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COMPARATIVE LABOR POLICY IN THE
HASHEMITE KINGDOM OF JORDAN
1961-1987

DISSERTATION

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By

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It is increasingly recognized that manpower planning and policies are a major component of a country's development efforts. The purpose of this study is to examine the labor market in Jordan and to identify the main determinants of employment (labor force) during the period from 1961 to 1987 in order to advise policy makers as to the best course of action to achieve full employment. This period was divided into two periods: 1961 to 1972 and 1973 to 1987 for comparative purposes. The socio-economic and political framework of the labor market, as well as the labor policies during the period were examined in an effort to determine the determinants affecting the labor market in the two periods.

The findings of this study reveal that Jordan's labor market and policies over the last three decades have been influenced by changes and events not only in Jordan, but by changes and events in the entire region. The study also indicates that factors influencing the labor market differ under different conditions. The impact of the independent variables tested in this study differ between the two

periods, 1961 to 1972 and 1973 to 1987. Policy which may serve the country's best interest during the time of instability and crisis may not be in the country's best interest in time of stability and peace.

A handwritten signature in cursive script, appearing to be the initials 'J.B.J.' with a flourish at the end.

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CHAPTER I

INTRODUCTION

Third World countries face a multitude of obstacles in their development efforts. Although the process of development must be patterned to each country's particular environmental condition, one common problem in all is the need to develop human resources. Human resources are the means, as well as the goal for development. For progress to occur, it is critical that human resources be developed and employed in the development and modernization process. The fact that manpower planning and policies must be a major component of a country's development efforts is increasingly recognized. Chandrasky and Hultman (1967) emphasized the point that the development of an effective labor policy is a major task in the national planning process as follows:

A strategy for development of human resources--i.e., the building and the effective utilization of the skills of people--is an essential element of any modern development strategy. The wealth of a nation is as much dependent upon the development of its people as upon the accumulation of material capital, and there is little need to argue which is the more important. Both material and human capital must be accumulated at high rates of speed, if rapid growth is to be achieved. And it is essential for politicians and planners to understand that the development of human and physical resources must be carefully integrated in any master plan for growth (p. 170).

Jordan, a non-oil-producing country and the subject of this study, is a classical example of the importance of human resources in the modernization and developmental process. Jordan, which is virtually a landlocked state in western Asia, is bordered by Israel on the west, Syria on the north, Iraq to the east, and Saudi Arabia to the south. It has only a narrow outlet to the Red Sea through the Port of Aqaba (Europa Yearbook, 1987, pp. 1587-1602). The country occupies an area of 97,740 square kilometers of which 5,650 square kilometers (the area of the West Bank) has been occupied by Israel since 1967. Only one third of the country's total area is cultivatable. Jordan has an estimated population of three million (in 1987), which must struggle to survive on its limited natural resources.

In order for a country to develop, human resources must compensate for its limited natural resources. The development of human resources is envisioned as perhaps the most important aspect of Jordan's planning and development. Its policy makers and planners face serious challenges in developing human resource plans and policies. The manpower challenges are intensified by such events as:

1. A fluctuation of demand for Jordanian workers in the region, according to the economic situation in the surrounding countries.

2. Thousands of guest workers migrating to Jordan during boom eras who in time of recession compete with Jordanian workers within Jordan.

3. An increasing unemployment rate, especially among the university graduates as a result of the decline in out-migration to the oil-rich Arab states (ORAS) in recent years.

4. The "Brain Drain," especially for highly-skilled and professional workers, which continues to rob valuable human talents needed in Jordan.

Since the early 1950s, Jordan's development efforts have been aimed at creating job opportunities and facilitating the movement of workers to areas in which job opportunities exist. In his opening speech to the Jordan Development Conference in 1972, this policy was emphasized by his majesty King Hussein when he stated, "Our plan envisages more opportunities of employment. Work is a blessing and an honor as much as it is a human right and a national duty. . . ." (Jordan National Planning Council, 1972, p. iv).

Jordan's goal of increased employment opportunities has been hampered by a variety of difficulties and challenges, such as the continuation of the Arab-Israeli conflict, the rise and decline of oil prices, the Lebanese crisis, and the Iran-Iraqi War. All these events have had a remarkable effect on the development of Jordan's and the region's labor market. There have been a series of debates calling for

more effective policies controlling foreign workers in Jordan. In order to achieve the goal of providing work for Jordanians, Jordan's policy makers and planners are currently attempting to balance the labor supply with the demand for workers, an attempt which is considered to be one of the main objectives of the 1986-1990 Plan for Social and Economic Development.

Statement of the Problem

Theoretically, Jordan follows the ideology of a free market economy. In fact, however, its economy has evolved into a mixture of laissez-faire and governmental management (Day, 1986, pp. 109-111). Therefore, the labor policy is affected by both economic conditions and governmental policies. Although the private sector plays an important role in the economy, the government controls, owns, or owns shares in most of the important economic firms. More than 40 percent of Jordan's entire labor force is employed by the government. Jordan's general economic policies, including labor policies, permit workers the freedom to work where they desire and to migrate to any destination of their choice (Share, 1983, p. 183).

This open-door labor policy makes it possible for the surplus of highly educated, and recently the unskilled Jordanian workers, to find employment in the Oil Rich Arab States (ORAS). This outflow of migration benefits the

economy and serves as a safety valve to release social and political tensions. The migration of Jordanian workers to the oil-rich Arab states has spurred Jordan's economy and resulted in the importation of foreign workers to substitute for Jordanian workers. Jordan's unique situation made the labor force interrelated with emigrating Jordanian workers abroad and with the immigration of non-Jordanian workers. In addition, the Jordanian labor market is influenced by internal as well as external factors.

The problem policy makers face in setting labor policy is to determine what specific internal and external factors affect the labor force and how the labor force is related to the country's economic development. Without knowing which factors influence the labor market and the weight of their influence, it is difficult to enact and implement a labor policy which will insure a high level of employment and economic development.

This research will examine the labor market and policies in Jordan during the period from 1961 to 1987, in order to identify the determinants affecting the labor force.

Purpose of the Study

The primary purpose of the study is to identify the factors affecting the Jordanian labor market in the last three decades. Specifically, the study hopes to accomplish the following:

1. To examine the labor market and policies in Jordan giving consideration to the changing conditions throughout the region;
2. To identify the determinants affecting employment and to quantitatively estimate the relative significance of each; and
3. To compare labor policy outcomes during two periods between 1961 and 1987.

Significance of the Study

The last two decades have demonstrated the increasing economic interdependence in the Arab labor market and also revealed that the labor force is influenced by more than just economic factors. Political relations between the various Arab countries are major determinants controlling labor migration. As long as the Arab world is divided among the many nation states and there is no effective regional agreement, each state will take action to protect what is considered to be in its vital economic interests.

In order for Jordan to ensure its economic development and full employment for its citizens, it is important that policy makers understand how Jordan, in the pre-oil boom era had met internal and external challenges and how it can meet future challenges when it is expected to have an even larger surplus of labor are questions of central concern for this study. To complete the study, it is necessary to understand

and weigh the influence of various internal and external factors on the labor market.

To date, no study of Jordan's labor market identifies these factors or attempts to evaluate their impact on the economy. Unlike other studies of Jordan's labor market, this exploratory research proposes to diagnose and quantify the determinants affecting the labor force and how labor policies relate to development. A quantitative study of the impact of these factors hopefully will provide policy makers and planners of human resources in Jordan greater insight into the elements of labor policy. Hopefully, the study will also attract the interest of Middle Eastern scholars and governmental policy makers concerning the importance of labor policy and economic development on the stability of the region. The study hopes to demonstrate the importance of labor as a factor in the interdependence between the Arab countries and to stress the significance of the Arab labor market and a regional labor agreement as a solution for unemployment in the Arab countries.

Public Policy: A Theoretical Framework

Public policy is not a new concern. It is as old as the study of government itself, perhaps even older, if one considers actions of tribal groups and pre-government collective arrangements for the sharing of water, land, crops, and defense. Throughout history, public policy

making has been a central concern of social philosophers and practical politicians. The writings of almost all political philosophers such as Aristotle, Machiavelli, Burke, and Camerlists, the federalists, and W. Wilson, as well as the many political leaders such as Babur, Richelieu, Frederick the Great, Mitternich, Bismarck, Roosevelt, and Churchill, to name a few, have written about public policy (Dror, 1968, p. 73).

The early fathers of the American political science discipline, however, did not focus on public policy. These political philosophers were concerned about constitutions, institutions, and structures of government. They described the law and institutions and argued over the best form of government, but did not consider policies or the linkage between institutions and the content of public policy. Only recently did their heirs in the political science tradition consider public policy. Since the World War II, modern behavioral political science focused on individual and group behavior in determining how public policy is made. The linkage between individual and group behavior and the content of policies, however, were largely ignored (Dye, 1975, pp. 1-19). The reasons for the behavioral scholars' emphasis on process over content, as stated by Austin Ranney, was that behaviorists believed that focusing on content would divert attention away from the most important aspect, the value-free study of political science.

Furthermore, studying policy content would require that political scientists become expert participants in a policy area, thus losing the essential detachment of a value-free observer (Ranney, 1981, pp. 9-12).

It was not until 1951 when Harold Lasswell, the president of the American Political Science Association, called attention to the need for policy study that the discipline began to address policy directly (Lasswell, 1951). Although there have been a number of works focusing on public policy in the last three decades, progress continues to be limited by the absence of a conceptual framework. Today the emphasis of political science has shifted from behavioralism to post behavioralism. As a part of the change, public policy and its consequences have again emerged as a subject worthy of study.

The new post-behavioralism approach has led to a number of new works in public policy. Since World War II, the increasing involvement by governments throughout the world in the economic and social spheres has caused greater attention to be focused on public policy from both scholars and government officials. More and more political scientists, economists, and other social scientists study public policy in order to aid policy makers in dealing with complex problems rather than purely for theoretical explanation.

This new interest by scholars in public policy began with the introduction of various administrative approaches

based on the so-called rational model of decision making. Simon's rational decision-making approach and the introduction of the Planning, Programming, and Budgeting System (PPBS) in the late 1960s stimulated a number of studies on policy analysis and evaluation. Policy analysis attracted scholars to the study of policy processes and how policies were made, implemented and evaluated. These scholars sought to discover what governments do, why they do it, how they do it, and what difference it makes.

Despite this interest in the study of policy, the combined efforts of several disciplines have not produced a general theory or framework for the study of public policy. Each new study seemingly adds to the methodological, conceptual, and ideological disagreement in the field (Doern and Aucion, 1979, pp. 1-3).

A number of approaches which have emerged from various works might be categorized in the following fashion:

- (1) those focusing on the process of making public policy,
- (2) those concerned with the environment of policy, and
- (3) those examining the content or impact of policy.

Studies Focusing on the Process of Policy Making.

Studies of the process of public policy making have utilized many of the main political science approaches such as the institutional, group, and elite theories, as well as rational and incremental decision theory. None of these

approaches, however, considers the content or impact of public policy.

Institutional studies have dominated the political science discipline throughout much of history. Studies using the institutional approach however, have predominantly concentrated only on the role of institutions in the process of policy making and how policies are formulated. Seldom do they analyze policy content or the linkage between the structure of government and policy itself.

Similarly, the group approach has been used to study policy making. The aim of this approach is to discover how the competing groups in the political arena affect policy (Anderson, 1975, p. 19; Bill and Hardgrave, 1973, pp. 117-141; Almond and Powell, 1978, p. 204). Likewise, the elite approach intends to answer who has power or influence to shape public policy, not the nature of policy.

After Simon's seminal work on decision theory, scholars began to study how public choices were made through rational decision theory. Note, however, again the emphasis was on the process of decision making, not on policy per se. Game theory is another attempt to explain how policy choices are made based on an assumption that rational theory will be used in making policy choices. Once again the entire emphasis is on policy process not on policy content.

Another decision-making theory, incrementalism, has been used to study how decisions are made. In this

situation, public policy is considered to be a continuation of past activities with only slight or incremental modifications. Decision makers, according to the view, "muddle through" the political processes with a limited number of alternatives instead of investigating all possible alternatives as called for in the rational approach. As in all of these approaches, policy process is the center of concern for incrementalists.

Other studies of the policy processes have examined the stages of decision making. In this approach, policy process is viewed as a series of sequential steps or stages--namely agenda setting, policy formation, policy adoption, policy implementation, and policy evaluation. Content of policy or its impact is not the main concern of this approach. Similarly, the decision process has been divided into what H. Lasswell called functional processes. He presents seven functional categories in the decision process: namely intelligence (information gathering), recommendation of alternatives, prescription (how and by whom the alternative will be chosen), invocation (deciding whether the new issue will be applicable to the old rules and laws or new ones will be needed), application, appraisal, and termination. This approach, he argued, permits comparative studies of policy making. Once again no consideration was given to what policy should be enacted under various circumstances by policy makers or the impact of policies adopted.

The Marxist theory of political economy has also been used by some to explain public policy. Policy, as seen in this approach, is the product of conflict between classes and how policy is shaped by the dominant class. Marxist theory pays great attention to the role of ideology in shaping public policy (Doern and Aucion, 1979, pp. 9-13). Dependency theory is one of the best known theories that explains the making of policy according to the role and interest of the dominant class (Hughes and Mijeski, 1984, pp. 17-19).

Studies Focusing on the Environment of Policy.

In the late 1960s, many scholars became increasingly dissatisfied with approaches used by behaviorists in the study of political science. The new movement, labeled post-behavioralism, argued that the call for pure science or value-free political science had caused political science to become irrelevant to the political problems of the world (Bill and Hardgrave, 1973, pp. 12-18). Post-behavioralism stressed that values and policies are important factors in shaping the political systems, and, therefore, are important to study. This approach stimulated many scholars to search for determinants such as culture, religion, organizational arrangement, and others which shape public policies. More attention was given to the environment of policy making.

According to Dye (1975), environment is anything that lies outside the boundaries of the political system, yet within the same society. Earlier political scientists attempted to identify only the variables affecting policy making within the political system, narrowly defined. They overlooked the importance of other environmental factors which help to shape public policy. As a result, the linkage between environmental conditions and public policy was not fully understood.

Recently, the relationship between various environmental factors and public policy has been studied through an approach known as the Environmental Theory of Policy Determinants. Factors affecting public policies are analyzed by using statistical models. Through this statistical process, it may be determined which factors are most significant in affecting policy. This approach enables scholars to make comparative studies cross political systems or over different time periods (Doern and Aucion, 1979, p. 11). Another approach which considers environmental factors is called the political system approach which relies basically on the systems theory. Public policy is considered to be an output of the political system. It cannot be fully understood apart from the environment, as long inputs, demands and supports, into the political system are generated from its environment. Although system theory raised an important question about the relationship between the political system

and its environment, it did not explain how decision is made and policy is developed within the black box (Anderson, 1975, pp. 18-19). System theorists have said little concerning the impact of culture, values, and attitude on policy making. The new cultural school of organization has recently begun to stress the importance of cultural value on policy making (almond, 1956; Bill and Hardgrave, 1981; Deal and Kennedy, 1982; Dehaven-Smith, 1988).

Studies Focusing on Policy Content.

Economic development of the new nations in the post-World War II period was the central concern of many political scholars. Economic development was seen as the road for political development and stability (Huntington, 1968, pp. 30-45). American foreign policy makers enacted large economic aid programs to promote economic and social development in these emerging nations. Secretary of State R. McNamara's statement in 1966 that "there is an irrefutable relationship between violence and economic backwardness" reflected the thinking of that time (New York Times, May 19, 1966, p. 11).

Although many of the new nations have achieved some economic growth, the majority are still too far behind to be called developed nations. The failure of development plans in the developing countries has attracted citizens' attention to public policies and has generated a new demand to

study the content of public policy to find what needs to be done. The study of public policy in the developing countries is considered by some scholars to be vital for both these nations and the world at large (Dror, 1969, p. 105). Some scholars are searching for an explanation as to why there are such wide variations of development between the developed and developing countries. Other scholars have begun to study the factors affecting what government can or cannot do. Increasingly, it is recognized that the content of policy must match or agree with the cultural values of the society.

Political culture and socio-economic resources are increasingly being examined to explain the differences in the types of policies enacted in various countries and their impact on society. In his article, "Comparative Political System," G. Almond introduced the concept of political culture in his early attempt to offer classification for comparing political systems (Almond, 1956, pp. 391-409). More recently another scholar, Anderson, stated that what is of concern in public policy study is the political culture, the widely held values, beliefs, and attitudes concerning what governments should try to do, how they should operate, and the relationship between the citizens and government (Anderson, 1975, p. 30).

Every society has a culture that differentiates the values and life style of its members from those of other

societies. Therefore, differences in policy content and policy making in various countries can be explained, at least partially, in terms of political cultural variation. Also the behavior of both decision makers and citizens toward public action can be explained in terms of their political culture (Anderson, 1975, pp. 20-30).

The socio-economic resources, as well as the political culture, are also significant factors affecting public policies. Public policies arise from conflict between groups and classes trying to impose or secure their interest through the political system. Conflicts are usually over the economic activities and resources. To a large degree, how a government allocates values depends on the level of development and the availability of resources (Anderson, 1975).

One of the newer policy study approaches, the determinant approach, attempts to discover which factors most significantly influence what kind of public policies will be made. Scholars are interested in discovering whether political structures and processes or socio-economic needs and resources are most influential in shaping public policies (Dawson and Robinson, 1963; Dye, 1966; Fry and Winters, 1970). Other scholars have introduced a wide array of social, economic, cultural, political, and organizational variables in their exploration of what shapes public policy (Dye, 1980, p. 4). These scholars attempt to create causal

models, normally using path analyses, to study the determinants of public policies (Tompkins, 1975).

In addition to these developments within the discipline of political science, other social scholars have attempted to study the impact of public policy on society and individuals, and how society and individuals can influence the policy itself (Grumm, pp. 439-445).

I am interested in discovering the factors shaping the labor force in Jordan and have employed the determinant approach. How this was done is explained in the next section.

Methodology

The proposed study has two interrelated objectives: (1) to describe Jordan's labor market and policies, and (2) to determine the variables affecting Jordan's labor force.

The research covers the period from 1961 to 1987. Taking into consideration that since the 1967 War, when that portion of Jordan called the West Bank was occupied by Israel until the recent declaration by King Hussein in 1988 severing relations with the West Bank officially, the state of Jordan has consisted of the East Bank. Also during this period, a complete economic cycle, including recessions and prosperity, has occurred in Jordan and the region has experienced both stable and unstable political periods.

The labor market and labor policies in Jordan are compared in two periods. The first period, 1961 to 1972, was a period in which Jordan experienced slow and high economic growth and had different unemployment rates. It was also a period with a high level of political instability. Jordan was involved in major war with Israel in 1967 which resulted in the migration of a large number of refugees who had fled from the occupied territories. Further instability occurred as a result of a clash between the Palestinian Liberation Organization stationed in Jordan with the Jordanian authorities.

The second period, 1973 to 1987, was a period characterized by high economic growth and economic recession caused by the rise and decline in the prices of oil. During the period 1973 to 1981, oil prices soared and the ORAS imported approximately one-third of Jordan's labor force to work in developing their countries. As a result, Jordan achieved full employment with less than 2 percent unemployment, and for the first time in its history, Jordan imported foreign workers to substitute for its workers. Politically, this was a period of relative stability. Jordan was not directly involved in any war during this period, despite its support for Syria in the 1973 wars with Israel. The region was relatively stable through this period, except for the Lebanese crisis which started in 1976 as a clash between the local forces in Lebanon. Another factor of instability was

the war between Iraq and Iran in late 1979. However, neither of these regional conflicts directly involved Jordan, although thousands of Lebanese and Palestinians fled from Lebanon to Jordan, especially at the beginning of the crisis.

By 1982, Jordan, as well as the whole region, was suffering from an economic recession caused by the decline in the price of oil. Unemployment in Jordan reappeared again in the 1980s. Demands for Jordanian workers abroad declined and many workers were discharged to return home. At the same time, the lack of job opportunities in Jordan was aggravated by the large number of foreign workers who had been recruited to replace Jordanians going to the ORAS and who remained in Jordan. The economic situation worsened with the continuation of the Iraq-Iran war and Israel's invasion of Lebanon in 1982. Much of the aid that formerly had been sent by some of the ORAS to Jordan as the front-line with Israel was now being diverted to Iraq or to the Lebanese cause.

In each of these periods, the government of Jordan had to respond to the economic and political demands by enacting policies to help stabilize economic conditions and promote employment. A comparison was made of policies enacted in each period. Measurement of the significance of various factors affecting employment was compared during the two periods.

