. This appears in item B in our table. Hence, B expresses the mean income of the total level of income at the occupational structure of each subgroup. For instance, the mean income of 581 Riyals in subgroup S_1 means that if this subgroup had had the same income level as the total sample, their mean income would have been 581 Riyals instead of 490 Riyals, applying the occupational structure of S_1. Thus the income level of S_1 is 508 Riyals as it is expressed in item C. This income level is equal to eighty-four per cent of that of the total sample as it appears in item D. The same procedure was applied to S_2, S_3, and S_4, which indicates that

Table 24. Place of Origin and Income Standardizing Occupation (Indirect Standardization).

Occupation	Place of Origin					
	Nonmigrants S_1	From Cities S_2	From Villages S_3	From Desert S_4	Total	Average Income by Riyal I
Professional	18	59	73	2	152	1193
Executive	27	85	29	3	144	1744
Clerk	111	162	206	11	490	630
Salesman	76	91	217	10	394	551
Peasant	5	5	5	0	15	306
Miner	0	1	10	0	11	532
Transport-Worker	57	54	129	21	261	485
Craftsman	41	92	186	36	355	390
Service Worker	90	63	161	18	332	247
Army	20	59	88	31	198	542
Total	445	671	1104	132	2352	605
(A) Actual Mean income of Sub-groups	490	836	480	325		
(B) Mean income of total sample on sub-group's occupational structure $\left(\frac{\Sigma S_i I_i}{\Sigma S_1}\right)$	581	719	558	496		
(C) Indirect Standardized mean income (A/B x $\bar{I}$)	508	702	520	399		
(D) Index of income $\left(\frac{C}{\bar{I}} \times 100\right)$	84	116	86	66		100

the income levels of these subgroups are equal to 702, 520 and 399, for urban migrants, rural migrants and nomads, successively. In other words, item D indicates that if the income level of the total sample is 100 then the income levels of these three subgroups would be 116 for urban migrants, 86 for rural migrants, and 66 for nomad migrants. This means that even after we standardized for occupation, there are still variations among origin groups with respect to income, with the nomads occupying the lowest level and urban migrants having the highest income. The rural migrants and the natives were midway between the two extreme groups before and after we standardized for occupation.

We also used indirect standardization in Table 25 to show the differences in the average income among origin groups when we standardize for education. Since education and occupation were found to be highly and directly related, we expect to find that variations in income would sustain after we standardize for education, as these variations have sustained when we standardized for occupation. The same procedure that was applied to Table 24 was applied to this table. The results obtained in item C at the bottom of Table 25 indicate that the variations and the direction of these variations sustained after we controlled for education. Urban-reared migrants still have the highest income and the nomads have the lowest income. Nevertheless, while the natives slightly outranked the rural migrants before standardization, the latter has a slight edge

Table 25. Place of Origin and Income Standardizing Education (Indirect Standardization)

Education	Place of Origin: Native S_1	From City S_2	From Village S_3	From Desert S_4	Total	Average Income I
Illiterate	784	748	1687	237	3456	312
Literate	732	556	724	75	2087	553
High School or more	107	322	215	6	650	1323
Total	1623	1626	2626	318	6193	499
(A) Average income of sub-groups before standardizing	490	836	480	325		
(B) Applying Total Rates for each Educational group to the structure of place of origin	487	595	461	387		
(C) Income level of each sub-group component to total average income ($A/B \times \bar{I}$)	504	569	519	419		
(D) Index of income ($\frac{C}{\bar{I}} \times 100$)	101	141	104	84		100

over the former when we standardize for education.

To sum up, the relationship between migrant status and socioeconomic characteristics in Riyadh in 1968 have been analyzed in this chapter in an attempt to explore the role of migrants as compared to the nonmigrants in the city. All types of migrants were found to be differentiated from the nonmigrants but in different directions. While urban-reared migrants overranked the nonmigrants in socio-economic status the latter had an advantage over the nomad or rural migrants in that respect. The nature of the migrant differentials was found to vary with the rural-urban cultural level of the place of origin of the migrant in all dimensions of socioeconomic status. Although our findings are not consistent with the theory that migrants resemble each other in some respects as a result of their common mobility, the findings, however, are consistent with the theory that the characteristics of the migrants are related to their previous rural-urban cultural background.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This dissertation explored and analyzed three basic issues:

1. The forces underlying the spatial arrangement of Riyadh were discussed and analyzed within the framework of three existing theories: the concentric-zone theory, the sector theory, and the multiple nuclei theory. While it was found that Riyadh exhibits a combination of some aspects of these three theories, Riyadh in its spatial arrangement and its socioeconomic structure, is more similar to the preindustrial city model than to any of these three theories. The spatial arrangement of present-day Riyadh reflects, to a large extent, the description accorded to the preindustrial city by Sjoberg. Contrary to Western cities, in which central areas are the least desirable dwelling places, Riyadh's central area is the most populous and the most desirable. The elite live in the center, and the poor fan out toward the peripheries, with the exception of the newly-established suburbs on the north and west sides. Riyadh, like other preindustrial cities, exhibits less specialization of functions than do industrial cities. Riyadh incorporates

all activities ascribed to the societal capital of a pre-industrial country, namely religious, political, commercial and educational. It was also found that the characteristics of the city's ten districts were not monolithic. There is a variety of physical and socioeconomic characteristics in these ten districts. Nevertheless, there are certain districts which resemble each other in their physical and socioeconomic outlook and in their populations. Accordingly, it was found that the city could be divided into three sectors: the traditional urbanite sector, inhabited mainly by the native population; the ruralized sector, occupied by the recent rural migrants; and the modern sector, comprised mainly by members of the royal family or urban-reared migrants. These three sectors were compared with each other with respect to housing durability, housing quality, family income, rent, and person per room ratio. There was no major difference among these three sectors with respect to person per room ratio. However, the differences in income and rent are noticeable with the traditional urbanite sector having the highest income and the modern sector having the highest rent. With the exception of some temporary shacks in district 9 (one of the districts of the modern sector), we found both the traditional urbanite sector and the modern sector to have advantages over the ruralized sector with respect to the durability and quality of the houses.

2. The impact of the recent economic upheavals upon population redistribution was discussed in an attempt to depict the trends, motives, and consequences of rural migration to Riyadh, where economic activities are more concentrated than in other parts of the country. A demographic analysis of Riyadh's population was carried out, and it was found that the city has a high sex ratio and has a high proportion of young adults. Such an imbalance in the sex ratio and the preponderance of young adults were two results of this massive recent migration, mainly performed by young male adults. It was hypothesized that there are significant differences between migrants and nonmigrants with respect to age composition and sex ratio with the former having a higher sex ratio and higher proportion of people in the productive age groups. The hypothesis was confirmed by our data, and it is consistent with previous empirical findings. As a function of their favorable age-sex structure, the migrants have a higher rate of employment with respect to their population than do the nonmigrants. There was no major variation in age-sex structure among different types of Saudi migrants. International migrants, however, have the highest sex ratio among other groups, but they are not significantly different from Saudi migrants with respect to age structure. Household size was examined to see if there is a significant difference among different types of migrants on one hand, and between migrants and nonmigrants

on the other. It was found that the native population have the largest household size, that foreigners have the smallest size, and that Saudi migrants' household size is between the two extremes. The variation in household size between the nonmigrants and Saudi migrants was explained by the fact that those migrants are usually younger and have not completed their life cycles. This explanation also applies to international migrants, who also have advocated limiting the size of their families and households.

3. The third issue explored in this thesis was the effects of place of origin on the individual's chances to integrate into Riyadh's socioeconomic structure. Some hypotheses pertaining to rural-urban differentials were examined. The data for examining the study's hypotheses were borrowed from the Household Sample Survey conducted by Doxiadis Associates in 1968 and sponsored by the Ministry of Interior in Saudi Arabia. The survey covered 2558 private households. The respondents were classified according to their community of origin, educational level, occupation, and income. The survey, however, did not mainly aim to work within the framework of existing theories related to rural migration and the degree of the migrant's adjustment to the new urban area. This survey was a comprehensive survey covering different phases of the city and the population with no emphasis on particular aspects of the city. Due to the lack of information in this survey about certain

social, cultural, and economic characteristics of the population, we were unable to test some essential theories about the assimilation of the migrants into Riyadh's society. Social participation in various groups, the migrants' attitudes toward the host society, and the migrants' degree of attachment to their community of origin (which are good measures for assimilation) have been overlooked by this survey. However, this survey has provided some social and economic information which was used in this dissertation as indicators of the migrants' economic integration into Riyadh. Inasmuch as these variables were the criteria for economic integration, we used some statistical tests, such as analysis of variance and Chi-square, to examine the relationship between migrant status, measured in this study by his place of origin and his socioeconomic achievement in Riyadh.