Multiple methods were used to accomplish the two objectives. They are:

1. To describe the development of Jordan's labor market and policies, I used a qualitative method, historical and descriptive methods relying on governmental documents, administration regulations, law, scholarly literature, and other correspondence with key policy makers in governmental agencies and labor unions. The qualitative method was used to describe the structural characteristics of Jordan's economy and was compared to the importance of the various sectors since 1961. Also, qualitative statistics were used to compare the sectoral and occupational distribution of the labor force and policies enacted during the proposed period, 1961 to 1987. In general, a simple mathematical method such as percentages and ratios was usefully applied in the study.

2. To determine factors affecting Jordan's labor force, a quantitative analysis must be used. Several statistical methods, including simple and partial correlation, multiple regressions, and path analyses have been used by scholars studying the determinants and impact of public policy. The last two techniques, regression analysis and path analysis, have been used most frequently because they enable researchers to examine many variables (Dye and Gray, 1975, p. 52).

A multiple regression analysis is used here. The statistical analysis (regression analysis) was based on

archival data compiled and assembled from different published sources (see Data Resources). Two types of data, absolute raw data and percentage data, were used in the statistical models. In order to determine which factors affect the size of the labor force, the following steps were followed.

First step: From information gleaned from the literature and from government documents, various factors affecting the labor force were organized in a four factor heuristic model in an attempt to identify factors affecting Jordan's labor force. As can be seen in Table 1, four clusters of factors are considered to have an impact on the labor force: (1) factors creating demands for jobs; (2) factors affecting job opportunities and the capabilities of creating employment; (3) direct and indirect actions (policies) of government affecting the economy and, as a result, job opportunities; and (4) factors affecting the economy and labor force which are largely beyond control of national decision makers.

Second step: From the heuristic model, twelve factors which are believed to have an impact on the labor force in Jordan have been selected. These factors were treated as independent variables.

The individual variables were selected from the four clusters of factor shown in the heuristic model (Table 1). For instance, the researcher reasoned that population growth

should have an impact on the labor force. Total population, which is composed of the birth rate plus immigration into the country minus the death rate and permanent migration from the country, was used to standardize some of the variables per capita. Similarly, expenditures for education are expected to affect school enrollment and the latter could affect the size of the labor force. Expenditures for education per capita and total school enrollment are therefore included in the model.

From the second set of factors in the heuristic model, that is, factors affecting job opportunities and the capabilities of creating employment, I chose two factors. First, the total investment is expected to stimulate the economy, including the increasing number of jobs. It is assumed that the gross national product affects jobs and employment. Therefore, both the total investment and GNP per capita were included.

The direct and indirect actions of government affecting the economy shown in the third set of factors in the heuristic model provides two variables. The size of the military and expenditures for defense are other variables affecting the economy and the size of employment. The number of military personnel per capita was also included in the model. The number of foreign workers (guest workers) allowed to work in Jordan was tested since they add to the labor force.

TABLE 1
FOUR FACTOR HEURISTIC MODEL

1. Factors creating demand for jobs:

Population:

Total population:

- Population growth (birth rate, immigration, mortality and migration)
- Size of family, number of dependents, average age, dependency ratio, e.g., numbers of workers to total population
- Marriage age, male and female

Education and Training:

- Total expenditures in education
- Number of schools, training centers, universities
- Number of school enrollment
- Number of males and females in school
- Length of school year
- Type of studies, social, hard science, or training and vocational
- Average of student to population

Labor Force:

- Total size of labor force
 - Number of workers abroad
 - Number of non-Jordanian workers
 - Number of employed labor in each sector
 - Ratio of labor force to population
 - Rate of participants in labor force
 - Ratio of dependents to workers
 - Number of males and females in labor force
 - Unskilled, semiskilled, skilled, professional
 - Size of military
 - Retirement provisions
-

- Affirmative actions pertaining to employment of women
- Affirmative action pertaining to employment of Jordanians

2. Factors Affecting Job Opportunities and the Capability of Creating Employment:

- Natural resources available: arable land, timber, fisheries, minerals, water, etc.
- Capital resources of the country: revenues from different resources
- Total investment and investment in various sectors, e.g., manufacturing, agriculture, and services
- Number of businesses
- Energy resources:
 - percentage of energy produced or imported
 - Oil, electricity, water, and solar
- Ability to conduct international trade:
 - Tourism
 - Commercial services
 - Transit

3. Direct and Indirect Actions (Policies) of Government Affecting Economy:

- Programs to stimulate investment (tax break, government loans, import/export regulations, protection monetary control, government/private joint venture, other concessions.
- Expenditures on state operations and economic development enterprises (percentage of total GNP)
- Percentage of labor force
- Expenditure for infrastructure: (road, water, sewer, transportation, etc.) percentage of these in the total budget
- Expenditure on welfare, health--percentage of total budget
- Regulating prices, licensing requirement, import/export regulations, monetary and fiscal policies to regulate inflation/deflation

- Legislation and policies affecting labor force:
- A. Labor demand:
 - Emigration controls
 - Provisions requiring labor intensive projects
 - Wages and incentives
 - National information system for labor force
 - Encourage Arab labor market
- B. Labor supply:
 - Education training
 - Readjusting the educational system to economic condition
 - Readjusting the training to development process
 - Coordination between human resource institutions
- Population:
 - Family planning programs
 - Adjust regional distribution

4. Factors Largely Beyond Control of National Decision Makers:

- Conditions of world economy
- Prices of minerals produced in Jordan, exchange rate of national currency, oil price
- Number of workers needed by ORAS
- Size of remittances
- Size of foreign grants
- Stability in the region and the world: wars, coups, rebellion, terrorist action

Finally, the heuristic model shows a set of factors affecting the economy and labor force which are largely beyond the control of national policy makers, from which five variables are developed. First, it is assumed that oil prices are the major factor affecting economic conditions and job opportunities in both the ORAS and in Jordan.

Secondly, it is assumed the remittances from the Jordanian workers abroad plus the grants in aid to the government of Jordan affect economic growth and employment opportunities. Therefore, oil price, the number of Jordanian workers abroad, the amount of remittances, and foreign aid are all included in the model.

Finally, the political condition of the region affects the economic condition in all countries. Unfortunately, a stability index for Jordan is not available according to Arthur Banks, the author of the Bank data set. In place of the stability index, ten political indicators were assembled from different sources (see Table 24) as a measure of political instability in Jordan for the period 1961 to 1987. The total number of events was used. There is no reason to believe that this measure will differ from an index number. The various chosen factors were defined and abbreviated as shown in Table 2.

The size of the Jordanian labor force was chosen as the main dependent variable. This variable represents the totality of employment in both the public and the private sectors on the economy and was computed as shown in the definition of terms. The twelve variables, which are shown in Table 2, have been perceived to have an affect on the labor force or the total size of employment as shown in Figure 1.

TABLE 2
FACTORS AFFECTING LABOR FORCE (LF)
ON A PER CAPITA BASIS

Factors	Abbreviation
Total population	POP
Total expenditure for education	EXP
Total school enrollment in all grades	STD
Total amount of investment	INV
Gross national product	GNP
Military personnel	MP
Total non-Jordanian worker (guest)	GWF
World oil price	WOP
Number of Jordanian workers abroad	JVA
The amount of remittances of Jordanian workers	RMT
Total foreign aid to Jordan	FAD
Instability	INDEX

Third step: Once we have determined the factors which are believed to affect the labor force, their impact on the labor force (size of employment) was hypothesized as follows.

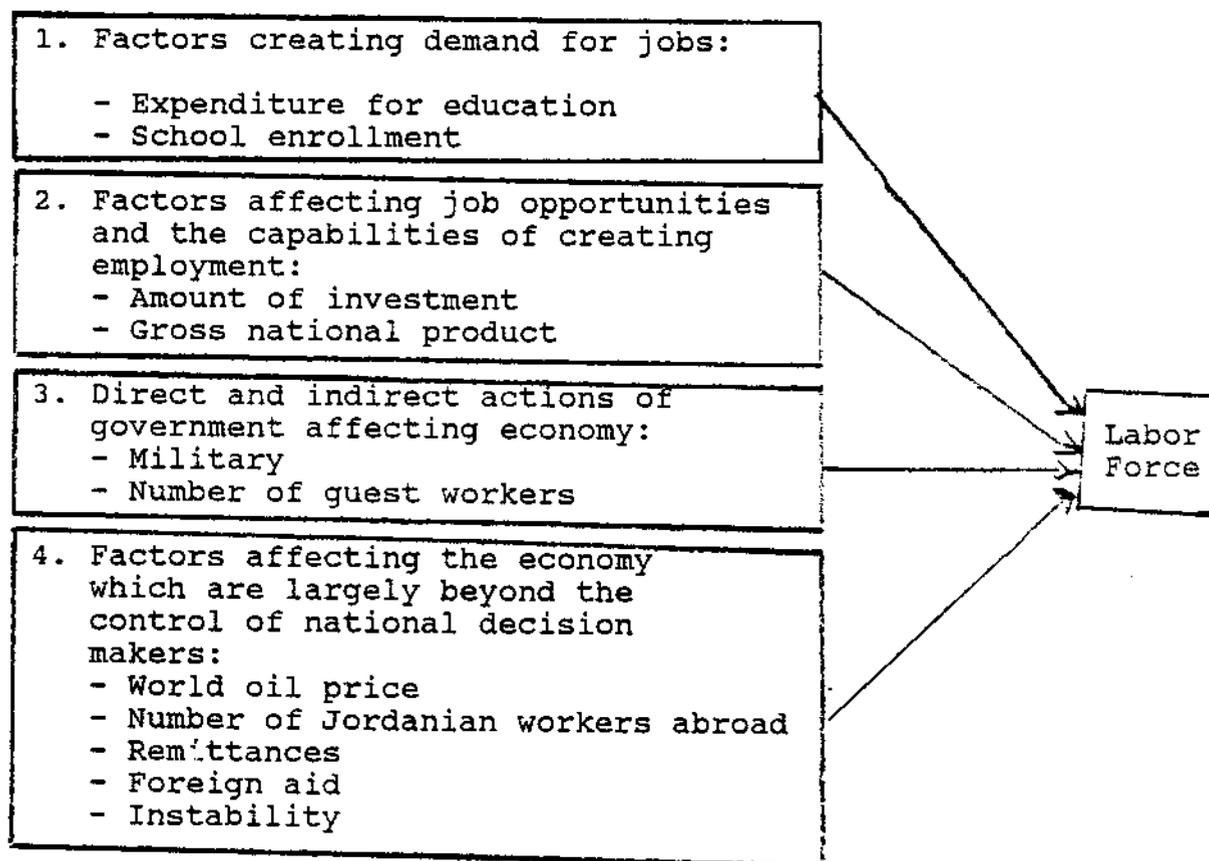
Hypothesized Relationship

1. Gross national product: Gross national product is expected to increase economic activities and level of investment, and thereby increase size of employment.

2. World oil prices: The level of oil prices is expected to influence the gross national product and level of investment in both the ORAS and Jordan, and the consequent increase in job opportunities for Jordanian workers in the ORAS and Jordan as well.

FIGURE 1

FACTORS AFFECTING LABOR FORCE
ON A PER CAPITA BASIS



3. Jordanian workers abroad: The number of Jordanian workers abroad is proportional to the level of oil prices, because increases in oil prices influence economic activities and increase the level of investment in the ORAS, thus increasing demand for Jordanian workers from abroad. This additional demand is expected to increase the size of employment in Jordan. To replace migrants and meet

additional demand which will be generated from investment of migrant remittances.

4. Remittance: Increases in remittances from Jordanian workers abroad are expected to increase economic activities and investment in Jordan and, as a result, augments the size of employment.

5. Non-Jordanian workers (guest workers): *Ceteris paribus*, increases in the number of non-Jordanian workers are expected to decrease the job opportunities for Jordanian workers in Jordan.

6. Educational expenditure: Increases in expenditure for education is expected to increase school enrollment and training programs and, as a result, increase job opportunities.

7. Student enrollment: Increases in student enrollment in schools is directly proportional to the employment level because keeping students in school longer lessens the number entering the labor force, also greater education increases skills and job opportunities.

8. Investment: Increases in the level of capital investments are expected to be proportional to the gross national product and, as a result, increased the size of employment.

9. Foreign aid: Increase in foreign aid to Jordan is expected to be proportional to world oil prices and is

expected to increase Jordan's gross national product and investments and thereby increase the size of employment.

10. Military personnel: Increase in the number of Jordanian military personnel is expected to have a negative impact on the size of employment in the civilian sector.

11. Instability: The level of political instability will be inversely proportional to level of investment, which will affect the size of employment.

Definition of Terms

Since many of the terms and concepts used in this research are not clear or self-evident, the following definitions are used in order that they may be operationalized. Some of these definitions have been used by other writers and were borrowed for use in this research.

Public policy, according to Dye, is what governments choose to do or not to do (Dye, 1975, p. 1), while it is defined by David Easton as the authoritative allocation of values for the whole society (Easton, 1953, p. 129).

Policy content refers to a set of objects that policy is intended to affect, course of events desired, lines of actions or declaration, and actions taken (Ranney, 1969).

Policy process: Actions or interactions that produce the ultimate choice by authorities or a particular policy content (Ranney, 1969).

Policy output: The actual amount of goods and services created or maintained for a target population as a result of policy or administrative actions undertaken for that purpose (Banki, 1986, p. 706).

Policy outcome: The level, scope, or degree to which policy successfully achieves its intended goal or objectives (Banki, 1986, pp. 706-707).

Economic development: The growth in the total economic activities and output of a society. It may be measured by per capita gross national product level of industrialization and level of individual welfare measured by such indicators as life expectancy, caloric intake, and supply of hospitals and doctors (Huntington, 1968, pp. 33-34).

Economic growth: Increase in the country's productive capacity leading to an increase in the production of goods and services. It is measured by the annual rate of increase in gross national product (Shafritz, 1985, p. 164).

Labor force: The totality of employment in both the public and private sectors who participate in the production of goods and services. Therefore, both terms, totality of employment and labor force, are interchangeable in this study to refer to all active employees who are engaged in productive domestic activities. The employment figure includes only domestic employment, excluding the armed forces, the migrants and the unemployed.

Labor policy: Any direct or indirect actions of government which respond to changing conditions in the labor market and which are primarily aimed at achieving a balance between labor supply and demand either by increasing job opportunities through creating new jobs or moving workers to locations where jobs are available.

Size of employment of labor force (EMP): The totality of employment in both the private and public sectors in Jordan. $\text{Size of employment} = \text{total labor force} - \text{Jordanian workers abroad} - \text{number of unemployed}$.

Population (POP): The study considers two figures of population. (1) The total population of both the East and the West Bank of the Hashemite Kingdom of Jordan during the period 1961 to 1967, and (2) the total number of the population of the East Bank alone after 1967.

Total school enrollment (STD): The total school enrollment of all grades in both the private and public sectors were included plus students in vocational schools and the universities. School enrollment did not include students in military schools, or military personnel in training missions or individuals attending literacy classes.

Investment (INV): The total amount of expenditure devoted to producing or maintaining goods which are not intended for immediate consumption. These investment projects may take the form of adding both physical and human capital as well as inventory in Jordan.

Gross national product (GNP): The value of all goods and services that are produced in the economy during a fiscal year through economic activities.

Non-Jordanian guest workers (GWF): The total number of non-Jordanian workers or foreign workers from other countries who have paying jobs with Jordan's government or Jordanian firms under long- or short-term employment. Excluding non-Jordanians who are students, workers with foreign firms in Jordan, volunteer workers, foreign training mission (if paid by their government), political asylum refugees, and immigrants for the purpose of residency.

World oil price (WOP): World oil price is the announced official oil price by oil-producing exporting countries (OPEC), since the market oil prices differ depending upon the country making the sale.

Jordanian workers abroad (JWA): The total number of the Jordanian workers who leave the country for the purpose of taking a paying job with a foreign country or a foreign firm for a long- or short-term period of employment, excluding those who leave the country for studying abroad, non-payment jobs (volunteers), Jordanian training missions abroad, political refugees, and others who leave for permanent migration in other countries.

Remittance (RMT): The sum of money remitted from Jordanian workers abroad to their relatives in Jordan either as cash, check, or other negotiable form as reported by the

Central Bank of Jordan. Excluded are gifts or other types of goods for personal use or household items. Remittance in this study represents the net remittance after abstracting the remittances of non-Jordanian workers to their relatives in their home countries or outside Jordan.

Foreign aid (FAD): Any capital inflow or other assistance given to a country which has not generally been provided by a natural market force. In Jordan's case, foreign aid consists of official transfers from foreign government and international and/or foreign agencies to the government of Jordan.

Military personnel (MP): The total number of military personnel (Army, Air Force, Navy) who are making the military their profession or who are serving the National Services in any of the military branches. Excluded are any para militant, public police, civilian militant, or secret police because of the lack of data and the nature of their duties to deal with local affairs which were not affected by the stability or instability of situations in Jordan.

Data Collection

The needed data regarding the Jordanian and Arab labor markets were compiled and assembled from sources published by national, regional, and international organizations. Data regarding Jordan's labor force, total size of employment, number of military personnel, number of students,

educational expenditures, number of Jordanian workers abroad, and the number of guest workers in Jordan were obtained mainly from documents published by various Jordanian administrative agencies. Also, information pertaining to Jordan's economic activities, such as gross national product, investment, remittances, foreign aid, and allocations of resources were taken from reports by specialized Jordanian agencies. Jordanian official documents, administrative regulations and public laws, statistical abstracts, reports and publications concerning human resources, and economic activities were considered primary sources.

Information related to the Arab labor market and Arab economic development and integration was obtained from Arab League publications. International sources, such as the United Nations publications, the International Labor Office, and World Bank provided data concerning socio-economic development in the developing countries including the Arab states. These sources provided data regarding international labor migration in the Middle East and the gross national product in the Arab countries. Also data pertaining to labor's remittances, foreign aid, and world oil prices were found in these sources. Other information, data, and materials from historical and scholarly literature on human resources, labor market, and international migrations were found in various scholarly publications in different specialized magazines.

Limitation of the Study

Gathering data in most of the developing countries is not an easy process, since there is no single source of statistical data, and Jordan is no exception. In Jordan, as in many other developing countries, one policy issue may be handled or managed by several agencies, each with different methods of collecting and reporting information. As a result, data frequently differ from one source to another.

In addition to this research problem, much data regarding Jordanian and Arab labor markets are not available, or the figures from various sources conflict. An attempt to overcome these limitations is made by adopting the following methods of collecting data:

1. The most primary source of data is chosen when it is available; otherwise data from regional or international organizations are used. Data published by the agencies directly administering programs, such as the Ministries of Education, Labor and Planning were chosen as primary sources of information concerning their activities. For instance, the total number of students and total amount of expenditures for education were gathered from Jordan's Ministry of Education publications and annual reports. Also, the size of the labor force, employed and unemployed persons, was obtained from the Royal Scientific Society publication, the Ministry of Labor, and Civil Commission Service. Thus, the number of unemployed was estimated from the number of job

seekers' applications to the Ministry of Labor and to the Civil Commission Service.

In the same method, the number of Jordanian workers abroad was taken from the Ministry of Labor reports and the Royal Scientific Society reports, while the number of foreign workers in Jordan was considered as the number of work permits issued by the Ministry of Labor to those foreign workers. Also, allocations of resources for investment were taken from the economic and social development plans issued by the Ministry of Planning.

Data published by specialized Jordanian agencies, such as the Central Bank of Jordan, Civil Commission Service, and Department of Statistics also were considered as primary sources, or whenever there was a conflict with data reported by the administrative agencies. In instances where the specialized agencies have a major responsibility for gathering official reports on matters, such as the gross national product, investments, foreign aid, remittances, and population, these data were taken from these specialized agencies.

Data from research and educational institutions, such as the Royal Scientific Society, Jordanian universities, and public administration institutions, were considered only if they agreed with data published by the responsible administrative agency or data only collected and available from these institutions. As an example, the size of total labor force, the number of employed and unemployed persons, was

obtained from Royal Scientific Society publications which agreed with the figures reported by the Ministry of Labor.

2. Regional and international organization publications were used. For instance, data related to the Arab states, such as the gross national product, number of foreign workers, international labor migration, and remittances were taken from the Arab League, United Nations, and World Bank publications. Also, other specialized magazines were used to gather this type of data, since there were no primary sources kept by Jordanian agencies.

3. A combination of sources were used to obtain data. For instance, data for world oil prices were gathered from the Central Bank of Jordan reports, since it is the Jordanian specialized agency responsible for gathering this type of information. Also, the oil producing exporting countries (OPEC), OPEC Annual Statistical Bulletin, and other International Energy Agency publications were used. World oil prices represented the OPEC official prices, because the market oil prices differ according to the country making the sale.

According to this procedure of collecting data, different sources were used to gather the number of Jordanian military personnel, such as the Jordanian military magazine published by the Jordanian Military General Command. In addition to this source, a variety of magazines were used to obtain the data for this variable.

In the next chapter we turn to the relevant literature on the labor force and labor policies.

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CHAPTER II

REVIEW OF THE LABOR POLICY LITERATURE

A nation's economy has been described by Lance Davis as "a huge machine that devours natural resources, labor, and capital, and turns out the multitude of goods and services that make the gross national product" (Davis et al., 1972, p. 12). Economists further contend that for the economic machine to function efficiently, it must have an adequate supply of three essential inputs: manpower, material or natural resources, and money or capital.

Under this analogy, the labor force is a supplier of one of the most important inputs of production, but it is also a user of the outputs as a consumer of goods and services. The labor force, therefore, is vital to the economy, both as a supplier and a consumer. A shortage of any of the three factors of production injures the economy, but a shortage or surplus of labor injures the economy in both the input and output stages (Darcy and Powell, 1973, pp. 148-152).

Governments often intervene through enactment of various policies in an attempt to ensure the availability of a suitable mix of these economic factors. Studies of how governments intervene in the labor market basically coincide

with the development of economic thought. Labor studies tend to reflect the dominant views about the determination of social policies, conditions of the economy, and the beliefs about government intervention in economic affairs. The following pages include a brief presentation about the development of economic thought and the place of labor in the economy.

Labor in Economic Thought

Since ancient times, agriculture has been a dominant economic activity. Land and agricultural labor in pre-industrial times were the most vital factors to the economy. Land was recognized to be the main source of wealth and power. Labor had little status, since labor consisted mostly of slaves, serfs, and war prisoners. The structure of the social system dictated labor's place and its significance at the bottom of the socioeconomic ladder rather than stressing its economic role (Wren, 1979, pp. 33-41).

A feudal social system prevailed in Europe from the fall of the Roman Empire in 476 A.D. until the fall of Constantinople in 1494. The feudal social structure divided society into two classes: the feudal landlords and the landless tenants. During this epoch, national authorities were weak, and kings were not in a position to enforce laws or control the feudal lords. Landlords were, in fact, largely independent to rule their properties as they saw

fit. Much of the labor force was bound to the land under this system (Srivastava, 1965, pp. 11-31). The main concern of the feudal landlords was only to have enough serfs to work the land. Ensuring the survival of their peasants by providing them enough food to eat and protecting them from attacks by other feudal forces or barbarians were about the only concerns these landlords had about labor (Jaffe, 1968, pp. 570-572).

Mercantilism Thought.

Significant changes occurred in the economic system of Europe between the fifteenth and eighteenth centuries as a result of the Renaissance, the explorations of the New World, and the emergence of strong national entities, the nation state. The Renaissance weakened the church, new technology helped break up the feudal system and helped establish the strong national governments. The exploration and discovery of new land created new routes, new products, and an international market. The new international market led to a new way of thinking about economics known as mercantilism (Srivastava, 1965, pp. 20-25).

The new mercantilistic thought rested on five concepts, all of which sought to justify the replacement of an agricultural-based economy with an exchange economy fostered by commercial activities. According to Stark (1944),

1. The welfare of a nation and health of its national economy depends upon the increase of population and likewise,
2. upon the increase of the mass of precious metals in the country.
3. Foreign trade must be made as active as possible, for if its balance is favourable it becomes most important.
4. Commerce and industry are more important as branches of the national economy than agriculture.
5. The state has the mission to foster national welfare by an appropriate economic and power policy (pp. 8-9).

The new economic thought of mercantilism encouraged population growth for two purposes. One was to provide soldiers during times of war, and the other to increase the number of workers for production. Cheap labor was considered to be necessary to increase production and enable home production to compete with that of other countries. Therefore, mercantilistic thinkers suggested the freedom of immigration and the restriction of the migration of skilled laborers. Also mercantilistic thought encouraged welfare programs for the poor because such programs would increase the population and therefore the number of laborers (Wren, 1979, pp. 35-40; Viner, 1969, p. 438).

The new economic thought also advocated governmental intervention into economic affairs. According to this doctrine, national wealth requires the government to finance, protect, and regulate private economic activities (Bell, 1967, p. 53). Proponents of mercantilism were particularly interested in how nations produce wealth. Two schools of mercantile thought, the British and the French,

debated over the source of wealth. Both schools considered the factors of national wealth to arise from the relationship between land and labor. According to the British school represented by William Petty (1693), "Labor is the father and active principle of wealth, as lands are the mother" (Srivastava, 1965, p. 41), while the French school, represented by Pierre Boiswillebert (1695), emphasized land over labor as the main source of wealth. Both groups of mercantilists encouraged government intervention to regulate and control the economic activities of traders and emerging commercial and industrial interests in order to protect the economy from the selfish individualism of those who could misuse the nation's resources (Chilcote, 1981, pp. 405-411).

The mercantile economic system, however, recognized the importance of the market mechanism in the allocation of resources, including labor. Prior to the rise of mercantilism, allocations of resources were made either according to tradition or by command. Mercantilism merged two beliefs: government should intervene to promote the national wealth in view of the external competition of other nations, and the market mechanism would allocate economic factors within nations (Heilbroner, 1962, pp. 10-16).

Classical Thought.

Mercantilistic economic philosophy led to a host of economic regulations which in turn led other economists such

as Quensay, Smith, Malthus, Ricardo, and others to call for the abandonment of governmental regulations. Instead, they urged reliance on the market mechanism for the allocation of resources (Malthus, 1971; Quensay, 1968; Ricardo, 1943; Smith 1967).

The early capitalists called for a laissez-faire system in which government should let the mechanism of the market operate without intervention. Smith, according to Wren (1979),

proposed that only the market and competition be the regulator of economic activities. The invisible hand of the market would insure that resources flowed to their best consumption and their most efficient reward. Economic self-interest of each person and nation acting in a fully competitive market would bring about the greatest prosperity of all (p. 39).

Although the early capitalists agreed that governments should not intervene in the economy and upon the importance of the market mechanism, they differed in their definition as to the source of wealth and the degree of labor's contribution to this wealth. For Quensay, the wealth of nations is not the gold and silver generated from trade, but it is the surplus produced in agriculture, and therefore land is the main factor of production. Smith and the early British thinkers about capitalism considered labor to be the most important factor (Chilcote, 1981). Smith called for the division of labor to increase their productivity and to meet the need of the expanding economy (Barber, 1967, p. 31). According to Smith, at that time labor was considered the

measure of value. The value of a commodity is determined by the amount of labor involved in its production (Smith, 1967).

Later in a restatement of this thought, however, Smith revised himself and argued that the value of a commodity was its cost of production, which consisted of all factors of production, land, labor, and capital. But he then argued that capital investment was the essential factor in the formation of a nation's wealth. Smith also argued that the market place plays a role in pricing the factors of production. Therefore, he opposed welfare programs by the government because such programs affect the mobility of labor. Smith saw the government duties as being only to protect the country against foreign rivals, to enforce the law and justice, to establish and maintain public work, and to provide free education for the young. He also stressed that it was the role of government to promote harmony of interests between laborers and employers in order to increase the national wealth (Barber, 1967, p. 48; Smith, 1967; Srivastava, 1965, pp. 4-91).

Robert Malthus, who wrote at the turn of the eighteenth century during a period of great economic hardship for workers, believed that excessive growth in population was the cause of economic problems. In his essay, The Principle of Population, he stated that when unchecked population increases in a geometrical ratio, while subsistence only

increases in an arithmetical ratio (Malthus, 1972, pp. 6-13). He further argued that the wealth of nations depended on limiting population growth and not having more population than was needed. Population growth was seen as a threat because it would increase labor supply and lower the level of wages. Malthus therefore opposed welfare programs, not just because they affected the mobility of labor, but also on the ground that such programs reduced workers' incentive to work and encouraged the poor to have more children (Barber, 1965, pp. 64-94).

Malthus' dire prediction for workers was to be echoed by other writers of that period. For instance, in 1817 David Ricardo began his work by pointing out the importance of agriculture to produce food for the expanding population. However, Ricardo did not believe that agriculture was the most productive sector of the economy. Commerce and industry were seen to be the most productive sectors, while capital accumulation was considered the main source of wealth. The value of a commodity, according to Ricardo, was measured by the amount of labor and capital involved in its production (Barber, 1967, pp. 76-79).

According to Ricardo, wages for labor ultimately were set by supply and demand, even when the level of wages fell below the subsistence level. Although there might be what he described as a natural price for labor which would enable laborers to survive, the market alone would establish wages.

From this, he concluded that government should not implement welfare programs and should not intervene in economic activities (Ricardo, 1943).

Writing in 1848 after the changes caused by the Napoleonic Wars and their aftermath had passed, John Stuart Mill focused on the distribution of wealth between social groups. Mill saw that the economic system of his time was giving too much to the already wealthy and too little to the poor and the working majority, In his Principles of Political Economy, 1848, he criticized the classical economic thought that inequality in the distribution of wealth was controlled by natural economic laws. Instead, Mill argued that

the natural economic laws controlled the economic production . . . , while the shares of output that shall be distributed to the people severally is a matter for entirely free, collective, human choice or decision (Taylor, 1960, pp. 249-253).

In his view, the primary agents of production were labor and natural resources. Capital was a significant factor utilized to employ these agents. Laborers were classified as productive and unproductive workers. The productive laborers were defined as those who were employed in creating permanent utilities, whether embodied in human beings or in any other animate or inanimate objects, while the efforts of the unproductive ones ended in immediate enjoyment without any increase of the accumulation of permanent means of enjoyment. Mill took the idea of productive labor to call for the freedom of slave labor, since they will be more

productive. In another contrast to the classical economist, Mill called for governments to play an active role in the economic activities, such as population growth, wages, organizing laborers, and encouraging copartnerships between capital and laborers (Mill, 1909).

Socialist Thought.

As a result of technological advancement, by the middle of the nineteenth century control of production was in the hands of a relatively few owners. Unlike Adam Smith's eighteenth century description of free laborers working with their own tools, increasing number of workmen in the mid-nineteenth century were forced to work in another man's factory and were bound to machines belonging to the factory owners. During the industrial revolution, capital replaced workers as the source of wealth and the measure of value. The relationship between labor and capital had been completely transformed by the separation of workmen from the means of production (Stark, 1949, pp. 20-39).

In the nineteenth century, Adam Smith's emphasis on a harmony of interest between labor and capital was largely forgotten and increasingly there was conflict between the capitalists and the new working classes. Capitalist governments avoided intervention in the struggles between labor and capital. Capitalist philosophy permeated the entire culture, and the dominant churches even developed doctrines

to justify inequality of wealth. Some theologians argued that wealth and poverty were of God's doing, and evidence of His favor or disfavor. Thus, clergymen were mandated to be indifferent to the poor, since to seek to assist them would defy God's eternal plan (Viorst, 1971, pp. 8-9).

As a result of these developments in the first half of the nineteenth century, socialist thinkers began to challenge the rationale causing the great inequalities in wealth and to offer alternatives to reduce the inequality and accompanying misery of the working class. Some liberal churchmen and socialist thinkers such as Saint Simon and Robert Owen and their followers, called for the improvement of working conditions, and emphasized the role of labor in the production process. They pointed out that investments in workers could lead to returns greater than similar investments for machinery (George Jr., 1972, p. 63). St. Simon and Owen called for a partnership between labor and capitalists to bridge the gap between social classes. Social transformation, according to these early social idealists, was to occur as a result of the influence of good will, morals, and religion (George, Jr., 1972, p. 63).

The utopian thinking of these early socialists was rejected by Karl Marx in the latter half of the nineteenth century. Marx, a radical socialist, believed that human behavior and the evolution of society could be explained in terms of the mode of production. Relying on the concept of

dialectical materialism, Marx explained how one social group had exploited another throughout history. He argued in his 1848 work, the Communist Manifesto, that social systems evolved through such historical stages as feudalism, in which landlords exploited peasants, to capitalism, where the bourgeoisie is exploited by the proletariat (Beer, 1955, pp. 8-9).

According to Marx, laborers were not only the most important social class, but the source of wealth and value. Capitalists exploited laborers by not paying them their full value. "Wages do not pay the worker the full value of his product," Marx argued, "but only the typically lesser value of his subsistence." His work may embody ten hours of labor, but his subsistence is only five. Marx designated surplus value as the difference between wages and the value of product. This surplus value, he believed, was the only source of profit, interest, and rent. Marx predicted that the miseries of laborers, or the proletariat, as he called them, would end only after a revolution by the proletariat and the establishment of public ownership of the means of production in a stateless, classless society. (Spiegel, 1971, pp. 469-480).

Neo-Classical Thought.

Despite the dire prediction by Marx of increasing misery for workers ultimately resulting in a class

revolution, significant changes occurred in the economic environment of the Western societies in the second half of the nineteenth century. These societies enjoyed a high rate of economic growth, and, although economic corporations grew greatly in size and capacity, there was an increase in the standard of living for all groups, including workers. Labor unions also emerged in this organizational revolution to resist the economic powers of the corporation and to alleviate the hardship of workers. These economic changes required a reorientation of classical economic thought.

The neo-classicists sought to provide the new economic orientation. Instead of emphasis on capital accumulation as the source of wealth and economic growth, the neo-classicists concentrated on the role of the market mechanism in the allocation of economic resources and the influence of consumers and producers on behavior of the market system (Barber, 1967).

A leading neo-classicist, Alfred Marshall, argued that the market system is influenced by the rational behavior of consumers and producers in the marketplace. The price of goods is determined by demand and supply in the market, and the value of goods stems from the satisfaction of consumers. The marginal utility of goods ultimately determines the market price, according to this thought. Even when there is a shortage of goods, it does not raise prices unless consumers feel they must have the goods (Marshall, 1961).

For the neo-classicists, the factors of production consisted not only of land, labor, and capital, but also what they considered the most important factor: the skills of management. The factors of production are compensated, according to their view, by supply and demand, plus their contribution to the production processes. Unlike classical economic thought, neo-classicist writers argued that governmental interventions in economic activities could be beneficial to all of society (Barber, 1967, pp. 163-221).

In the early twentieth century, the time neo-classical economic thought flourished, Frederick Taylor was espousing the so-called theory of scientific management which proposed that there was one best way of doing work. This machine-like view of organizations perceived workers to be a part of the machine and were to be motivated mainly by economic factors, rewards, or sanctions. Workers, like any part of a machine which failed, could be fired and replaced with new workers capable and willing to do the job, since there were no governmental policies protecting labor (Wren, 1979, pp. 119-157).

The labor movement in the United States and Western Europe was stimulated in part by the resistance to the increasing harshness of work caused by the speed-up in the assembly lines as a result of time and motion studies undertaken as a part of scientific management (Perlman, 1968, pp. 517-523).

Keynesian Thought.

Crises in the first half of the twentieth century, such as World War I and the Russian revolution, followed by the world-wide depression in the 1930s, shook the economic environment of the Western world. World-wide unemployment mounted to an increasingly high level as economic activities declined. The severity and persistence of the depression challenged the neo-classical economic assumptions that full employment was the normal operating level in a nation, and that the economic system itself was self-adjusting throughout the economic cycle. The continuing world-wide unemployment of the 1930s clearly demonstrated that the economic system was not self-adjusting in a severe depression (Barber, 1965, pp. 224-225).

Lord Keynes argued that the classical and neo-classical economic assumptions concerning the capability of the market were inadequate, and that governmental actions in the economy were needed to assure the employment of all factors of production. He concentrated on the determination of the levels of national income and employment, which he believed were established by the level of investment. Since not all capital savings were returned as investment, the economy inevitably would decline unless government intervened. In order to assure continued growth, the government must preserve the economic well-being of the nation by controlling the flow of money and amount of investments. During a

depression, governments should invest public monies to encourage economic growth and employment. During a period of inflation, the government should reduce governmental expenditures and raise taxes. Monetary policy, interest rate, and governmental fiscal policies are to be used, according to Keynes, as instruments to control the economic cycle and thus assure full employment (Keynes, 1935).

In addition to his views regarding the government's role in maintaining economic stability and full employment, Keynes recommended a system of flexible wages and viewed labor unions as performing a salutary role in economics. For him, laissez-faire economics were no longer adequate to ensure the full utilization of productive resources. He called for government to play an active role in the economy so it could achieve its full potential (Keynes, 1935).

The Keynesian revolution dominated economic thought from the 1930s until recently. Governments throughout the world created central banks, enacted regulatory measures, and pursued fiscal policies designed to stimulate the economy and to provide full employment.

In the 1970s and 1980s, the Keynesian answers did not appear to work because world-wide nations simultaneously suffered the ills of both inflation and unemployment. In their desperate search for solutions, classic and neo-classic economics were resurrected in an attempt to provide a paradigm for meeting today's economic problems (Almond and

Powell, 1978, pp. 369-372; Myrdal, 1957, p. 6; Todaro, 1978, p. 15).

Recent Theories on Human Resources and Manpower Development

As the literature review indicates, most writings about labor from the time of Adam Smith have focused on economic factors. The main theme of these writers was to employ the various factors of production, including labor. Few of these writers stressed other aspects of the work place, and generally they did not explore the complexities of labor or the labor market (U.S. Department of Labor, 1975, pp. 10-11).

Recent writers from different disciplines other than economics, such as sociology, political science, psychology, education, and social work, as well as economics, have sought to understand the labor market from a social, psychological, organizational, informational, and cultural perspective (Darcy and Powell, 1973, pp. 57-65). This new interest in human resources since the end of the second world war has increasingly focused attention upon such matters as manpower in developing nations, human resources, and industrial relations. Some of this research is of major concern to this dissertation and the following traces its development.

Labor Policy and Development in Developing Countries.

In the immediate post-World War II period, economic development was a central concern throughout the world. It was assumed that economic development would solve most, if not all, the problems facing the newly independent nations (Huntington, 1968; Chilcote, 1981, p. 279). However, as a result of the polarization in economic thought between the Western and Eastern blocs, different advice was given to these countries concerning how to proceed with economic development. For Western scholars, it was assumed that development would occur if developing nations followed the Western experience and were able to obtain additional capital through international grants or loans. The socialist scholars, however, called for nationalization and public ownership of the means of production as the solution to the problem of development and inequality. Which developmental policies a nation followed, therefore, were dictated mainly by the economic philosophy they adopted (Almond and Powell, 1978, pp. 369-371).

Almond and Powell argued that neither of these proposals considered the conditions of the developing countries (Almond and Powell, 1978, p. 371). The typical less-developed country is characterized by an extremely low ratio of material to human resources and a backward technology. These factors resulted in low per capita output and a personal income barely above the subsistence level. The low

level of personal income was further aggravated by a high degree of inequality of wealth in these countries. A main goal in the developing countries, including Jordan, is to improve the standard of living. But, income redistribution, as well as increasing production and labor productivity, is essential if the goals of improving the standard of living are to be achieved. Income redistribution requires a great amount of governmental intervention and is politically difficult. Developmental policies such as price controls, governmental subsidies, free education, free health care, and increasing job opportunities, for example, are frequently made in economic development plans, but the implementation of these policies depends mainly on the country's political, social, as well as economic situation. Creation of jobs and the improvement of workers' output is the focus of many of the strategies for economic development in developing countries (Leibenstein, 1957, pp. 38-41).

Since many of the new nations are over-populated and have a surplus of labor in the traditional sector, some scholars suggest that the main task is to bring about change from the traditional form of labor to the modern forms. They view the economic structure in the developing countries as being characterized by a dualism in the economy. One part of the economy is composed of a relatively small, market-oriented, and industrial sector, while the dominant traditional sector consists of subsistence-type agriculture

and is non-market oriented. The output in this sector is low, yielding little more than mere subsistence for workers. Since this traditional sector is continuously pressed to absorb the excessive high population growth, unemployment is widespread. The supposition is that a transformation of the economy into a modern market-oriented economy will shift workers from the traditional to the modern sector, such as commercial agriculture and/or industrial activities, and result in greater economic advancement for the nation. The flow of labor from the traditional to the modern industrial sector is seen as a means for effectively employing the surplus of labor and for modernizing the country (Fei and Ranis, 1963; Lewis, 1964).

This strategy of transferring labor to the modern sector, however, now is severely criticized since it has caused agricultural workers to give up their traditional lifestyle in agriculture and to seek work in the urban area, where there is an increasing number of unemployed. Also the assumption that the rate of labor transfer and level of employment creation is proportional to the rate of capital investment proved to be untrue. Capital investment does not necessarily increase the rate of employment if it is invested in labor-saving machines. Many of the developing countries have turned from subsistence farming to commercial agriculture and labor-saving machinery only to displace many workers, accentuating the problems of poverty. Also it was

assumed that surplus labor existed in the rural area, while urban areas with the more modern economic sector enjoyed full employment. The situation in the developing countries, however, is just the reverse, where full employment is more likely to be found in the rural area where subsistence farming is the norm (Griffen, 1973, p. 76).

It is also assumed by these scholars that wages in the urban market will hold relatively constant, since there is a large pool of rural workers to be absorbed in the labor market. This has not proven to be the case. Wages in the urban market have a tendency to rise over time, thus creating further tensions in society by helping to create urban ghettos and limits on the number of laborers which can be employed (Paglin, 1965).