The analysis in this study was guided by some sociological theories and empirical work about rural-urban differential background and its effects on the degree of assimilation. On the basis of the well-accepted assumption that individuals born and raised in the rural areas have different cultural backgrounds than urban-reared persons, it was hypothesized that urban-reared migrants are more likely to integrate into Riyadh's socioeconomic structure than are the nomad or rural-reared migrants. The prediction was based on the assumption that urban-reared migrants coming from cities similar to Riyadh

were more likely to possess certain characteristics which would help them to achieve higher socioeconomic status than would the rural migrants. The nomad and the rural migrants, raised in areas where chances for higher education and modern technical skills are limited, would not be able to compete with urban-reared people. Bearing the above proposition in mind, several sub-hypotheses were formulated in an attempt to clarify the role of different migrants in the new urban environment. On the basis of place of origin our respondents were classified into five categories: the native population, urban-reared migrants, migrants from rural areas, migrants from the desert, and migrants from foreign countries. This classification, as it was provided by Doxiadis, has created major problems. First, members of one family may have come from different residential backgrounds and Doxiadis has treated all members as if they have the same place of origin as the head of the household. The problem here arises from the fact that some household heads have come from rural areas while their wives might have been born and raised in Riyadh. Second, the survey has considered the respondent's place of birth as the sole criterion for his rural-urban background. Thus, if the respondent was born in the desert or in a foreign country but was raised in Riyadh since the early stages of his life, he was classified as if he were a nomad or a foreigner. Third, the data did not define "urban" and "rural," which is essential for

a study aiming to investigate the rural-urban differences in assimilation. The data did not name the settlement from which the migrants came. Thus, we were prevented from making any regional comparison with respect to assimilation. The data gave information only about the present conditions of the respondents. It did not provide information about the stage preceding the physical movement to the city. Knowledge about different stages of the migration is essential because these stages are interrelated. The data, however, include information about the socioeconomic achievement of different groups in the new urban society. Such information about occupation and income was valuable as an objective measure of economic integration. The data have supported our previous assumption, and it was found that the nomad and rural migrants lag behind the urban-reared people in all socioeconomic dimensions. Urban-reared migrants were found to be the most privileged of all groups in terms of socioeconomic achievement. Nevertheless, when we control for education, the differences in occupation among these groups become smaller. When we standardize for education and for occupation the differences in income remained very large. Thus when we put all our findings together, they indicate that neither place of origin nor educational level were the only determinants of differences in occupation or income as indirect indicators of economic integration. Thus, economic integration is a complex process not determined by one factor but by a constellation

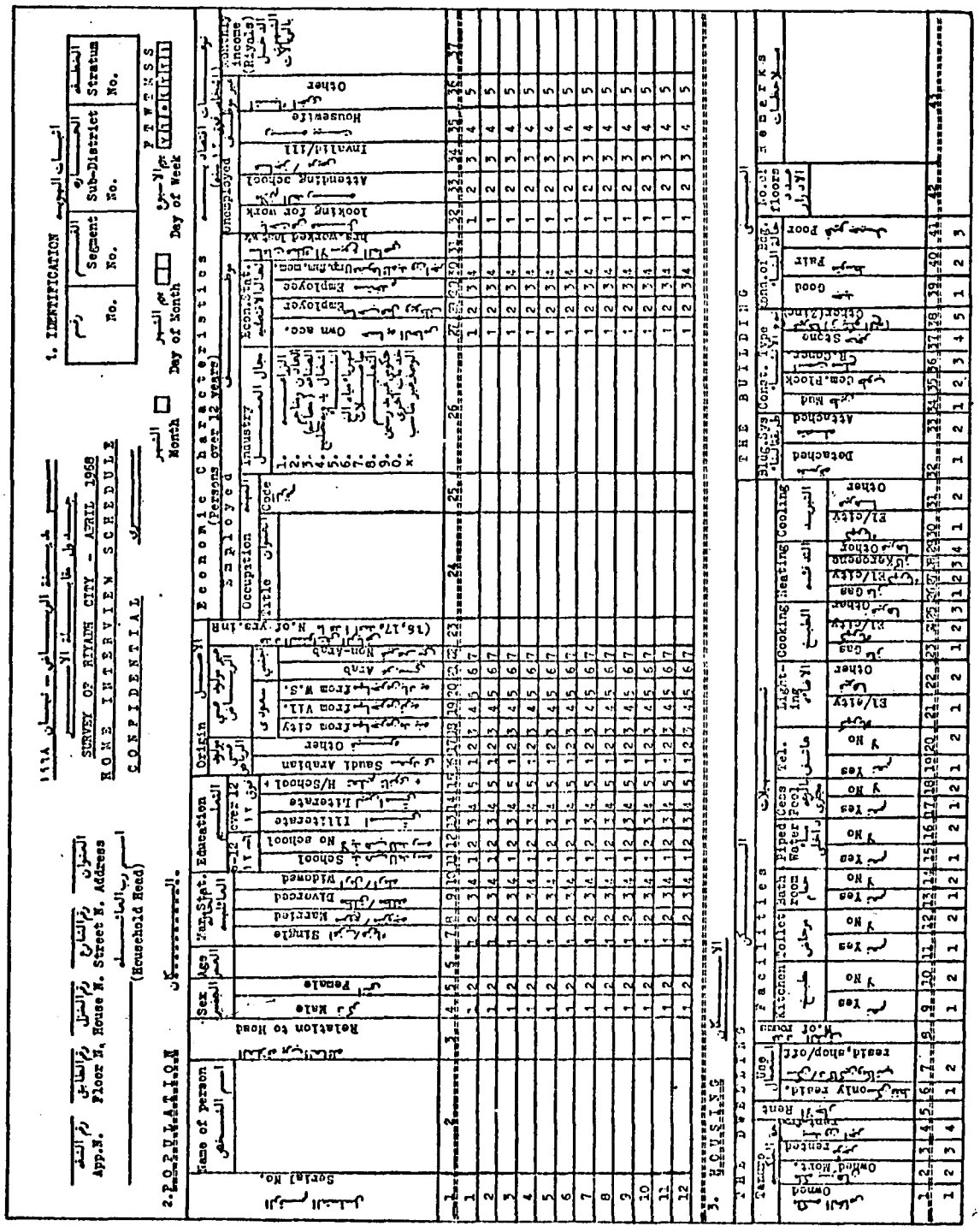
of many variables. Generally speaking, our findings support the popular notion that rural-urban differences exist and that these differences affect the individual's chances to integrate into the new urban society. The last question which should be raised is whether these findings about Riyadh are generally applicable to other cities in Saudi Arabia or whether they describe a peculiar situation. The question is still open, but the indication is that the answer is positive. There is no apparent reason for these findings to be unique to the situation of urban growth and rural migration to Riyadh. The overall circumstances--social, cultural and economic--in Riyadh are quite similar to those of other cities in Saudi Arabia. Therefore, it is expected that for the most part our findings regarding rural migration and urban expansion in Riyadh will apply to other cities in the country.

APPENDIX I

QUESTIONNAIRE OF THE HOUSEHOLD INTERVIEW SAMPLE SURVEY

APPENDIX I

QUESTIONNAIRE OF THE HOUSEHOLD INTERVIEW SAMPLE SURVEY



2. POPULATION Cont'd — السكان بقية

Serial No. الرقم المسلسل	Name of person اسم الشخص	Relation to Head العلاقة برب العائلة	Sex الجنس: Male ذكر	Female انثى	Age العمر	Mar. Stat. الحالة العائلية: Single اعزب/عزباء	Married متزوج/متزوجة	Divorced مطلق/مطلقة	Widowed ارمل/ارملة	Education التعليم: 6-12 سنة: School يذهب للمدرسة	No School لا يذهب للمدرسة	Over 12 فوق ١٢: Illiterate امي	Literate غير امي	H/School+ ثانوي فوق	Origin الاصل: مولود الرياض: Other	مولود في الرياض: سعودي: من مدن اخرى from city	من القرى from village	من البادية from W.B.	اجنبي: Arab عربي	Non-Arab غير عربي	No. of yrs. in R عدد السنوات في الرياض (اذا اقل من سنة)	Economic Characteristics (Persons over 12 years) — Employed موظف: Occupation المهنة: Title العنوان	Code الرمز	Industry حسب العمل	Econ. Stat. الحالة الاقتصادية: Own Acc. صاحب عمل لحسابه	Employer صاحب عمل ويوظف	Employee مستخدم	Unp.fam.men عمل بلا اجر من افراد العائلة	Hrs. worked last wk. ساعات عمل الاسبوع الماضي	Unemployed غير موظف: looking for work يبحث عن عمل	Attending school يتعلم في المدرسة	Invalid/Ill عاجز/مريض	Housewife ربة منزل	Other اخرى	Monthly Income (Riyals) الدخل الشهري بالريالات
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
13			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
14			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
15			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
16			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
17			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
18			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
19			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
20			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
21			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
22			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
23			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	
25			1	2		1	2	3	4	1	2	3	4	5	1	2	3	4	5	6	7					1	2	3	4		1	2	3	4	5	