As this strategy for transferring labor to the modern sector failed and was being criticized, other scholars began to examine the applicability of the developed countries' experience in development for the newly-developing nations. Various stages of development which all nations had to experience were identified. Earlier in the mid-nineteenth century, Marx proposed that capitalist nations had gone through five stages of development reflecting the various stages of ownership of the mode of production (Chilcote, 1981, pp. 81-119).

In the 1960s, W. W. Rostow, a capitalist-oriented scholar, proposed another set of five stages of economic

growth which he believed to be the common road to economic development for all modern economies. His five stages included: (1) traditional society, (2) precondition for take off, (3) take off, (4) drive toward maturity, and (5) the age of high mass consumption. In 1971 he added another stage he called "the search for quality." Rostow argued that the developing countries need to prepare themselves for the various stages. To prepare themselves for this transformation, developing countries must not only make economic changes, but other institutional changes as well (Rostow, 1960).

The importance of the stage conception of growth is that it emphasized social and political change as well as economic change. As Almond and Powell pointed out, however, the stage growth model does not seem particularly helpful for the developing countries who face immediate pressures for development in a short period of time while it took decades, and in some instances, centuries for the developed countries to pass through these stages (Almond and Powell, 1968, pp. 359-365). Rosenstein and Rodan, in 1961, also argued that a "big push" or noncremental development efforts are essential for developing countries to escape the backwardness trap, which the incremental stage approach does not provide (pp. 393-395).

The failure of the developmental plans in most of the developing countries stimulated scholars to search for other

reasons besides economic performance and technological sophistication to explain the backwardness of these nations. Non-economic aspects, primarily the political, social, and cultural conditions in the country, determine the pattern of development. These non-economic factors are much more complex and elusive than the economic ones.

Social structures and social relations in the developing countries are seen to hinder the process of modernization and development in these countries. The social structure of these societies frequently has its origin in tribal and kinship relations. Small community and family economic ties constitute the basic institutions shaping values and individual behavior. These institutions still hold a considerable strength and resist changes from the greater society. The new nation-states often face a loyalty crisis, where citizens are more loyal to their small communities rather than to the nation-states' values. Customs of the small communities control what individuals can or cannot do. Even at the work level, some jobs are not acceptable because of their traditional social image. Handcrafts and similar service, as an example, are considered to be the work of the lower class and not suitable for citizens of these societies. Women may not take certain jobs because they offend customs and social values. Also, in many of these cultures, the family or group is held collectively responsible for the actions and behavior of its members.

Individual behavior, therefore, is influenced not only by self-interest, but by community interests. These close relations in small communities and the multidimensionality of social behavior are an important explanation of why developing countries often resist change. The fear of absorption, replacement of its institutions by modern ones, and the loss of family economic ties produce conflict and resistance to changes in all developing societies. Unless the social objectives determined by the activities or institution to be replaced are met, change cannot take place (Shackle, 1968, p. 423).

Scholars of development theory believe that for countries to modernize and pass peacefully and successfully from traditional to modern society, significant changes must take place in all facets of these societies. Modernization is now recognized as a multifaceted process involving all means of human thought and activities and requiring changes of psychological, demographical, social, economic, cultural, and political conditions in a society. These changes involve a shift in an individual's values, attitudes, expectations, and beliefs in his capacity to change and control the new environment. Such change in one's life requires development of a sense of loyalty to the greater society. Creating such loyalty requires the establishment of modern institutions capable of responding to the needs

and demands of the citizens, which are beyond the small community's ability (Huntington, 1968).

Such changes in individuals also increase their awareness and expectations. This new awareness and increase in expectations may be disruptive, unless the new institutions are capable of responding to the demands which are developed. Since social demands grow faster than institutions can be developed, a gap occurs between the level of demands and the creation of institutions which often leads to political instability (Huntington, 1968, pp. 32-72). Since the process of modernization may breed instability, Huntington and other scholars suggest that political changes as well as economic changes are fundamental to the process of modernization (Huntington, 1968; Anderson, 1967).

In order to avoid political disruption, attempts to modernize traditional society should not be made only to replace traditional values and institutions, but to also adapt and add to them to meet today's conditions. Both traditional and modern elements of society, as well as traditional and modern types of individual behavior, should be present in the culture in a mutually reinforcing manner instead of pitting modern ideology against traditional. Gradual changes and the transition of a society help to ease the pain of change and avoid the danger of instability (Bill and Hardgrave, 1981, pp. 43-57).

Organski, in his book "The Stages of Political Development" written in 1965, adapted Rostow's stages of economic growth for political development. Organski defines political development as "increasing governmental efficiency in utilizing human and material resources of the nation for national goals." He identified four stages, each characterized by a primary political function of government. The first stage is the primitive unification in which the primary governmental function is the creating of national unity. The second stage is industrialization, where the main function of government is to permit and aid economic development. The third stage is that of national welfare in which the task of government is to protect the people from the hardship of industrial life by ensuring a stable economy to improve the standard of living and aid the disadvantaged. The fourth and final stage is that of abundance, in which the function of government is to cushion the adjustment of social reorganization in order to make automation possible and to make an automated economy politically responsible. Government must fulfill the new functions at each stage as well as consolidate the gains of the past if political development is to be achieved (Organski, 1965).

As the previous discussion shows, modernization and development are multidimensional and multifaceted processes. But scholars differ in their definition and measurement of the concept of development and modernization, to what extent

the development processes differ from one country to another, and what factors are the most influential in these processes (Bill and Hardgrave, 1981, pp. 43-83).

Scholars of development in the developing countries argue that the growth models as derived from the experience of matured countries has little applicability to the developing countries (Almond and Powell, 1978). Griffen argues that the failure of progress in most developing countries is related to their attempts to apply the experience of developed countries without considering the cultural differences. He states that

most of the theorizing on economic development has been done by economists who have lived and were trained in the industrial West, some economists have written about the developing countries before they have seen them (Griffen, 1973, p. 15).

Therefore, such scholars as Almond and Powell, Galenson, Baster, and others argue that the development processes must consider the special situation of each country. Thus, the development processes differ from one country to another according to the economic, social, cultural, and political setting of the country and the position of the country in the international system. Also the differences in each of the key sectors must be considered (Almond and Powell, 1978; Galenson, 1959; Baster, 1972). The differences in situations among countries stimulated Rustow to argue that there is no single pattern of modernization and development, instead, he argued, each country must start with a frank

assessment of its particular liabilities and assets, and that each must compare itself with other countries whose problems most closely resemble its own, and learn from these experiences (Rustow, 1967, pp. 276-286).

Despite the differences of opinion concerning the best path for development, scholars tend to agree on the importance of human resources in the development process. But economists who treated development for the most part as a problem of capital formation stressed economic factors at the expense of social factors (Sherbiny, 1981, pp. XV-XVII). This was the case until 1961, when Schultz pointed out the importance of human factors in the development process. Schultz argues that improvement in the quality of a country's human resources through education and other social factors has a highly positive impact on the development and growth of the country. In his article "Investment of Human Capital," he stated

The productive capacity of human beings is now vastly larger than all other forms of wealth taken together . . . to omit knowledge and skills in studying economic growth is like trying to explain the Soviet strategy without Marx (Schultz, 1961, p. 2).

Therefore, despite the fact that monetary capital is a necessary ingredient for growth, it is not the only one. Manpower, or the labor force, is as important in the development process. Dror argues "that scarcity of high-quality manpower is much more serious in the long run than a scarcity of money" (Dror, 1968, p. 232).

It was during the oil boom of 1973 that the traditional conceptualization of the process of development based on capital formation was seriously challenged. In 1973, the oil-exporting countries emerged as a financial power and embarked upon a huge development plan. When these countries tried to implement their development plan, they were faced with the constraint of a labor shortage. The financial power has to be transformed into physical and human capital before the development process can be effective. Since the transformation process will take generations to complete, these countries had no choice but to open their borders to immigration and the massive inflow of workers from the countries over-populated with surplus labor (Sherbiny, 1981, pp. XV-XVII). The experience of these rich oil-exporting countries has attracted the attention of scholars and policy makers (Sherbiny, 1981, pp. 25-28).

Human resources are the most important basis for development in any country, regardless of its economic and social system. The quality of the labor force--its skill and knowledge--is very important for the country to be able to absorb technology, new ideas, and changes. Durand argued that while the wealth of natural environment is relevant, it is the human environment that is crucial for the growth of the economy. The human environment includes social and political institutions and values. Above all, the quality of the people is the primary ingredient which determines

whether economic growth will flourish or languish. Thus, the qualities of labor input and human environment are inseparable (Durand, 1975, p. 3).

Human resources have to be developed to mold them into an effective work or labor force. Since the labor market and development are mutually interdependent, skill in developing a labor force and labor policy are vitally important to all policy makers. But without knowing which factors influence the labor force and the weight of their influence, it is difficult to enact and implement a labor policy which will insure a high level of employment and economic development (Birks and Sinclair, 1980, pp. 1-3). This research is an attempt to add to previous studies in identifying some of the variables which have an impact on the size and quality of the labor force in developing countries.

Factors Affecting the Labor Force in the Developing Countries

Population growth and the labor force.

Most of the developing countries suffer from a high rate of population growth coupled with a low rate of growth in the gross national product. Over 80 percent of the two billion person increase of the world's population in the last three decades took place in the developing countries where the per capita income was less than \$400. One reason for the explosive growth in the developing countries is the

introduction of better public health and medical services which have lowered the death rate but have failed to control the birth rate. Thus, the annual crude birth per 1,000 in developing countries during the period 1980-1985 was 31.2 while in the same period, the crude birth rate in developed countries was approximately 15.5. The population growth rate reached 2.02 percent in the developing countries, compared to only 0.64 in the developed countries (McNamara, 1984, pp. 1109-1115). This high rate of population growth in developing countries evoked a pessimistic outlook regarding the future of development in these countries. A high population growth rate not only has an adverse effect on the food supply, per capita income, and services, but is also expected to generate other social and political problems (Meier, 1971, pp. 589-591).

In his speech before the world population conference in Mexico City in 1984, Robert McNamara, former President of the World Bank, reiterated the problems facing developing countries as a result of the exploding population growth. The surplus of labor in the traditional and modern sectors, plus a shortage in the critical skills in the modern sector magnify all of the problems of development. Providing meaningful employment to the growing number of new entrants in the labor field is a major challenge to these countries. Also, the increasing number of school-age groups increases pressures on health, training, and educational facilities.

The population growth increases the number of dependents and lowers the ratio of those active in the labor force. In addition, the surplus of labor keeps wages at or near subsistence levels, since the modern sectors cannot absorb the huge number of job seekers. Because of limited land resources, the traditional sectors are unable to absorb the ever-growing population, and thus poverty and starvation may threaten many. The employment situation in the traditional sector worsens as governments try to regulate food prices which further weakens farmers' incentives to employ more workers to increase production of additional food (Harbison, 1971, pp. 612-620; McNamara, 1984, pp. 1109-1115).

Migration from the rural to the urban areas is expected to increase as the traditional sector proves unable to provide a livelihood for many. This rural to urban migration in turn increases the pressures on the already overloaded cities for additional public services. This pessimistic view expressed by the former president of the World Bank forecasts only poverty and instability for most of the world if the population growth continues unchecked (McNamara, 1984).

At the international level, increased surplus of labor in the developing countries increases pressures for international labor migration. International labor migration may work as a safety valve in some instances. Countries in North America, such as the United States and Canada, the

oil-rich Arab countries in the Middle East, and the industrial Western European countries may absorb the surplus of labor from poor developing countries (Serageldin et al., 1983). McNamara warned that such out-migration which took place in the past cannot continue in today's global village. National restrictions on migrations already have begun to be implemented in many of the wealthy countries. In the future, he further states, international migration will be mainly in the form of refugees fleeing some form of disaster, such as the Palestinian refugees to the Arab World in 1948, and its aftermath, migration from Bangladesh to India in 1975, and the boat refugees from Southeast Asia, following the Vietnam and Cambodia wars (McNamara, 1984). Despite the importance of labor out-migration, it is a temporary solution, and it may have many negative affects on the mother country, since professional and highly-skilled persons are usually the groups to emigrate. This is the group which developing countries need for their own development. Without migration, most of developing countries have no other alternatives except to introduce family-planning programs to encourage small family size and to provide the incentives for controlling the population explosion (Burki, 1984; Ibrahim, 1982). Reducing the rate of population growth, according to Sauvy in his article "Population Theories," may hinder the development of developing countries. He argued that economic growth and innovation cannot

take place in an aging society. Furthermore, the rigidity of institutions controlled by an older generation act as an obstacle for new ideas, technology and norms. Population growth, he points out, provides a young population base and helps to generate social and structural changes of institutions without the conflict caused by the introduction of modern values and institutions in a society with an older population (Savvy, 1981, pp. 354-357).

Blandy examined the relationship between population and employment in forty-four developing countries. The study tested the effects of changes in growth rates of income, population, and labor force on employment in each economic sector in these countries. His findings showed that reducing population growth worsened the unemployment and underemployment in developing nations and increased income inequality between workers in the modern section and those working in the traditional one. The only positive finding for the policy of reducing population is that it may shorten the development time span even though it may generate the above-mentioned risks. Blandy concluded that

development by reducing population growth rate is likely to be a poor strategy for promoting employment growth in the non-agricultural sector compared with a development strategy of increasing income growth rate (Blandy, 1972, pp. 347-362).

Population distribution and labor force.

Population in the developing countries is often unequally distributed either at the regional or national level. Population density is influenced by the availability of such things as natural resources, climate, and political factors, so that one region of a nation may be much more densely populated than another.

The differences in population density in developing countries resulted in factories being established near the big cities, because large markets, labor, power, and other facilities are readily available. Workers are forced to move to where these factories are located to find employment. The influx of workers has increased the pressure on cities to provide additional services while also increasing demands for higher wages to cover workers' expenses and provide support for their families back home. The migrant workers displaced from the social ties of families often join labor unions to provide the feeling of belonging to a social group. Radical labor unions often increase demands for higher wages which, in turn, aggravates economic and political conditions (Nurske, 1971, pp. 146-149).

The impact of population distribution is magnified by a lack of adequate transportation and communication facilities. The movement of labor, as well as material and finished goods, between regions affects the price of goods. Since many roads and railways in the developing countries

were established in the colonial period for military purposes and to facilitate the movement of raw material and agricultural products to the main port of the country, little consideration was given to the economic growth of the colonies when the transportation system was designed. The transportation system in India, for instance, according to Lansing, was developed to increase efficiency in the administration of the country and for military purposes; this objective, however, is hardly equivalent to the objectives preferred by the modern Indian economists. Developing countries must include all regions in their development plans, especially areas where most of the working class makes its living. To complement the distribution of new projects, a development plan must consider the creation and improvement of transportation and communication systems to encourage the movement of labor and capital between regions (Lansing, 1966, pp. 120-135).

The movement of the labor force introduces workers to new job opportunities, new skills, and new ideas. The circulation of workers also makes them more open to change and increases their ability to absorb new knowledge and technology. Since population distribution is a major factor affecting development, developing countries must adopt a distributive economic growth policy to decrease the inequality in income between individuals and in investment and public services between regions. Such a policy has to

take into account the interaction of the rural and urban sectors and must aim to reduce poverty and inequality between the two sectors (Almond and Powell, 1978, pp. 364-369).

General Investment In Economic and Human Capital.

Investments are another factor affecting development. General investment in a country includes both economic and human capital investments. Capital investment aims to use resources to produce more capital goods, machine equipment, etc., while investment in human capital intends to produce educated men and women and more skilled workers. Both have an impact on the development of a country and its labor force. Capital investment is expected to influence the number of jobs and job opportunities, while investment in human capital is a means of improving the quality of the labor force to increase job opportunities (Darcy and Powell, 1973, pp. 346-347).

Both kinds of investments are dependent on the availability of capital. Capital investment in capitalist countries is primarily dependent on the availability of private capital, while investments in human resources are mostly dependent on the availability of public capital. Thus, general investments influence and are influenced by the availability of capital. Meier, therefore, argues that

the general rate of development is always limited by shortage of productive factors. If any one single

factor associated with under-development should be singled out, it would be capital. Therefore the final goal of development programming is to find the best way of breaking the vicious circle between capital shortage and under-development and to design the most efficient and optimum rate of capital accumulation (Meier, 1971, p. 169).

Since the time of Adam Smith, economists have considered capital accumulation to be the major factor for economic development and full employment. Even the scholars of development of the new nations argued that capital accumulation is the major constraint on any new nation's developmental plans (Sherbiny, 1981, pp. XV-XVII). Meier argued that capital formation may very well be regarded as the core of development by which all other aspects of growth are made possible (Meier, 1971, p. 169). Since most of the developing countries have to pass through the period of take-off for economic growth, more capital is needed to enable these countries to build the necessary infrastructure to modernize and to buy new equipment. The ability of the developing countries to accumulate enough private and public capital from domestic resources is limited because of low per capita income, which is hardly enough to enable the majority of the population to live at the subsistence level. Also, the high-income groups in these countries tend to be able to avoid taxation and to spend mostly for consumption. The investments made by them often are for real estate or for projects such as exports and transit services on which there is a fast cash return. The political instability and

uncertainty in most of the developing countries discourage private investments as well as foreign investors because of the fear of changes and nationalization. According to Meier, developing countries should strive to hold personnel consumption to less than national income, so as to have 25 percent to divide for public administration and the other 13 percent for capital formation. Personal consumption in developing countries, however, is estimated to take 85 percent or more of the total national income, leaving little for public services and capital formation. As a result, developing countries are forced to seek foreign resources and borrow even though they have to pay a high interest rate and carry a heavy debt load which further reduces their ability to accumulate needed capital (Lewis, 1971).

The previous discussion regarding labor's place in economic thought demonstrated the controversy among scholars as to the importance of labor in economic growth. However, Smith and other scholars after him, such as Owen, Marx, Taylor, and Fisher, recognized that productivity was increased by the division of labor, education, and training of the labor force (Darcy and Powell, 1973, p. 69). Generally, economists placed much more emphasis on investment in capital resources as a means to promote economic growth rather than investments in human resources.

In fact, in his presidential address to the annual meeting of the American Economic Association in 1960,

Theodore Schultz pointed out that investment in human capital is probably the major explanation for differences in national output among nations. He stated

it has been widely observed that increases in national output have been largely compared with the increases of land, man-hours, and physical reproducible capital. Investment in human capital is probably the major explanation for these differences (Schultz, 1961, p. I).

Industrialization, however, was recommended as the best path for the growth of developing countries during much of the post-World War II period (Meier, 1970, pp. 391-409). Attempts to import high technology into these countries were hindered by the lack of skilled labor to operate or maintain them (Dror, 1968, p. 232). The experience of the developing countries demonstrated that development of human capital is a necessary condition of development, and that it requires a much longer period than just purchasing machines (Musgrave, 1970, p. 608).

Since the 1960s, many studies have concentrated on the human factor in economic growth. Investment in human capital through education, on-the-job training, health, and providing employment and information were advocated as major factors for improving the quality of labor and ultimately causing economic growth and development. Darcy and Powell (1973) stated that,

one of the most important economic discoveries of the 1960s was that education and other forms of investment in human resources provide vast benefits to individual workers and to the economy as a whole. Research

studies have shown that manpower can be made more productive by investing in workers' knowledge and skills--sometimes called human capital. In the same way, that economy gains from investment in non-human capital such as machines, buildings, and equipment, knowledge about investment in human resources will be valuable in planning a career and making personal and social decisions (p. 69).

Investment in both education and on-the-job training are aimed at increasing the acquired ability of the labor force. In the developing countries, the labor force normally suffers from a surplus of unskilled workers. In some of these countries, such as Jordan, however, the reverse is true. There is a surplus of workers with a professional or graduate degree while, at the same time, there is still a shortage of critical skills needed for modern economic sectors. The failure of the educational system to train persons for positions needed in the economy is largely due to cultural values which promote the traditional types of education rather than the needed skills.

Educational systems in most of the developing countries were designed or influenced by the colonial powers whose main objectives were to train local administrators and military personnel, so as not to have to use their own citizens in local administrative affairs. Thus, the types of education in most of the developing countries were not very helpful in economic development. Also, the cultural attitude instilled by the colonial masters tended to inspire students to pursue degrees in law, engineering, or medicine

instead of business or technical skills needed in industry. As these countries try to industrialize and modernize, education becomes more essential for developing a skilled labor force. When production shifts from manual labor with low skills to mental labor requiring high skills, education and training become the agent of change. In reality education sorts people into the various jobs and occupations (Clark, 1981, pp. 510-515).