رقم العداد Interviewer's Code ☐☐ رقم الراجع Inspector's Code ☐☐ صح O.K. ☐

الاخطاء

النقط المفحوصة Spot Checked ☐ نعم Yes ☐ لا No

اذا نعم If yes ☐ صح O.K. ☐ يجب ان تعاد Had to be redone ☐

اسم الفاحص واضاءه
Name of Inspector & Signature

ملاحظات الراجع، اذا وجدت
Inspector's remarks, If any

ملاحظات الفاحص، اذا وجدت
Supervisor's remarks, If any

APPENDIX II

CODE BOOK FOR THE SAMPLE SURVEY OF SAUDI ARABIAN INDUSTRIAL WORKERS IN RIYADH

APPENDIX II

Code Book for the Sample Survey of Saudi Arabian Industrial Workers in Riyadh, conducted by the Center of Research and Economic Development in Saudi Arabia

Translated and Coded
by:
Saleh Malik

V.1. The deck number

V.2-4. The name of the worker

V.5-7. The number of the worker

Section 1: Place of Origin

V.8. What type of settlement did you come from?

(3) Farm or village
(4) Town
(5) City
(7) Inap
(9) NA

V.9. How large is your hometown?

(1) 0-500
(2) 501-1000
(3) 1001-2000
(4) 2001-5000
(5) 5001-19,999
(6) 20,000 or more
(7) Inap
(9) NA

V.10. Which district did you come from?

(1) West
(2) South
(3) Central
(4) East
(7) Inap

V.11. What is your present age?

(1) 14-19
(2) 20-24
(3) 25-29
(4) 30-34
(5) 35 or more
(9) NA

V.12. How old were you when you left home?

(1) Less than 15
(2) 15-19

(3) 20-24
(4) 25-29
(5) 30 or more
(7) Inap
(9) NA

Section 2: Education

V.13. Do you read or write?

(1) Read
(3) Read and write
(5) Do not read or write

V.14. Have you ever enrolled in elementary school?

(1) Day school
(3) Night school
(5) Neither

V.15. Were you working during your elementary school enrollment?

(1) Yes
(3) No
(5) Inap

V.16. Have you ever enrolled in middle school?

(1) Day school
(3) Night school
(5) Neither

V.17. Were you working during your middle school enrollment?

(1) Yes
(5) No
(7) Inap

V.18. Have you ever enrolled in secondary school?

(1) Yes
(5) No

V.19. Were you working during your secondary school enrollment?

(1) Yes
(5) No
(7) Inap

V.20. How many years of schooling do you have?

(1) Three years or below
(2) Four years
(3) Five years
(4) Six years
(5) None
(6) Literate but no certificate

V.21. What are the reasons that prevented you from getting a diploma?

(1) Society does not encourage education
(2) Need to work for financial reasons
(3) No school in my town
(4) Two of the above
(7) Inap
(9) NA

V.22. Why don't you pursue a higher level of education?

(1) Need to work because of lack of money
(2) Lack of time
(3) Responsibility of the family
(7) Inap
(9) NA

V.23. Are you preparing yourself to take the diploma exam?

(1) Elementary school
(2) Middle school
(3) Secondary school
(5) No
(9) NA

V.24. Do you plan to go back to school in the future?

(1) Day school
(2) Evening school
(5) No
(7) Inap
(9) NA

Section 3: Vocational Training

V.25. Have you ever joined any vocational training program?

(1) Yes
(5) No

V.26. Did you go to a vocational school?

(1) Yes
(5) No

V.27. Have you had any vocational training abroad?

(1) Yes
(5) No

V.28. Have you had any training in the vocational training centers in the country?