Another group of scholars such as Mincer, Denison, Meginn, and Ward have sought to measure the returns from investments in human capital in different countries. In 1962 Mincer reported that investments in job training in the United States increased from \$3 billion in 1939 to approximately \$12.5 billion in 1955, yielding a rate of return from 9.0 to 12.7 percent per year (Schultz, 1968, p. 284). Also, Denison reported that investments in education in the United States contributed 23 percent of the total national production during the period 1929 to 1957, and was expected to be the same during the period 1960 to 1980 (Darcy and Powell, 1973, p. 347). A study of investment in human capital in Jordan in 1973 showed that investment in education for workers who then migrated to Kuwait has produced a 20 percent rate of return, while economic investment in Jordan often yielded only a 10 percent rate of return (Ward, 1973, p. 282). In South Korea, Meginn and other scholars found that investment in human capital for education was

equivalent to 125 percent of the value of physical capital (McGinn et al., 1980, p. 108).

As a result of such studies, the importance of investment in human capital is generally accepted as an essential part of developmental plans today. Studies of development, therefore, must review education, health training, and other aspects of human resources development to insure a balanced labor force.

The rate of modernization of a country, according to Harbison, is associated with both its stock and rate of accumulation of human capital (Harbison, 1970, p. 613). Another significant part of human capital is managers and entrepreneurs. The former are involved in coordinating and carrying on an established, on-going concern, while the latter are involved in activities necessary to create or increase the size of an enterprise. Both manager and entrepreneur types are essential in the development process to coordinate activities, to search and discover economic opportunities, to marshal the financial resources necessary for the enterprise, and to provide leadership for the work group to translate these opportunities to goods and services and to manage activities of the enterprises (Leibenstein, 1978, pp. 72-83).

Entrepreneurship is a scarce talent. Securing this talent to formulate and execute the development policies is as essential, if not more so, than acquiring capital. Dror

argued that "scarcity of high-quality manpower is much more serious in the long run than a scarcity of money" (Dror, 1968, p. 232). Throughout history, entrepreneurs have played an important role in the developed countries. In the colonial era, these talents were provided to the developing countries from European and foreign sources. Independence of the colonies since World War I has enlarged the new governments' responsibilities and increased their need for high-quality manpower and entrepreneurs. The lack of entrepreneurial and managerial talent in most of the developing countries seemed to hinder their development plans and help to cause high levels of unemployment. The shortage of talent was exacerbated by the nationalistic pressures to remove all vestiges of imperialism, including European and foreigner manager from key public and private organizations. Even local talent was expurgated or curtailed after nationalization of strategic sectors in many developing countries. The previous entrepreneur roles were taken over by bureaucrats whose only talent is that they operate with the blessing and under the protection of the political power apparatus (Hoselitz, 1968, p. 429). Recently, many of the developing countries, even those who have a socialist system, have tried to meet the urgent needs for high-quality manpower by establishing schools to train managers. Also, they are encouraging local and foreign entrepreneurs to increase their investment.

Labor Unions and Labor Relations.

The impact of labor unions is still another factor frequently considered by those attempting to comprehend the labor force in developing countries. Labor unionism in the West is the child of industrialization (Strumthal, 1968, p. 523). The labor movement in Western Europe took the form of class struggles after the industrial revolution. Therefore, it is not surprising that development of labor unions in the developing countries did not follow the same pattern as in the West (Ross, 1968, p. 419-512). The process of labor union development in developing countries is slow for reasons inherent to the nature of these new nations. The majority of the labor force is unskilled and semi-skilled, while labor unions tends to flourish in the modern sectors where the majority of workers are skilled. Also the modern sector in developing countries tend to minimize the use of skilled labor, relying instead on unskilled and semi-skilled workers (Morris, 1968, pp. 513-516). The large numbers of workers in the labor market makes it easy for the employer to replace troublemakers, and the lack of job opportunities makes workers very careful to avoid anything which will put their jobs in jeopardy including joining a union (Galenson, 1959, p. 155).

The labor movement in the developing countries tends to be politicized in a different fashion from that in the West. Many of the unions in developing countries developed during

the struggle for national independence. Union leaders were mostly from the educated middle class and were not themselves workers. Joining the union was a means of obtaining political power. The fact that organizations of workers were under the banner of national independence and economic development politicized the labor unions. The main goal for most union leaders was to accomplish political ends rather than to organize a labor union capable of serving its members' interests and impose collective bargaining relationships upon employers (Morris, 1968, pp. 511-516). In many of the developing countries, the governments formalized labor unions by establishing a federation of labor unions financed by the government. These federated unions work mostly as a transmission belt of the government, and government representatives interpose themselves between the employers and workers in any bargaining or labor disputes (Galenson, 1959, pp. 7-15). Governments in the developing countries try to regulate and control strikes and lockouts, stressing the belief that the resource base for economic development is so limited that they cannot afford to permit prolonged or costly work stoppages. Governments, therefore, initiated welfare, health insurance, and wages systems to ease labor grievances and to minimize social and political unrest (Ross, 1968, pp. 511-512).

In general, labor unions in developing countries are weak. Some scholars contend that the main purpose of labor

unions in these countries should be education, although unions should act as educational institutions for the working force. It is proposed that unions should participate in such programs as on-the-job training as well as in the administration of housing, medical, and social security programs. Unions also should be a source of motivation to increase workers' productivity and should be granted a role in handling workers' grievances. Employers should accept the principle of collective bargaining in order to avoid more radical labor movement. Other scholars propose that for labor unions to be more work-oriented, union leaders should be chosen only from the working class instead from outsiders who are usually politically oriented (Galenson, 1959, pp. 1-15).

Governmental Policies and the Labor Force.

Governments worldwide play a major role in economic development programs (Galenson, 1959, p. 16). Historically, governments played a facilitating role by providing national security, transportation, credit and other services to the neoteric countries such as the United States and England, although the entrepreneurial class carried out the main burdens of development. In the second wave of modernizing countries, such as France and Germany, governments played an even greater role by imposing economic regulation, state financing, and various actions to protect key projects. In

Japan and Russia, the third wave of nations to modernize, the role of government in the development process grew even more. Governmental planning, financing, and ownership were characteristics in these countries (Almond and Powell, 1978, pp. 358-359). In developing countries today, governments perform still more significant activities in the process of development (Hoselitz, 1968, pp. 428-429). Their entire economies tend to be plan-oriented by the country's five-year plans, and the government takes enormous action to implement these plans.

Leaders of the developing countries have adopted different strategies in an effort to achieve economic and political developments. In the economic arena some of the developing countries have adopted the liberal capitalist model, while others have chosen the socialist revolutionary. Still others have adopted a more moderate reform model (Almond and Powell, 1978, pp. 369-390). Whatever model developing countries follow, a systematic economic plan must be formulated and implemented. Governments of these countries must initiate projects either as a partner or guarantors with or for private and foreign investors. Also laws concerning such areas as protection, exemption of taxes, and free land must be enacted to encourage investors. Governments must also provide a host of human capital programs such as training, education, free health care, social security, and welfare programs, as well as develop roads,

bridges, schools, and other infrastructures in these countries. As a result of these involvements in the development processes, governments in most of the developing countries are the largest employers, employing workers either in the military or in the public sectors.

Governments in these countries also affect employment and the labor force through their developmental plans, and financial allocations in various governmental programs such as education, health, training, and other public facilities. Immigration laws and restrictions also have a direct affect on employment conditions, while population control measures and family planning have a long-range impact on the size of the labor force (Jordan Ministry of Planning, 1986).

Ultimately, the political stability or instability of these countries affects their development and their labor force. Political ideology and development strategies affect the stability or instability of the country and have many ramifications on the economic situation and development of human resources. Since there is no agreement as to what type of development and economic policies are most effective in achieving the developmental goals, it is advisable, as Rustow suggests, that each country choose the form of government and policies that suit its social, economic and political situation (Rustow, 1967).

As can be seen from this review, much of the literature has been written by economists who have stressed the

economic aspects of production. Since World War II, however, other scholars have begun to study the processes of development and labor's role in this process. These newer works have identified a host of factors influencing development but, as of yet, there is no agreement upon which factors are most essential to development or upon a methodology for determining the importance of these factors. The purpose of this research is to attempt to advance understanding in this field.

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CHAPTER III
LABOR POLICY AND ECONOMIC DEVELOPMENT
IN THE ARAB WORLD

The Arab world lies at the crossroads of Africa, Asia, and Europe. It covers an area of 13 million square kilometers (5.4 million square miles) and stretches from the Atlantic Ocean in the west to the Arabian Gulf in the east. The Arab world includes the North African Arab States, the Levant, and the Arabian peninsula. Politically, the Arab world is divided into twenty-two states, with a total population estimated of 200 million, which is expected to reach 286 to 300 million by the year 2,000. The labor force is expected to grow from approximately 50 million in 1980 to more than 80 million by the turn of the century (Table 3) (Massialas and Jarrer, 1980, pp. 1-5).

The vast area and the strategic location of the Arab world are a mixed blessing. The region contains a wealth of mineral resources such as oil, natural gas, phosphates, iron ore, coal, lead, manganese and a host of other minerals. But these resources are unequally distributed, and their locations are far from the industrial centers. This situation makes it difficult to establish an effective market system in the region.

TABLE 3

POPULATION, AREA, LABOR FORCE, GROSS NATIONAL PRODUCT
AND GNP/CAPITA IN THE ARAB WORLD IN 1987

Country	Population in Millions	Percent Growth Rate	Area Square Miles	1987 Per Square Mile	Density Labor Force (1000)	GNP/ Per Capita US Dollars
Algeria	23.10	3.3	919,951	25.0	4.500	2,680
Bahrain	.44	4.5	255	17	.81	11,708
Djibouti	.47	5.2	8,996	5	.27	.760
Egypt	50.92	2.7	386,872	131.6	14.300	670
Iraq	17.09	3.4	172,000	99.3	3.100	2,140
Jordan	2.90	3.9	37,297	100.5	.520	1,560
Kuwait	1.83	5.9	7,780	235.2	.670	14,870
Lebanon	3.50	2.5	4,015	871.7	.452	1,600
Libya	4.05	4.2	679,536	5.9	.800	5,500
Mauritania	1.85	1.9	419,229	4.4	.515	440
Morocco	22.96	2.9	171,953	134.1	6.000	620
Oman	1.34	3.0	82,000	16.3	.150	5830
Qatar	.37	7.6	4,247	87.1	.74	22,940
Saudi Arabia	12.45	5.6	873,000	142.6	2.750	13,160
Somalia	5.71	2.6	246,155	23.1	1.800	290
Sudan	11.24	2.7	967,491	23.9	4.500	330
Syria	23.21	3.4	71,498	157.2	2.300	1640
Tunisia	7.48	2.5	63,379	118.0	2.100	1260
United Arab Emirates	1.45	6.2	32,279	44	.557	15,770
Yemen Arab Republic	8.43	2.3	75,278	111.9	1.120	
Yemen Peoples Democratic Republic	2.27	1.8	111,000	20.4	.452	420

Source: World Bank World Tables (Baltimore: John Hopkins University Press, 1989); United Nations International Financial Statistics (Washington, Publication Services, 1988); John Paxton (ed.) The Statesmen's Yearbook 1988, 1989 (New York: St. Martin's Press, 1988); Europa Year Book A World Survey (Rochester, England: Europa Publications Limited, 1987, 1988); International Labor Office, Yearbook of Labor Statistics 1988, (Geneva: Swiss).

The strategic location of the Arab world has long made it a center of interaction between civilizations and a target for outside powers. For ever 2,000 years, Romans, Persians, Crusaders, Mongolians, Turks, Italians, French, British, and Zionists, intervened in the Arab world. This area is still a center of conflict and competition between the Western and Eastern blocs. The stability of the region affects world peace since much of the world's oil resources are located in the region (Fixler and Ferrar, 1976, p. 22).

Despite the fact that new types of administration and bureaucracy, technology, and education were introduced by invading powers, these invasions had a negative impact on the social, economic, and political integration and development of the Arab world (Massialas and Jarrer, 1984). Long before the turn of this century, the Arab world had difficulty in coalescing into a single unified Arab state. Political and economic disintegration of the Arab world occurred after the dissolution of the Ottoman Empire at the end of World War I (Bani Hani, 1984, p. 177). Before the war, under Turkish rule, manpower and other factors of production moved freely through most of the Arab world as it had done for centuries. Labor has circulated throughout the Middle East because of unequal distribution of the quality and quantity of the human resources and economic activity in various parts of the region. The common background of the Arabs in culture, language, and life style, as well as the

absence of rigid national state borders, facilitated migration and the subsequent adjustment of the immigrants (Ibrahim, 1982).

Following World War I and the dissolution of the Ottoman Empire, the Arab world was divided into small nation-states under the mandate of European powers--especially the British, French, and Italians. Economic policies, as well as political relations of the new Arab states during the colonial period 1914-1950, were disunited and tied to the colonizing countries. Each Arab state was considered to be sovereign within its borders, having its own government, currency, investment policy, custom code, tariffs, and other functions as a separate entity. These developments hindered the traditional movement of manpower and production in general throughout the Arab world (Kerr and Yassin, 1982, pp. 17-25).

Between World War I and World War II, the new Arab countries were either struggling for liberation from the foreign powers or experiencing the travail of creating national states. Little attention, therefore, was given to economic cooperation and integration on a regional level beyond bilateral trade agreements. Since Jordan's economy is intimately tied to the Arab world, this chapter explores the attempt to develop and integrate the Arab world.

Economic Development and Integration
in the Post-World War II Period

The Arab countries were among the first to recognize the potential benefits of regional economic cooperation and integration in the post-World War II period (Garnick 1961, pp. 294-300). Three events in the Arab world during and after the war were, to a large extent, responsible for increasing interest in social, economic, and political interaction among the Arab states (Bani Hani, 1984, pp. 177-181). For one thing, many of the Arab states gained their independence in the late 1940s and early 1950s, reducing foreign influence in regional decision making.

After independence, the Arab countries displayed an increasing awareness of the need for socio-economic development and integrations throughout the region. This new awareness was stimulated in part by the discovery of oil in a number of Arab countries and by the increased reliance on national planning with the public sector to stimulate development (Ghantus, 1982, p. 98). The establishment of the Arab league in 1945, with an expressed objective of promoting political, economic, social, and cultural ties and cooperation among its members, provided the framework for regionalism in the Arab world. Also the loss of the 1948 war which led to the establishment of the state of Israel, and the continuing conflict between Arabs and Jews was another factor causing the Arabs to develop an increased

awareness of their common identity and the need for regional integration (Bani Hani, 1984, pp. 177-181).

The embarrassment of the Arabs caused by the defeat of 1948 and the continuing economic backwardness of the region, coupled with a remembrance of glories of the past, forced a new awareness of the advantages of integration. This new awareness of the need for Arab economic and political integration fed the political ferment in the region. Every political movement adopted slogans of Arab unity, including pan Arabism and Arab socialism. Despite the differences between them, all Arabs talked about the brotherhood of Arabs (Bani Hani, 1984, p. 178).

Borders of the present Arab states were drawn as a result of political compromise between the traditional European rivals (the British and the French at the end of World War I), with little consideration as to the naturalness of such borders. The unnaturalness of the national borders has created social, economic, and political problems throughout the region. Within the new borders, none of the Arab states, even the wealthy ones, are fully able to meet their citizens' demands for food, jobs, and security. The Arab states are cut off from either natural resources, manpower, transportation routes, or markets which they previously would have used. Manpower from Arab countries with large populations cannot migrate to other areas in the Arab world where manpower is critically needed, such as to

the new oil-rich Arab states (ORAS). Similarly, other factors of production cannot freely move to where the markets are located or where they are most needed (Ibrahim, 1982).

Evidence of the need for further regional integration may be seen in the inability of Arab nations to feed their own people. The need is most apparent in such states as Sudan, Somalia, South Yemen, and even Egypt. Also, the high unemployment in most Arab states is basically caused by the inability of people to migrate to other states such as the ORAS, which have small populations and a shortage of labor. Another evidence of the need for regional integration is the inability of the Arab states to defend themselves in wars with Israel, or even to contain the Israeli expansion to front-line states such as Jordan, Lebanon, Syria, and Egypt. Nor have they been able to stop Israel's aggression and threats to non-front-line states such as Iraq, Libya, and Tunisia. The inability of many Arab countries to exert authority over their territories or to control local conflict has been evident in such states as Lebanon, Sudan, Morocco, and Iraq. It is not surprising, therefore, that Arab decision makers, as well as the Arab people, consider economic and political integration to be an essential goal in achieving the aspiration for a better life (Kaddouri, 1984, p. 202).

Since the 1950s, several attempts have been made to promote economic cooperation and integration in the Arab world. The main objectives of these attempts were to facilitate the movement of individuals, goods, and capital among Arab countries. These attempts have resulted in the following:

1. A Treaty of Joint Defense and Economic Cooperation between members of the Arab league was signed on April 13, 1950. The states of Egypt, Iraq, Jordan, Lebanon, Saudi Arabia, Syria, and Yemen signed the original treaty. Morocco and Kuwait later joined the treaty in 1961 and were followed by Libya, Tunisia, Sudan, and Algeria in 1964. Although the treaty was primarily a military defense pact, it contained some articles providing for members to cooperate economically for their development (MacDonald, 1965). The economic provisions were institutionalized through the establishment of an economic council, composed of the ministers of economic affairs of the various states.

2. The holding of an Intra-Arab Trade and Payments convention in 1953 for facilitating trade and regulating transit trade among states of the Arab league. The convention was a result of a recommendation by the Arab ministers of finance and national economy to discuss and promote economic relations between member states of the Arab league. The recommendations of the convention did not materialize because of the many amendments proposed and the absence of

policy coordination among the member states (Bani Hani, 1984, p. 179).

3. By the late 1950s, it was recognized that trade liberalization would have to go hand in hand with coordination of economic policies concerning development, monetary policies, industrialization, and payment (Bani Hani, 1984, p. 179). Upon the recommendation of the Arab Economic Council, which was created in 1950, an Arab Economic Unity Agreement was enacted and adopted in 1957 by the Council of the Arab League and went into effect on March 3, 1954. The aim of this agreement was described in its introduction as follows:

The Arab countries, given their desire to organize their economic relations and to strengthen them on a basis commensurate with current national and historic ties, and in order to achieve the best conditions for the good of their economies and the development of their wealth, and to ensure the welfare of their countries, agreed upon complete economic unity (Kad-douri, 1984, p. 199).

To achieve these goals, an Arab Economic Unity Council (AEUC) was to be established to help guide the economic integration in the region. Thirteen of the Arab states originally joined in this agreement included the states of Kuwait, Egypt, Iraq, Syria, Jordan, Yemen, Arab Republic, Yemen People Democratic Republic, Sudan, United Arab Emirates, Somalia, Libya, Mauritania, and Palestine. Although thirteen of the states originally agreed to the proposal, only seven of them--Kuwait, Egypt, Iraq, Syria, Jordan,

North Yemen, and Sudan--have a membership on the council which represents the machinery of the Arab Economic Unity Agreement (Kaddouri, 1984, p. 205).

4. In 1964, the Arab Economic Unity Council again attempted to get the Arab states to agree to the creation of a common market in the region. An Arab Common Market resolution aimed at gradually reducing tariffs and introducing free movement of goods between member states was proposed in January 1965. Under this proposal, all restrictions on economic activities among the Arab states were to be completely removed by January 1974, and there was to be free movement of goods, persons, and capital (Kaddouri, 1984, pp. 180-181). Although the Arab Economic Unity Council exerted tremendous efforts to attract all Arab states to join the Arab Common Market, only five states--Jordan, Syria, Egypt, Iraq, and Mauritania--agreed to implement a free trade area. Despite this agreement, evidence shows that a truly free trade area among these five countries has not been fully achieved (Aliboni, 1979, p. 92).

In addition to these formal attempts to create economic integration among Arab states, political events in the region led to numerous attempts to create Arab political unity. Since the early 1950s, many attempts at unity have taken place between two or more states. The first of these attempts was the merger of that portion of Palestine still

in Arab hands after the 1948 war with Trans-Jordan into the Hashemite Kingdom of Jordan in 1950. The second attempt took place after the Egyptian Revolution in 1952. The adoption of the ideas of pan Arabism and Arab socialism permeated the Arab world and resulted in a number of political alliances between two or more Arab states. The merger of Egypt and Syria into the United Arab Republic in 1958 was perhaps the high point of pan Arabism. Later in 1958, the Kingdom of Yemen joined the United Arab Republic (Egypt and Syria) in the creation of the United Arab States. The union lasted until 1962 when Syria withdrew, and the revolution occurred in Yemen in 1962 to put an end to the United Arab States.

Another attempt at political integration was the federation between Jordan and Iraq in 1958, but this proposed union was dissolved by the withdrawal of Iraq in the same year after the Iraqi revolution. In 1963, Egypt, Syria, and Iraq considered federation attempts which never came about. After the Libyan revolution in 1969, Libya, Egypt, and Sudan signed the Charter of Tripoli in December 1969 to unify their countries. Libya again joined with Egypt and Syria in 1971 in the establishing the Federation of Arab Republics, and the same year Libya and Egypt announced they were merging. In 1974 Libya proposed a merger with Tunisia, also with Syria in 1980, and with Morocco in 1984. In 1971 the independent seven sheikdom

(former British protectorates) federated into the United Arab Emirates (Bani Hani, 1984, p. 181).

None of these political alliances resulted in political integration, and most did not exist long enough to achieve any of the benefits of political integration. Only two of these alliances still exist: the Hashemite Kingdom of Jordan which was created by the merger of the West Bank with Trans-Jordan in 1950 which lasted until July 31, 1988, when King Hussein severed relations with the West Bank and the Federation of the United Arab Emirates which still exists.

Changes in the Arab World After 1967.

Following the 1967 War, the entire Arab region seemed to be at a turning point in its social, economic, and political relationships. The fiery rhetoric and slogans of Arab unity and Arab socialism, as well as the call for socio-economic development and revolutionary ideologies which had marked the period before the war, generally lost their appeal after the defeat of all of the front-line Arab states--Egypt, Syria, and Jordan--and Israeli's occupation of a part of their territories. Even the nonfront-line Arab states did not escape the impact of this defeat because of their alliances with the three front-line states (Ibrahim, 1982, pp. 167-168).

The demise of the revolutionary ideologies after 1967 and the emerging significance of oil in politics after 1973

permitted the oil-rich Arab states, allied behind Saudi Arabia, to assume a more active role in Arab affairs. Saad Eddin Ibrahim (1982), in his study of the social impact of oil wealth in the Arab world, commented on these changes in this fashion:

Petro dollars spoke louder than revolutionary ideologies. Pragmatism gained precedence over idealism. Arab dreams of national unification gave way to vigorous state building by the ruling elite. Assertion of economic-political independence in the world system, while ritually observed, has in fact been eclipsed in favor of integration in the international capitalist system. Socialist measures and central planning to ensure equitable development have been brushed aside in favor of growth policies and market mechanisms, with an implicit assumption that the "trickle-down effect" would take care of the masses below . . . the swing was back to pre-revolutionary policies (pp. 168-169).

These changes decreased the gap between the radical-revolutionaries and the traditional conservative Arab regimes and increased channels of communication and understanding between them. These events also contributed to the growing awareness in the Arab world that economic fragmentation hinders development and progress as well as their ability to resist outside pressures. Publicly it became widely believed that a collective economic policy for the entire Arab world was needed to meet the demands for economic development, as well as for integrating the other vital policy areas in the region (Ghantus, 1981, pp. 68-69).

The call for economic integration of the region was advanced mainly by Middle-Eastern intellectuals. These intellectuals pointed out that the oil price revolution in

1973 gave the region a new means for recapturing past greatness and the best chance of developing the entire Arab world that it had had in the last two centuries (Ghantus, 1982, p. 1973; Ibrahim, 1982, pp. 1-3; Sherbiny, 1981, pp. 17-19).

The revolution of oil prices since 1973 had a profound effect on the economic, social, and political development in the Arab world. Its impact on the entire society was described by Saad Eddin Ibrahim (1982) who stated:

When we assert that oil has been a major determinant of the new social order, it should of course be realized that we are talking not simply about oil as a raw material, it is all the facets of this strategic substance, i.e., an energy source, technology, money, geopolitics, and manpower. The interaction among all these facets, on one hand, and the existing social structure on the other, has produced a host of social-cultural changes that we are subsuming under the label "new order" (p. 2).

Oil, through the movement of money and manpower across the Arab state borders, has influenced almost all activities and structures in the Arab world. Oil has played a major role in the Arab world's integrative efforts in the last two decades. Although the Arab world has historically been linked by many factors such as kinship, culture, religion, and language, the discovery of oil and the huge increase in oil revenues has led to the most significant changes in the Arab world in modern history. Socially, Arab states have been stratified according to wealth and the source of wealth. Today, for instance, Arab states are categorized as

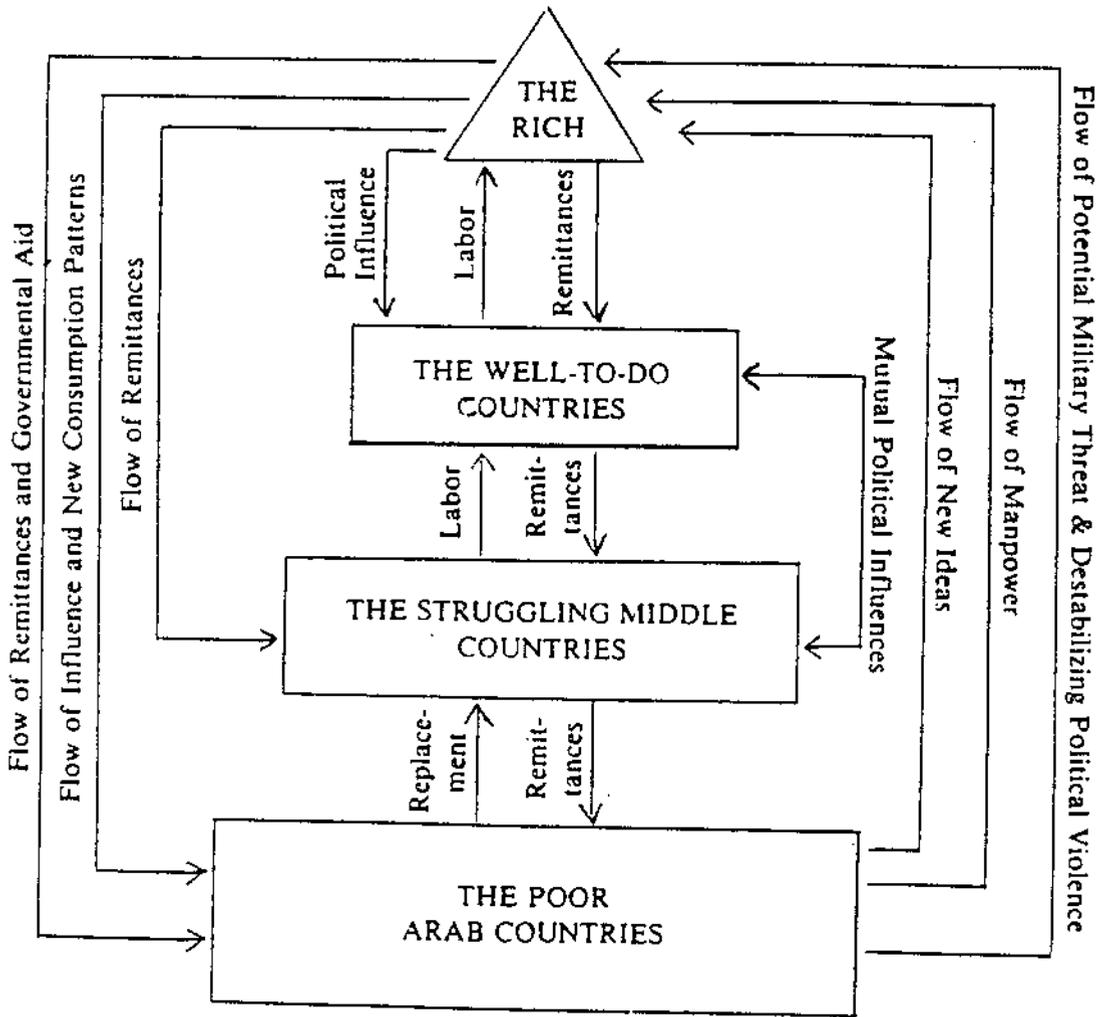
oil and non-oil states, capital rich and labor rich, or as rich and poor, or rich, well-to-do, struggling middle states, and the poor states.

Economically, the changes brought by oil have led to a new kind of interdependence as shown in Figure 2. Because of their lack of population, the oil Rich Arab States (ORAS) are dependent on the labor Rich Arab States (LRAS) for labor to develop their countries, while the labor rich Arab states depend on the oil rich Arab states for capital to develop their countries. The Arab interdependence is dramatically manifested by the flow of money, manpower, ideas, attitudes, new consumption patterns, political, and military influence and cooperation (Kerr and Yassin, 1982, pp. 60-61).

Although the oil-rich and the labor-rich countries have different constraints on their economic growth, they have complementary resources. The oil countries have a capital surplus but lack a labor scarcity, while the non-oil countries have a labor surplus but suffer from inadequate capital. Therefore, the flow of capital and labor between the two groups relieve the economic growth constraints and aid in developing the economics in both oil and non-oil Arab countries (Sherbiny, 1982, pp. 230-239).

Labor and money are perhaps the most important linkages for integration of the Arab states today. The flow of these two economic factors is in opposite directions, with labor coming from the labor rich Arab states (LRAS) as workers

FIGURE 2
THE GROWING ARAB INTERDEPENDENCE



Source: Saad Eddin Ibrahim, The New Social Order: A Study of the Social Impact of Oil Wealth. Boulder: Westview Press, 1982, p. 63.

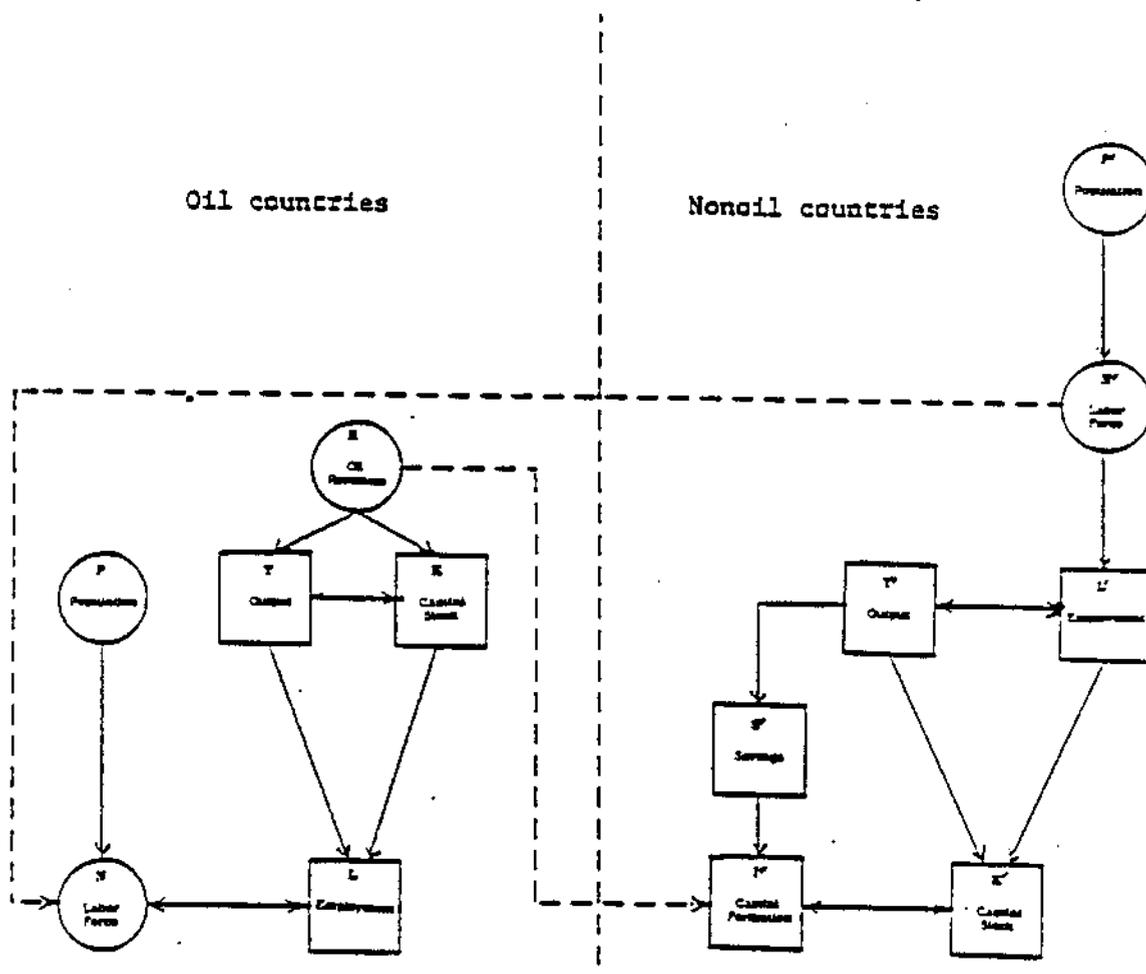
migrate to the oil-rich Arab states (ORAS), and capital flows from the ORAS to the LRAS. A neo-classical model (Figure 3), developed by Sherbiny, shows this flow. The model focuses on the supply and demand for the scarce resources in the ORAS and LRAS and demonstrates their mutual interdependence (Sherbiny, 1981, pp. 230-239).

The economic impact of these transfers was demonstrated further by Sherbiny in the following figures. For the non-oil countries, labor and capital are denoted on Figure 4, by L' and K' , respectively. Figure 4 shows that the highest output from the combination of capital and labor in the LRAS is Y_1 , if there are no outflow of labor and inflow of capital to and from these countries. At this level of production, the LRAS will use all their capital sources, but will continue to have a surplus of labor equal to $M'L'$ in the graph. The constraints on economic growth in the LRAS obviously is a capital shortage. For the LRAS to achieve an output level of Y_2 , they need to have the surplus capital KR , shown in Figure 5.

Figure 5 is the same graph for the ORAs, labor and capital denoted by L and K , respectively. The highest output the ORAS can achieve by employing only their own labor and capital is Y_1 , which absorbs their entire labor force but leaves a surplus of capital KR . For the ORAs to achieve an output level of Y_2 , they need to import $L'M'$ labor from the LRAS.

FIGURE 3

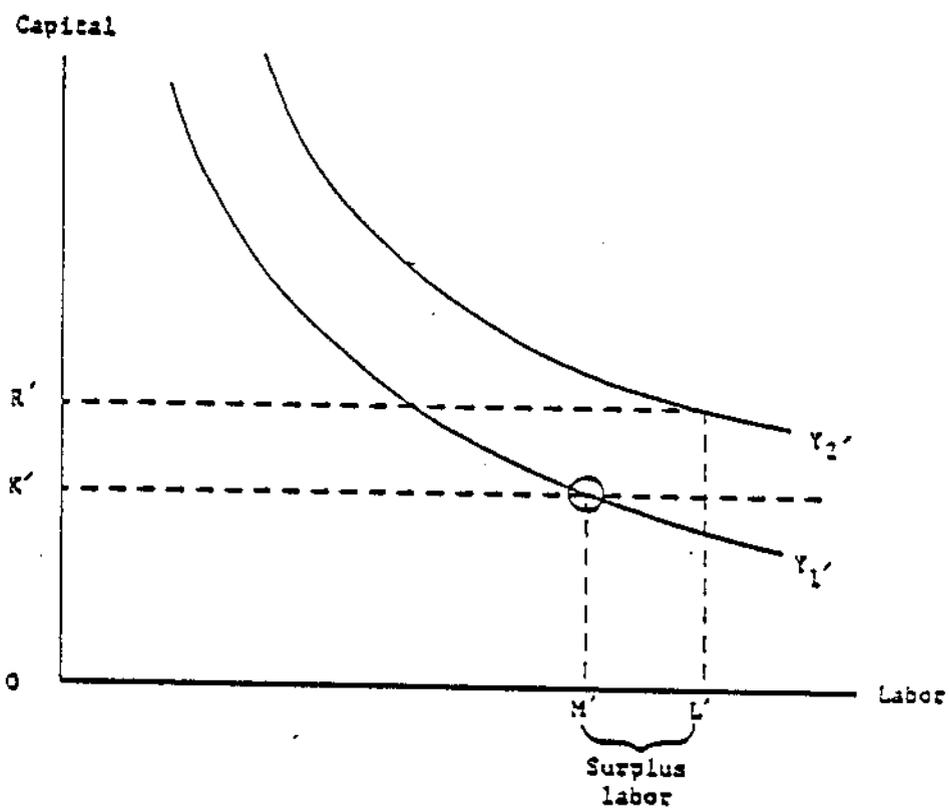
SCHEMATIC REPRESENTATION OF RESOURCE FLOWS BETWEEN AND WITHIN THE ARAB COUNTRIES

Notation:

- P - Population
- N - Labor force
- L - Employment
- K - Capital stock
- Y - Output
- S - Savings
- I - Capital formation
- R - Oil revenues

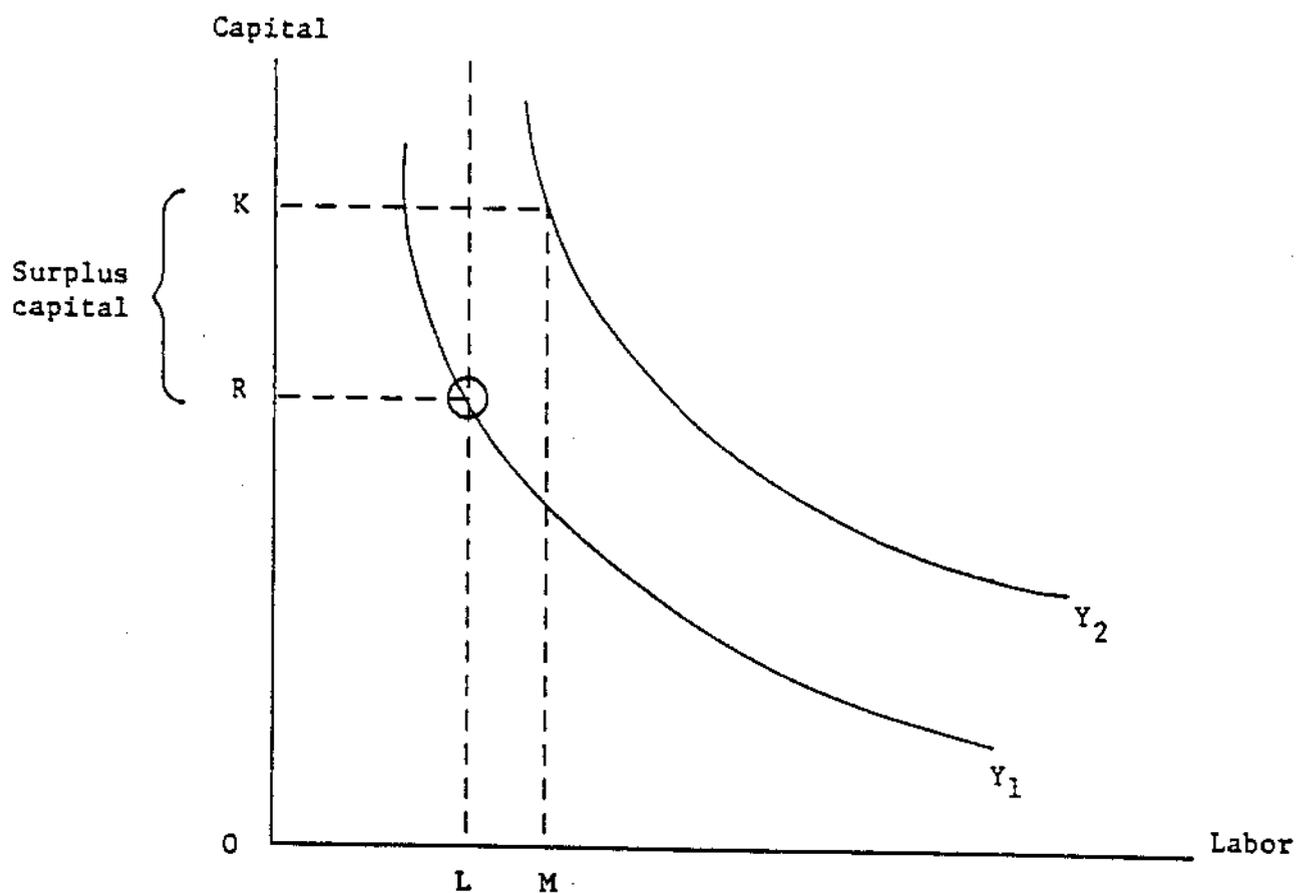
Source: Naiem Sherbiny, 1981 Mandpower Planning in the Oil Countries (Greenwich, CN: JAI Press Inc.

FIGURE 4
RESOURCE ENDOWMENT AND PRODUCTION FUNCTIONS
(NON-OIL COUNTRIES)



Source: Naiem Sherbiny, 1981 Manpower Planning in the Oil Countries (Greenwich, CN: JAI Press Inc.

FIGURE 5
 RESOURCE ENDOWMENT AND PRODUCTION FUNCTIONS
 (OIL COUNTRIES)



Source: Naim Sherbiny, 1981 Manpower Planning in the Oil Countries (Greenwich, CN: JAI Press Inc.

essential if they are to grow to their full economic potential. It is argued that the free flow of resources between these two groups of countries will contribute to the economic development and integration of the Arab world (Birks and Sinclair, 1980; Ibrahim, 1982; Serageldin et al., 1981; Sherbiny, 1983).