(1) Yes
(5) No

Section 4: Job History

V.29. How long have you been working in this industry?

(1) A year or below
(2) 13-24 months
(3) 25 months to four years
(4) More than four years to six years
(5) More than six years

V.30. Why did you choose this factory?

(1) Need to work
(2) Continuity of the work here or overtime payment
(3) To gain some experience
(4) Other
(5) To encourage national production
(6) Personal relation with the factory personnel
(7) Advice of my relatives
(8) Because I have experience
(9) NA

V.31. How did you choose this factory?

(1) Advertisement
(2) Relatives or friends

(3) Labor office in the city
(4) By myself
(5) Other

V.32. Did you have any training in this factory?

(1) Yes
(5) No

V.33. How many factories have you worked at similar to the present one?

(1) One
(2) Two
(3) Three or more
(5) None

V.34. Where are these factories located?

(1) Riyadh
(2) Jeddah
(3) Damman
(4) Other
(5) More than one city
(7) Inap

V.35. How long did you remain in these factories?

(1) Six months or below
(2) Seven months to eleven months
(3) 1-2 years
(4) More than two years
(7) Inap
(9) NA

V.36. Why did you leave these factories?

(1) Low salary
(2) Not enough work
(3) The factory was closed
(4) Friction with the management
(5) Other
(6) Two of the above reasons
(7) Inap
(8) Leaving for my hometown
(9) NA

V.37. What type of work did you do in your former job?

(1) In the production line
(2) Maintenance
(3) Marketing
(4) Administrative work
(5) Work

V.38. How did you choose these factories?

(1) Advertisement
(2) Relative or friends
(3) Labor office
(4) By myself
(5) Other
(6) NA

V.39. What kind of work are you doing now?

(1) In the production line
(2) Maintenance
(3) Marketing
(4) Administrative work
(5) Other

V.40. What kind of work were you doing when you first began at this factory?

(1) In the production line
(2) Maintenance
(3) Marketing
(4) Administrative
(5) Other

V.41. Why has your type of work changed?

(1) Because of my long experience
(2) New job was opened
(3) Better working conditions
(4) Friction with the management
(5) Other
(6) Desire of the management
(7) Inap

V.42. What time do you work?

(1) One shift starting in the morning
(2) One shift starting in the afternoon
(3) Two shifts: one in the morning and another in the afternoon
(4) One shift in the morning and two shifts in the afternoon
(5) Open

V.43. What time do you prefer to work?

(1) Day shift
(2) Evening shift
(3) Day and evening shifts
(4) I prefer what is good for the factory (flexible)
(5) Open
(6) Continuous-one shift

V.44. Would you accept a night shift?

(1) Yes
(5) No
(9) NA

V.45. Do you have another job or do you work overtime?

(1) Yes, I have another job
(3) Yes, I work overtime
(5) Neither

V.46. Why did you choose the industrial sector as a way of living?

(1) To gain some experience for my future
(2) Income
(3) Both income and experience
(4) Available job (easy to find)
(5) Does not require academic qualification
(6) Land is not fertile any more
(7) Security and continuity
(8) I like it
(9) Friends and relatives advised me to do so

V.47. Have you ever worked in industry before?

(1) Yes
(5) No
(9) NA

V.48. What was your former occupation in your hometown?

(1) Mechanics or body welder
(2) Student (no job)
(3) Construction worker
(4) Water carrier
(5) Jammal (carries goods from one town to another on camels
(6) Farmer
(7) Shepherd
(8) Other

V.49. What is/was your father's occupation?

(1) Construction worker
(2) Retail salesman
(3) Jammal
(4) Government or company's employee (blue-collar)
(5) Shepherd
(6) Farmer
(7) Other
(9) NA

V.50. What is the most common type of work in your hometown?

(1) Nomadism
(2) Agriculture and nomadism
(3) Agriculture
(4) Commerce, government employment, and industry

V.51. Does your hometown have any industry?

(1) Yes
(5) No

V.52. If you find an industrial job in your hometown would you consider going back home?

(1) Yes
(5) No
(6) Does not make any difference
(7) Inap

V.53. If the answer was yes, indicate the reason for the desire to return home:

(1) Family
(2) Town

(3) Both family and town
(4) High expenses of the City (Riyadh)
(5) Both family and low expenses of my town
(7) Inap
(9) NA

V.54. If the answer was no, indicate the reason for your preference to stay in Riyadh:

(1) I have my family and business here
(2) Higher wages here
(3) Satisfied in Riyadh
(4) I can't leave the job; I am very much involved with my present job
(5) To be away from home and to be independent
(7) Inap

V.55. What is your attitude toward working in industry?