Capital as an integrative factor in the Arab world.

The increased production of oil caused the revenues of the oil-rich Arab states to grow from \$2.3 billion in 1965 to \$12.7 billion in 1973, and the sudden increase in the price of oil in 1973 and 1979 brought an additional windfall of wealth to the oil-rich Arab states, increasing their revenues from \$53.6 billion in 1974 to \$77.5 billion in 1977 and to \$100 billion by 1980. The dramatic increase in revenues enabled the oil-rich Arab states to accumulate a large capital surplus needed for development in the oil and non-oil Arab countries (Ibrahim, 1983, pp. 27-30).

A portion of this surplus capital was channeled by the ORAS to the non-oil countries in the form of governmental aid and private investments. The flow of capital from the oil to the non-oil countries became a major source of funds for the non-oil countries. Assistance from Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates to other Arab countries increased from \$1173 million in 1973 to

\$1,321.8 million in 1976 and to \$1,833 million in 1980 (Ghantus, 1982, p. 71).

The generosity of the oil-rich Arab states was motivated not only by religion and cultural kinship with non-oil Arab countries, but also with the belief that it was to their self-interest to promote economic welfare and stability in the region which always seemed to be in turmoil following the 1967 and 1973 wars. Furthermore, the lack of adequate investment opportunities in the oil states also motivated private investors from these states to seek investments in the non-oil Arab states. A number of enterprises were created as joint ventures in an attempt to promote investment opportunities to help absorb the surplus of capital (Ghantus, 1982).

Some of the oil-rich Arab states individually established Arab funds to provide loans to promote social and economic development and to strengthen Arab economic integration. In 1965 Kuwait founded the first bilateral fund for Arab economic development with an initial capital investment of \$150 million, which was later increased to \$600 million, and finally to \$3,380 million in 1974. Another of these development funds, the Abu Dhabi Fund for Arab Economic Development, was established in 1971 with \$150 million in capital, which in 1976 was increased to \$500 million. Two similar funds were established by Saudi Arabia and Iraq in 1974. The Saudi Arabia Fund for Development

with capital of \$3.5 billion (10 billion Saudi riyal) began operation in 1975 to lend funds to all developing countries, whereas the Iraqi Fund for External Development, with a capital of \$180 million, was solely for Arab countries (Ghantus, 1982).

Several multilateral financial institutions were also founded in the late 1960s. After the 1967 war, Kuwait proposed the creation of the Arab Fund for Economic and Social Development to assist Arab countries involved in the war (Egypt, Jordan, and Syria). This fund was based in Kuwait and subscribed to by all of the Arab states with a capital of \$1,200 million (400 million Kuwaiti dinar). Also in 1976 four of the gulf states established the Gulf Organization for the Development of Egypt which financed or guaranteed the flow of \$2,000 million to Egypt.

Another Kuwaiti proposal provided for the establishment of the Inter-Arab Investment Guarantee Corporation to provide insurance to private investors against possible losses arising from non-commercial risks such as nationalization, or civil disturbances and war. This institution for encouraging and promoting private investments was established in 1974 with 15 members from the Arab states.

Creation of these regional financial institutions was not only to help the wealthy Arab states to create regional-wide investment opportunities, but at the same time to promote stability and political and economic integration.

The common heritage of Arabs, as Ghantus (1982) stated, would be promoted by these loans and grants of capital as well as increasing the interaction of goods and people throughout the region.

As a result of the efforts to encourage regional-wide financial institutions, several joint venture companies were established between the various states and businessmen in these states. Among the most well-known of these joint venture companies are the Arab Potash Company based in Jordan, the Arab Company for the Development of Animal Resources based in Syria, the Arab Company for Pharmaceuticals and Medical Supplies based in Egypt, and the Arab Company for Industrial Investment based in Iraq.

Similar efforts have been created to strengthen banks and lending institutions in the Arab region and to provide loans for businesses and individuals. These include such institutions as the Arab Monetary Fund in Abu Dhabi with capital of \$300 million (750 million Saudi riyal), and the Islamic Bank for Development in Jordan with capital of \$2,500 million. Table 4 shows the major joint venture economic activities undertaken in the Arab states since the 1970s. It should be noted that most of these joint ventures were either in the late 1960s or the 1970s; there have been few developments in the 1980s.

TABLE 4
THE MAJOR JOINT VENTURES IN THE ARAB WORLD

Name	Capital Year	Millions of Dollars Initially	at Present
Kuwait Fund for Arab Economic Development	1965	150	3,380
Arab Fund for Economic and Social Development	1967	1,200	1,200
Abu Dhabi Fund for Arab Economic Development	1971	150	500
Saudi Arabia Fund for Development	1974	3,500	3,500
Iraqi Fund for External Development	1974	180	180
Gulf Organization for the Development of Egypt	1976	2,000	2,000
Inter-Arab Investment Guarantee Corporation	1974		
The Arab Potash Company-Jordan	1976	75	75
The Arab Company for the Development of Animal Resources-Syria	1976	660	660
The Arab Company for Pharmaceuticals and Medical Supplies-Egypt	1976	130	130
The Arab Company for Industrial Invest-Iraq	1976	500	500
The Arab Maritime Petroleum Transport Company-Kuwait	1973	600	600
Shipbuilding and Repair Yard Company-Bahrain	1974	500	500
Arab Petroleum Investment Corporation-Bahrain	1975	1,200	1,200
Arab Petroleum Services Company-Libya	1975	300	300
United Arab Shipping Company-Kuwait	1976	550	550
The Arab Satellite Communication Organization-Saudi Arabia	1976	100	100
Arab Authority for Agricultural Investment and Development in Sudan	1976	NA	NA
The Arab Monetary Fund in Abu Dhabi	1976	300	300
The Islamic Bank for Development in Jordan	1976	2,500	2,500

Source: Elias Ghanus, Arab Industrial Integration: A Study for Development (London: Croom Helm, 1982).

Labor Force as an Integrative Factor in the Arab World.

Throughout history, movement of labor through the Arab world was a common occurrence because of the differences in distribution of population, quantity and quality of the labor force, and in economic activities in various parts of the region. The common cultural background facilitated labor migration and the subsequent adjustment of the immigrants. The circulation of manpower in the Arab world provided essential human talents to those areas needing manpower, and promoted the sense of pan-Arabism. As a result of past migration, it is now a common occurrence to find families with branches throughout the Arab world. Enterprises such as shopping centers may be found throughout the region which were established by families from Yemen, Palestine, Syria, and Lebanon. These businesses are being run by family members living in various countries. In the past, members of these entrepreneurial families have moved to various parts of the Arab world, and now their descendants continue their businesses (Ibrahim, 1982).

With the turn of the twentieth century, the Arab world experienced colonization by the West and the division of the Arab world into small nation-states. Restrictions on migration in this period hindered the movement of labor as well as other factors of production. Despite this division of the Arab world, Birks and Sinclair argued that many Arabs kept the sense of unity and did not recognize national

borders. Even today, political parties and national movements normally have members in several or all of the Arab countries. Some Arabs argue that what has taken place since the oil discovery is not international labor migration, but a continuation of the traditional circulation of manpower within their own region (Birks and Sinclair, 1980, p. 355).

Table 3 shows a wide disparity between the Arab states in terms of size of population, labor force, and wealth. The most densely populated countries of Egypt, Morocco, and Sudan are also the poorest in the Arab world, while the smallest states of Qatar, Bahrain, Kuwait, and the United Arab Emirates are the least populated but among the wealthiest of the Arab states.

This pattern in which the least populated have huge amounts of wealth and the densely populated have the least is further aggravated by the high growth rates in the poorest parts of the Arab world. The growth rates in the Arab states is also shown in Table 5.

The combined growth rate in the Arab world increased from an annual rate of 2.4 percent in the mid-1950s to the current annual rate of 3.1 percent. Concomitantly, the Arab labor force has grown from about 30 million in 1951 to 60 million today, and is expected to reach 80 million by the turn of the century (Massialas and Jarrar, 1983, pp. 1-17).

Creating jobs for millions of new entrants into the labor markets presents a major challenge to the Arab states.

TABLE 5
ESTIMATION OF POPULATION AND LABOR FORCE
GROWTH IN THE ARAB WORLD 1950-2000

Year	Population Million	Percent Growth Rate/Year	Labor Force
1950	72.7	2.4	N.A.
1960	106.2	3.0	28.1
1970	124.0	3.0	N.A.
1980	165.0	3.1	54.7
1990	200.0	3.0	60.8
2000	286-301	2.8-3.1	81.5

Source: Byron Massialas and Samir Jarrar. Education in the Arab World. New York: Praeger, pp. 1-17, 1983.

The difficulties of this task are magnified by the fact that about 75 percent of the labor force comes from the non-oil countries which cannot finance development fast enough to absorb all of these new workers.

The full impact of the manpower challenges may not be fully reflected in these population growth statistics, since the rate of participation in the active labor force is very low in the region. Only about 30 percent of the total manpower participates in the labor force, compared to about 41.7 percent of the labor force in Asia, and 37.9 percent in Africa (Massialas and Jarrar, 1983, p. 4).

The low rate of participation in the labor force, in part, reflects the age structure in these countries. Approximately 45 percent of the total population in the Arab

world is under 15 years of age and are dependent on those working in the labor market. Furthermore, participation of women in the labor force is very low, estimated to range from 2 to 14 percent in various Arab countries. Also, many men in their productive years do not work because of early mandatory retirement policies. The military and civil services, strongly encourage early retirement because of the surplus of manpower. Since these relatively young retirees lack training and skills needed in the civilian labor force, most remain unemployed (Massialas and Jarrar, 1983, pp. 4-17).

The educational level in the Arab world also contributes to the high level of unemployment. The regional literacy rate is only 30 percent. Between 70 and 80 percent of the adult population in the Arab world are either illiterate or lack necessary skills to hold any but the most unskilled types of jobs. As a result, more than half of the labor force still works in traditional occupations (Serageldin et al., 1983, pp. 95-99).

According to Massialas and Jarrar (1983), the number of workers in agriculture increased from 18 million in 1960 to about 25 million in the 1980s. The seasonal nature of employment in agriculture creates further problems of unemployment and under employment since other sectors of the economy are too undeveloped to absorb these workers (pp. 5-8).

The uneven distribution of population and resources among the Arab states has stimulated migration of labor throughout the region for many years. New patterns of migration have developed since the 1950s and 1960s because of the discovery of oil in some Arab states. The traditional flow of migration was mainly from the southern part of the Arabian peninsula northward and westward to the populated centers in the levant and North Africa. The discovery of oil reversed this traditional flow of labor from the north and west to the south and east, where the less-populated, oil-rich Arab states (ORAS), with the exception of Iraq and Libya, are located in the Arabian peninsula (Ibrahim, 1982, p. 30).

Oil-rich Arab states like Bahrain, Kuwait, Libya, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and to a lesser degree, Algeria and Iraq, import labor from the labor-rich Arab states (LRAS) or the non-oil Arab countries, such as Egypt, Jordan, Lebanon, Sudan, Syria, and the two Yemens. Until the 1980s, laborers in other Arab states such as Morocco, Algeria, and Tunisia largely migrated to the European countries, but recently laborers from these countries have begun to migrate to the labor market in the oil-rich Arab states, especially to Libya (Bouhdia, 1979, pp. 134-187).

In the 1950s and 1960s, the original labor migration to the ORAS was made up of highly-skilled and professional

employees such as teachers, doctors, engineers, and university graduates who were recruited mainly from Egypt and Jordan through state-to-state missions. The total number of Arab labor migrants to the ORAS before 1973 was estimated to be 679,000 workers (Ibrahim, 1982, p. 34).

The huge increase in oil revenue from \$2.3 billion in 1965 to approximately \$100 billion in 1980 enabled the oil-rich Arab states to launch ambitious social and economic development plans. When these states tried to implement these plans in the mid 1970s, they were faced with the constraint of labor shortages. They turned to Jordan and other Arab countries who had a surplus of labor with the human talents the rich states needed to develop their countries (Sherbiny, 1981, pp. 15-18).

The rush to develop the ORAS increased this demand for foreign workers. By the mid-1970s, after the oil price revolution, the number of migrant workers in the ORAS was estimated to be 1,610,600. The composition of the labor migration as a result of the state of development in the ORAS after 1973 was made up of skilled, semi-skilled, and even many unskilled workers. Table 6 shows origin and skills of workers migrating to those countries. The occupational trend is expected to stay the same till 1990 (Ibrahim, 1982, pp. 34-35).

The type of workers being imported to the ORAS reflected the stage of development in the ORAS. For

TABLE 6

ARAB MIGRANT WORKERS IN THE MAJOR LABOR-IMPORTING COUNTRIES BY COUNTRY OF ORIGIN AND OCCUPATIONAL LEVEL, 1975 AND 1985

Country of origin	Year	Professional and technical (A-1)		Other professional (A-2)		Sub-professional and technical (B-1)		Other sub-professional (B-2)		Skilled office and manual (C-1)		Semi-skilled office and manual (C-2)		Unskilled (D)		Total	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Egypt	1975	8.9	2.5	27.2	7.7	8.4	2.4	19.3	5.5	24.4	9.7	63.5	18.0	191.6	54.2	353.3	100.0
	1985	30.9	4.3	73.2	10.3	25.6	3.6	58.7	8.2	96.1	13.5	86.6	12.2	340.4	47.9	711.5	100.0
Jordan	1975	11.1	8.0	26.8	19.3	12.9	9.3	16.5	11.9	21.9	15.7	8.9	6.4	40.9	29.4	139.0	100.0
	1985	26.3	10.2	52.4	20.3	29.0	11.3	41.9	16.3	38.6	15.0	20.9	8.1	48.3	18.8	257.4	100.0
Lebanon	1975	4.4	15.4	5.1	17.9	2.9	10.2	5.6	19.6	5.7	20.0	2.6	9.1	2.2	7.8	28.5	100.0
	1985	13.9	19.8	12.7	18.1	9.6	13.6	17.5	24.9	10.0	14.2	4.0	5.7	2.6	3.7	70.3	100.0
Oman	1975	0.2	0.6	0.2	0.6	0.2	0.6	0.6	1.9	3.5	11.3	7.1	23.0	19.1	62.0	30.9	100.0
	1985	0.4	0.9	0.4	0.9	0.3	0.6	0.9	2.0	5.8	12.6	17.6	38.3	20.5	44.7	45.9	100.0
Sudan	1975	2.6	10.0	3.1	11.9	1.8	6.9	3.3	12.7	2.8	10.8	4.2	16.1	8.2	31.6	26.0	100.0
	1985	7.4	8.4	10.1	11.5	5.1	5.8	10.6	12.0	14.2	16.1	21.8	24.8	18.8	21.4	88.0	100.0
Syria	1975	2.2	5.8	6.8	17.9	2.0	5.3	4.9	12.9	6.9	18.2	6.1	16.1	9.1	23.8	38.0	100.0
	1985	7.0	7.3	20.3	21.1	6.3	6.6	12.4	12.9	13.4	13.9	18.2	18.9	18.4	19.2	96.0	100.0
Y.A.R.	1975	0.1	--	0.6	0.2	0.2	0.1	0.8	0.2	28.1	8.6	73.8	22.5	224.8	68.4	328.4	100.0
	1985	0.3	--	1.5	0.4	0.5	0.1	20.	0.5	34.5	8.6	96.4	24.0	265.6	66.4	400.8	100.0
P.D.R.-Y.	1975	0.4	0.9	0.5	1.1	0.4	0.9	1.0	2.2	27.0	58.7	10.0	21.8	6.6	14.4	45.9	100.0
	1985	1.2	1.4	1.1	1.3	0.9	1.1	2.3	2.7	36.7	43.4	35.5	42.0	6.8	8.11	84.5	100.0

Note: Definitions of Occupational Groups: (A-1) requires a science of math-based university degree; (A-2) requires a fine or liberal arts-based university degree; (B-1) requires one to three years math- or science-based post-secondary or secondary vocational education; (B-2) requires one to three years non science- or non math-based post-secondary or secondary vocational education; (C-1) requires completion of general secondary; (D) requires intermediate civil education completion.

Source: Ismail Serageldin, James Sockrat, Stance Birks, and Clive Sinclair, and Clive Sinclair, Some issues related to labor migration in the Middle East and North Africa, in The Middle-East Journal, V. 38, 1984, pp. 615-642.

instance, in the mid-1970s migrant labor made up 65 percent of the construction work force in Libya: 67 percent in Oman, 95 percent in Kuwait, and 47.6 percent in Saudi Arabia. This labor pattern reflects the fact that in the 1970s these countries were in the stage of building the infrastructure of their countries. Also, migrant industrial workers made up 86 percent and 62 percent of all industrial workers in Kuwait and Saudi Arabia, respectively, reflecting the fact that these countries were beginning to industrialize. Professional workers who had migrated in the 1970s held 85 percent of all top professional and administrative positions in Kuwait, 75 percent in Saudi Arabia, 56 percent in Libya, and 85 percent in Oman. This pattern of professional migration indicates the serious shortage of highly-skilled and professionally-trained personnel that existed in these countries (Ibrahim, 1982, pp. 39-45).

The huge labor flow from labor-rich Arab states (LRAS) to the oil-rich Arab states (ORAS) which was set in motion in the 1970s continued through the 1980s. The huge increase of oil revenue in the 1970s and the early 1980s continued to generate new demands for foreign workers. In 1983 the World Bank study estimated that Arab labor migrants in the ORAS would reach 3.5 million by 1985 (Serageldin et al., 1984), and the number of non-Arab migrant workers would increase to 4 million in the same period (Ibrahim, 1982, pp. 59-62). In a study completed in 1984, Sherbiny forecast that the ORAS

would import between 1.63 to 1.78 million additional workers during the period of 1985 to 1990 (Sherbiny, 1984, pp. 643-677).

In the late 1970s and early 1980s the demand for foreign workers in the ORAS increased in every category. The strong demand for professional and technical occupations continued, and has expanded by almost 170 percent since the price of oil revolution 1973. The number of technical workers has also increased, growing 108 percent in the same period. Sub-professional workers grew by 145 percent, and even semi-skilled and unskilled increased by 71 and 21 percent, respectively. Indigenous or local labor in the ORAS is estimated to provide only half of the total manpower needed in the 1980s. The other half must be imported from Arab and non-Arab countries (Serageldin et al., 1983, pp. 25-39).

Another development in the Arab labor market resulting from the huge labor flow to the ORAS is the replacement of laborers who migrate from the LRAS with workers from other Arab or non-Arab countries. By the mid-1970s, countries such as Jordan, North Yemen, and to a lesser degree, Oman and Iraq, who are considered to have a surplus of labor, faced a labor shortage as a result of the out-migration of labor. Consequently, these countries began to import labor to substitute for workers who migrated to the ORAS. Wage differentials between these countries and other labor-

exporting countries, such as Egypt, Syria, Pakistan, India, and others, helped make possible the secondary, or replacement, migration in the region (Ibrahim, 1982, pp. 40-45).

Table 7 shows that Jordan and other countries in similar circumstances imported a large number of laborers from Arab and non-Arab countries. Jordan mainly exports professional and skilled workers and imports semi-skilled and unskilled labor. On the other hand, Yemen and Oman normally export semi-skilled and unskilled labor and import professional and skilled workers.

TABLE 7
LABOR EXPORTER AND IMPORTER ARAB COUNTRIES
1975

Country	Total Number Exported	Total Number Imported	Net Number Exported
Jordan	264,717	32,800	232,917
Iraq	20,625	15,200	5,425
Oman	38,413	8,800	29,613
N. Yemen	290,128	2,350	289,778

Source: Sa'ad Eddin Ibrahim, The New Arab Social Order: A Study of the Social Impact of Oil Wealth (Boulder, CO: Westview Press, 1982) p. 43.

The large-scale entry of Asian workers into the Arab labor market by the mid-1970s is still another major development caused in the oil price boom. Table 8 shows

that the number of migrant laborers from south and south-eastern Asia expanded from 18.5 percent of all migrants in the ORAS in the 1970s to approximately 30 percent of the total migrant labor force by the mid 1980s. The migration of Asians is expected to rise even more in the future (Choucri, 1986, pp. 252-273).

TABLE 8
COMPOSITION OF LABOR FORCE IN THE ORAS
BY SOURCE AND PERCENTAGE,
1975 TO 1985

Source of Labor	1975		1985		Annual Increase 1975-1985
	Total Labor Force	%	Total Labor Force	%	
Nationals	9,758.3	75.7	14,313.3	60.0	3.1
Other Arabs	2,237.3	17.4	5,688.8	24.0	6.0
South and Southeast Asians	579.8	4.5	2,808.6	11.5	7.9
Others	309.3	2.4	1,066.3	4.5	7.0
Total	12,883.7	100.0	23,879.0	100.0	--

Source: Ismail Serageldin, James Sackrat, Stance Birks, and Clive Sinclair. "Some Issues Related to Labor Migration in the Middle East and North Africa." The Middle East Journal, v. 38, 1984, pp. 615-642.