(1) Noble, profitable, and it gives experience
(2) Okay, fair
(3) Tiring and miserable
(9) NA

V.56. If you have a chance to choose any sector to work in, which one of the following would you prefer?

(1) Industry
(2) Government office
(3) Agriculture
(4) Commerce
(5) Private work
(6) No preference
(9) NA

V.57. Do you have any relatives who are working in factories?

(1) One
(2) Two
(3) Three
(4) Four or more
(5) No relatives
(9) NA

V.58. Have you ever helped any one of your relatives to find work?

(1) Yes, and I suggested the work
(2) Yes, and I responded to his request
(5) No
(9) NA

V.59. Do you recommend that people work in the industrial sector?

(1) Yes
(5) No
(9) NA

V.60. If yes, indicate the reason for recommendation:

(1) Experience
(2) Money
(3) Noble work and useful for the nation
(4) Secured and continuous work
(5) Two of the above
(7) Inap
(9) NA

V.61. If no, indicate the reason for not recommending the industrial sector:

(1) No benefits
(2) Wages are low
(3) Tiring and the work is not guaranteed
(4) To avoid friction
(7) Inap
(8) Other
(9) NA

V.62. How many hours do you work weekly?

(1) 15-24
(2) 25-34
(3) 35 or more

V.63. What was your monthly salary when you first started in this factory?

(1) 200 Riyals (Riyal 24¢)
(2) 201-300
(3) 301-400

(4) 401 or more

V.64. What is your salary now?

(1) 200 Riyal
(2) 201-300
(3) 301-400
(4) 401-500
(5) 501 or more

V.65. How many increases did you get here?

(1) One
(2) Two
(3) Three
(4) Four or more
(5) None

V.66. What is the average of these increases?

(1) 10-19
(2) 20-29
(3) 30-39
(4) 40 or more
(5) Inap

Section 5: Demographic Aspects

V.67. What is your marital status?

(1) Single
(2) Married
(3) Other

V.68. How many children do you have?

(1) One
(2) Two
(3) Three
(4) Four or more
(5) None
(6) Inap (not married yet)

V.69. Do any of your children work?

(1) Yes (code the exact number)
(5) No
(7) Inap

V.70. How many members are in your immediate family?

(1) 2
(2) 3-4
(3) 5-6
(4) 7 or more
(7) Inap (single)

V.71. How many members in your extended family are you responsible for?

(1) 1-2
(2) 3-4
(3) 5-6
(4) 7 or more
(5) None
(9) NA

V.72. How many members from your extended family live with you in your house?

(1) 2
(2) 3-4
(3) 5-6
(4) 7 or more
(5) None
(9) NA

V.73. Does your family live with you here?

(1) Yes
(5) No
(7) Non-migrant

Section 6: Housing Conditions

V.74. If your family is not with you here, what type of housing do they live in?

(1) Owned
(2) Rented
(3) Shack or tent
(7) Inap (living with you)
(9) NA

V.75. What type of housing do you live in now?

(1) Owned
(2) Rented
(3) Provided by/or in the factory
(4) Other (shack, hut)

V.76. How many rooms do you have in your house here?

(1) One room
(2) Two rooms
(3) 3-4 rooms
(4) Five or more

V.77. How many rooms are in your house in your hometown?

(1) One room
(2) Two rooms
(3) 3-4 rooms
(4) Five or more
(7) Inap
(9) NA

V.78. Does the house in which you live here or in which your family lives back home have electricity?

(1) Yes, in the house I live in
(2) Yes, in the house back home
(3) Yes, in both of these houses
(5) Neither
(6) I live with my family and have electricity
(7) I live with my family and have no electricity

V.79. Do you have a radio, record player or tape recorder?

(1) Radio
(2) Record player
(3) Tape recorder
(4) Two of the above
(5) All of the above
(6) None of the above

V.80. Do you have a car, television set, gas stove or refrigerator?

(1) Car
(2) TV

(3) Gas stove
(4) Refrigerator
(5) Two of the above
(6) Three of the above
(7) All of the above
(8) None of the above

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