The inability of the LRAS to meet their own needs and the demands of the ORAS coupled with the willingness of Asian workers to accept jobs and wages not generally acceptable to Arab workers, is responsible in part for the growing number of Asian workers. These developments in the Arab labor market reflect the importance of labor to the economic development of the region since the oil price revolution in 1973 (Choucri, 1983, pp. 254-256).

Impact of the Labor Migration on Regional Development.

In the immediate post-World War II period, all Arab countries were classified as underdeveloped. Traditional sectors and traditional activities such as pearling, date cultivating, boat building, weaving, fishing, livestock, and agriculture were the main sources of employment in the now so-called oil-rich Arab states, as well as in the other Arab countries. A small portion of people worked as traders and fewer were employed in manufacturing or the services sectors (Birks and Sinclair, 1980, pp. 343-346).

The discovery of oil with the revenues it produced made it possible for the ORAS to improve the welfare of its people, and the oil price boom in 1973 overcame the capital constraints to economic development. Industrialization was seen as the key to modernization and development. Therefore, these countries set about trying to create industrial sectors. (Birks and Sinclair, 1980, pp. 22-24; Hershlag,

1979, pp. 64-65). Expansion of the infrastructure as well as the development of human resources capable of building, managing, and maintaining these projects were included in their national plans. Teachers, doctors, and engineers were imported to help in implementing educational, health, and housing programs. The influx of labor was essential for the ORAS to implement their ambitious economic developmental plans (Sherbiny, 1984, pp. 643-667).

Through labor migration, the economies of the ORAS are being transformed from traditional to modern. The evolution of this economic development in the ORAS can be seen in the changing patterns and number of migrants as discussed earlier. Also, by developing their own countries, the ORAS created investment opportunities for private capital, thus helping to keep the money within their own countries. An increased standard of living as is reflected in the per capita gross national product which ranges from \$1,390 in Iraq to \$15,840, \$13,990 and \$11,400 in Kuwait, the United Arab Emirates, and Saudi Arabia respectively shows the scale of this development (Birks and Sinclair, 1980, p. 10).

Although migrant labor contributed significantly to the development of the host countries, their numbers, composition, and national diversities have raised serious questions about their effects on the social, economic, political, and security matters in the ORAS, as well as on the whole region. The increasing number of migrants, estimated to

reach 10 to 12 million by 1990, plus their families, means that there will be between 20 to 30 million foreigners in the ORAS. These countries with, the exception of Algeria and Iraq, have relatively small populations of only 14 to 20 million. This huge number of foreign workers and their families threatens to completely change the culture in these countries. Furthermore, the diversity in nationalities makes the ethnic composition of the migrants a serious problem in the ORAS. The cultural differences between various ethnic groups and the native population frequently clash and threaten these closed societies. There seemingly is no end to the problems.

Even after the development phase is over, these countries will still be dependent on migrant laborers (Sherbiny, 1984, pp. 643-667).

Despite the fact that the ORAS normally does not grant citizenship or permanent residence to migrants, many stay for years and some for generations. This settling-in process has caused concern among policy makers in the oil states. This is especially true in the small gulf states which literally feel as if foreigners have taken over their countries.

The availability of imported workers has caused the natives of the ORAS to withdraw from certain types of work. Relatively few natives of the ORAS, for instance, are found in the productive sectors of manufacturing, construction,

and services. Most prefer employment in the government or the private sector in trade or commerce. Even the unskilled and uneducated workers in the traditional sectors, estimated to be about 50 percent of the total labor force in Saudi Arabia, Libya, and Algeria, tend to desert this type of employment as their educational and financial status increases. This trend portends the importation of even more foreign workers in the future (Serageldin et al., 1983, pp. 105-106).

Unlike the oil-rich Arab states, the labor-rich Arab states have not experienced economic growth as rapidly, and have had difficulty maintaining the momentum for development. Economic development in the LRAS suffers generally from the same problems as other developing countries, such as high population growth, low capital formation, low domestic saving, inflation, and weak currencies. In addition, a high level of unemployment or underemployment continues to threaten these economies (Birks and Sinclair, 1980, pp. 24-25).

A high percentage of the work force in the LRAS earn their living in the traditional sector. These countries' attempts to industrialize have been limited and often unsuccessful. The lack of job opportunities forces workers either to enter the traditional economic sector or to become a migrant worker in the ORAS (Birks and Sinclair, 1980, pp. 24-25). Economic development in the LRAS was affected by

the oil boom almost as much as the ORAS since it provided an outlet for the surplus labor force. In a sense, the opportunity for laborers to migrate served as a safety valve for the LRAS (Burk, 1984, pp. 669-684).

For instance, in the mid-1970s Jordan experienced almost full employment, and even had to import foreign workers as a result of Jordanian labor migration to the ORAS. Also, the flow of workers and their families reduced demands on the governments in the LRAS for a host of services. These services such as education, health, housing, and others were provided by the ORAS to those migrating. Reduction of these domestic demands permitted the governments of the LRAS to provide better services for those remaining in the country (Muzur, 1979).

Migrant laborers frequently sent part of their earnings to their families in the home countries. The flow of these remittances from the ORAS to the labor-exporting countries provided the LRAS with a source of scarce foreign currency which served as a potential source of capital formations. In addition to these remittances, the ORAS also frequently made grants to the LRAS for economic and social development. Table 9 shows the impact of labor remittances on some of the labor exporting and importing countries between 1974 and 1984. The flow of remittances to Egypt, for instance, climbed from approximately \$310 million in 1974 to over \$3 billion in 1984. These remittances helped improve the

TABLE 9

TOTAL INFLOW OF REMITTANCES IN SELECTED LABOR-EXPORTING COUNTRIES
AS A PERCENTAGE OF GDP, EXPORT AND IMPORTS
(In Millions of US Dollars)

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Sudan	4.9	1.5	36.8	37.0	66.1	115.7	209.0	322.7	107.1	245.8	275.3
Egypt	310.9	455.0	842.0	988.0	1824.0	2269.0	2791.0	2230.0	2160.0	3315.0	3611.0
N. Yemen	135.0	270.2	675.9	987.1	910.1	936.7	1069.5	777.4	911.4	1084.4	995.5
Jordan	82.0	172.0	401.8	420.8	468.0	509.0	666.5	921.9	932.9	923.9	1053.3
INFLOW OF REMITTANCES AS A PERCENTAGE OF GDP IN MAJOR LABOR-EXPORTING COUNTRIES IN THE MIDDLE EAST											
Sudan	00.14	00.03	00.69	00.55	00.80	1.51	2.56	3.60	1.62	3.63	N/A
Egypt	2.89	3.64	5.25	4.71	7.30	12.63	12.63	9.29	7.26	10.44	N/A
N. Yemen	21.77	32.67	62.49	65.43	50.43	42.51	40.94	27.03	28.41	N/A	N/A
Jordan	9.80	17.10	30.70	27.20	22.00	20.80	19.50	24.60	24.20	22.10	24.80
INFLOW OF REMITTANCES AS A PERCENTAGE OF EXPORT											
Sudan	1.40	0.34	6.64	5.60	12.70	21.12	38.51	48.36	20.79	39.42	N/A
Egypt	20.45	32.45	55.33	57.83	104.99	123.33	91.60	68.98	67.82	103.13	N/A
N. Yemen	1019.59	2582.47	8836.00	8900.50	13266.30	6926.60	4732.90	1637.50	N/A	N/A	N/A
Jordan	61.20	132.90	261.60	231.90	217.40	189.50	158.10	171.00	172.10	206.20	144.60
INFLOW OF REMITTANCES AS A PERCENTAGE OF IMPORT											
Sudan	0.67	0.15	3.75	5.52	5.52	10.30	13.26	8.28	18.15	N/A	N/A
Egypt	13.18	11.57	22.12	20.52	27.12	59.13	57.43	25.39	23.31	32.26	N/A
N. Yemen	71.41	91.98	163.80	94.93	70.89	62.79	57.72	44.21	59.92	N/A	N/A
Jordan	15.42	23.4	38.17	30.75	30.36	26.53	27.58	27.96	29.92	35.24	

Source: IMF International Financial Statistics Yearbook, December 1980, February 1983, and December 1985; Nazli Choucrist, 1986, The hidden economy: A new view of remittances in the Arab world, *World Development*, V. 14, No. 6, pp. 607-712.

standard of living from 2.5 to 3.0 million families in Egypt. For Jordan, remittances increased from approximately \$16 million in 1961 to over \$1.0 billion in 1984, before they began to slowly decline to \$765.9 in 1987.

When remittances are viewed as a ratio to total export and import in the LRAS, as shown in Table 9, their importance is clearly demonstrated. For instance, in Egypt, Jordan, and North Yemen, the ratio of remittances to exports is 1.3, 1.4, and 123.5. This shows that remittances amount to more than the total export of goods from these countries and are vitally important to their economies. Similarly, the ratio of remittances to GDP demonstrates the role remittances play in the domestic economies of the LRAS. For instance, in Egypt the ratio of 0.10 shows that the remittances create 10 percent of the total GDP. In Jordan and North Yemen, even more of GDP comes from the remittances since the ratio of remittances to GDP is 0.27 and 0.28, respectively (Choucri, 1986, pp. 697-712).

Economists generally consider the impact of remittances to be similar to foreign aid and direct foreign investment. Although the impact of these three types of capital flows on the balance of payment is essentially the same, their respective contribution to capital outlay and economic growth are not identical, and there are problems created by remittances (Serageldin, 1983, p. 86).

Foreign aid and foreign investments are normally channelled through governments or private investors for particular purposes. Remittances are the personal income of migrants and can be used for consumption or saving as the workers and their families prefer. As a result, remittances may present problems for labor-exporting countries which are not present for foreign aid and investments.

Evidence shows that a high portion of remittances are used to purchase such items as land, housing, and consumer durables, none of which increase the productive capacity of the country. Also, remittances tend to fuel inflation in the labor exporting countries since there are relatively few goods to buy with the migrants' increased purchasing power. This additional income frequently causes a boom in imported goods and introduces new patterns of consumption which are expensive and difficult to maintain (Quaraan, 1988).

The unpredictability of the level of remittances further prevents the governments from taking adequate fiscal and monetary steps to stabilize the economy. A high portion of remittances come into the country through workers visiting home, rather than through banks or official channels. As a result, there is a great deal of foreign currency in the black market, which is beyond the government's control, and which makes it even more difficult to stabilize the economy (Serageldin, 1982, p. 89). It was stated by Ibrahim (1982) that no one knows exactly what portion of the

remittances are traded through the currency black market. Estimates vary from 20 to 100 percent, equivalent of the amounts transferred through official channels in Egypt in the period between 1973 and 1978 (pp. 70-73). Recent indications show that the currency black markets are found and operate in many of the LRAS and the ORAS as well.

(Ibrahim, 1982, p. 39).

As a result of the problem discussed above, labor migration is a mixed blessing for the labor exporting countries. There is a wide divergence between the gains to society and the individuals. For the individual migrants, the reward is higher wages and an accompanying higher standard of living, plus new experiences and exposure to a new environment. For the labor-exporting countries as a whole, there is a debate as to whether they benefit or not.

Economists, as well as political decision makers, argue that in the long run, social and economic problems generated by migration outweigh the short-run advantages (Hassan Bin Talal, 1984; Burki, 1984; Birks and Sinclair, 1982; Choucri, 1986; Serageldin et al., 1984; Ibrahim, 1981). Economic growth in the LRAS is not advanced and personal income remains very low.

Unemployment problems are not solved by migration, since the pattern of migration indicates that the employed and skilled workers are normally the first to be hired. In turn, this migration of key personnel hinders the

developmental plans of the LRAS and disrupts their economies. Replacing the loss of highly-educated, skilled workers takes a long time because of the inflexibility of the educational systems in these countries. At the same time, the uneducated and unskilled workers are worse off, since the economies do not expand as planned (Serageldin et al., 1982).

There are also harmful social impacts from migration. Migration creates a group accustomed to high pay with new patterns of consumption, who easily become discontent with conditions in their home land upon their return. The experiences of these migrants raises their expectations and aspiration to unattainable levels, creating additional frustrations which may lead to political instability. Furthermore, those national workers who do not migrate suffer from inflation created by the influx of foreign currencies to the country, and are injured by the instability created by the returning workers and the widening gap between groups within society (Choucri, 1986; Ibrahim, 1982).

The Unfulfilled Dream of Regional Integration and Development

With the discovery of oil, much of the Middle East felt that the dream of Arab development and integration was about to become a reality. It was assumed, especially after the 1973 and 1979 oil-price revolution with its huge injection

of capital into the oil-rich Arab states (ORAS), that economic development and integration would occur as the money from oil increased development, and, in turn absorbed surplus laborers throughout the region (El-Mallakh et al., 1977; Guecioueur, 1981; Kerr and Yassin, 1982; Sherbiny, 1984). Scholars such as Sherbiny assumed that the mutual independence of the ORAS, with their abundance of capital, and the LRAS, with their abundance of labor, would bring about economic development and integration to the region, despite the lack of political unity (Sherbiny, 1981). Now some twenty years later, it is evident that the Arab dreams of regional integration and development have not become a reality.

This failure has occurred in part because sufficient capital has not been invested in the non-oil Arab states. Although grants and aid have been made and remittances from Arab migrants laborers have been sent back home, these have been insufficient to enable these economies to become self-sustaining. This has generated an on-going controversy between the ORAS and LRAS as to whether the LRAS have been treated equitably by their more affluent brothers.

According to El-Mallakh and his colleagues, approximately \$6.8 billion is needed annually by the labor-rich Arab states to develop their economies to an annual growth rate of 10 percent. Despite the fact that the total capital surplus for the ORAS has averaged 30 to 40 billion dollars

annually, the non-oil Arab countries claim that they have received only \$1.833 billion annually, or less than one-third of the estimated amount needed for development (El-Mallakh et al., 1977, pp. 80-93).

Capital which many believed would be used to generate regional development has not mutually affected development throughout the region. The reasons why adequate capital does not flow from the ORAS to the LRAS is complex. In part, it is due to political divisions and competition in the region which hinders the flow of capital. Also there are inadequate financial institutions and a lack of coordination in fiscal and monetary policies in the region. Therefore, there are few investment opportunities for private or public investors without taking exceptional risk (El-Mallakh, 1977, pp. 95-97).

Political differences and uncertainties in the region have been an obstacle to the free flow of capital through loans. Lending agencies in the region are forced to place severe restrictions on loans to the LRAS and individual investors in these countries. Usually lending agencies limit their financial involvement on any project to a maximum of 50 percent of its cost, with the host state providing the remainder. This type of restriction seriously hinders development in these countries (El-Mallakh et al., 1977, pp. 94-102).

Although remittances, as has been seen, are a major factor affecting the economies of the LRAS, only 30 to 50 percent of the migrants' earnings are sent to their home countries (Keely and Saket, 1984, pp. 685-698). Furthermore, a study of Egyptian migrants to the ORAS showed that only one-third of those remittances which were sent home went into investments. The other two-thirds of these funds were spent on non-productive, consumption items such as real estate, furniture, and cars, all of which help to fuel inflation (Ibrahim, 1982, pp. 87-88).

The possibility of labor migration from the LRAS to the ORAS, which generated much optimism in the 1970s concerning regional integration, has also been a disappointment. It is estimated that approximately eight million workers have crossed the borders between the LRAS and ORAS since the oil price revolution in 1973. Assuming that each laborer is a member of an average family of five, it would mean that approximately 40 million Arabs have been directly affected by the migration caused by the oil rush (Ibrahim, 1982, pp. 43-45).

Despite this immense cultural interaction, the sense of regional unity has not been strengthened. Rather than creating feelings of brotherhood and comity, more often this interaction causes hostility and alienation. The migrant community often accuses citizens of the ORAS of acting as if they think the migrant workers are there to steal their

birth right under the popular slogan, "oil of the Arabs is for the Arab." Policy makers, as well as the general public in the ORAS, fear the domination of their countries by the Arab workers. They also express concern that these workers may be used by their homelands as a political weapon against their people (Choucri, 1984, pp. 421-451).

Restrictions are often placed on migrant workers, thus limiting their free interaction in the ORAS societies. Migrants are paid less for the same work and are denied the right to join unions or even to change jobs should they desire. They are also restricted from any participation in political activities. Feelings of job insecurity and of being in a hostile environment result from these restrictions. As a result, labor migrants who expected to be treated as brother Arabs, entitled to certain rights in all Arab countries, find themselves treated as foreigners despite their common background of language, culture, and religion. Many highly-educated migrant workers who have been in the West, where immigrants are welcomed and enjoy full civil rights, express great bitterness about the discriminatory practices in these Arab states (Ibrahim, 1982, pp. 123-130). The ORAS justify these restrictions as an attempt to preserve a balance between growth and security. Importation of such a large number of Arabs to help develop their economies is believed to jeopardize their security and to threaten their cultural distinctiveness.

The potential danger of a large number of foreign laborers has led the ORAS to resort to a number of protective measures and policies. Restrictions are placed on the number of workers coming from Arab states. Many workers are now imported from other parts of the world, such as the Far-East and Southeast Asia. Another protective policy used by the ORAS is to insulate expatriates from the natives in industrial enclaves similar to military camps. Many projects are built as enclave development projects, where contractors are to supply all labor and equipment and then take them home upon completion of the project (Ibrahim, 1982, pp. 118-122).

Despite the flow of capital and labor generated by oil wealth in the last two decades, the region is not politically and economically integrated, and development has not occurred uniformly throughout the region. In fact, some argue that the region is more conflictual and disintegrated today than ever (Bani Hani, 1984, p. 181). Evidence of this disintegration may be seen not only from the conflictual political events that mar the region, but also in the relatively small portion of trade that occurs between Arab states. In the 1960s, it was estimated that about 8 percent of the total Arab trade was between Arab states. This percentage has declined in the 1970s and 1980s to about 6 percent, indicating that the region is experiencing reduced economic disintegration. Furthermore, each Arab state still

continues to make its own economic policies with little consideration of the impact on its neighbor. Little success has been made in lowering tariffs, and all efforts to unify or coordinate monetary policies of the various Arab states have failed (Aliboni, 1979, p. 96; Bani Hani, 1984, pp. 181-187).

Although all Arab states have undertaken long-term development plans to advance the well being of their people, little effort has been made to coordinate these plans with other Arab states, which are often essential to the success of the plans. The oil-rich states, for example, which have small populations and are dependent on non-oil Arab states for workers, have not considered the plans or the needs of other countries in the region. In fact, in recent years, they have begun to employ Far Eastern workers rather than Arabs from the non-oil Arab states. This situation has aggravated unemployment and development in the non-oil Arab states.

As a result of the deteriorating Arab relations and of the increasing structural imbalance between Arab states, many Middle-Eastern scholars call for new efforts to integrate the region and to promote economic development (Hassan Bin Talal, 1986; Ibrahim, 1982; Serageldin, 1983; Sherbiny, 1982). At a symposium held at Yarmouk University in Jordan in November 1981, the obstacles to Arab economic integration were summarized. It was stated that the lack of

integration between the Arab states negatively affected Arab economic joint efforts and caused them to be dependent on foreign markets. The wide differences in the stages of development, coupled with the different economic systems, divide the region and promote hostility between countries and prevent needed coordination of economic policies (Guecioueur, 1984, pp. 220-221).

After considering these obstacles to economic integration, the conference adopted the Arab common economic strategy which was approved by the first Arab economic summit meeting held in Jordan in 1980. The basic elements of this strategy provides that:

(a) the maximization of the flow of capital surpluses for national and regional investments with a view to developing an integrated self-sustaining productive base which would strengthen the economic structure of the countries concerned and achieve a balanced growth in both geographic and economic terms; (b) the development of manpower resources to meet regional requirements in the long-run through joint vocational and training programs; (c) the creation of an indigenous technological base, through pooling and coordinating national programs for development; (d) the creation of an efficient common infrastructure (Ghantus, 1982, p. 79).

Other scholars, policy makers, and international organizations involved in the Middle East have proposed that the following efforts are necessary to strengthen integration and enable the region to face future challenges and to achieve its goals. Among the major proposals which have been made to advance the region are the following:

1. In 1975 the Economic Commission for Western Asia (ECWA) proposed the consolidation of the various development funds into one financial institution, and the creation of a new specialized lending institution such as an industrial and agricultural bank to encourage development (El-Mallakh et al., 1977, p. 96).

2. At the Yarmouk University Conference in 1981, the creation of a common Arab dinar and a stock market with an Arab monetary fund to preserve its value was proposed (Guecioueur, 1984, pp. 96-110).

3. In 1971 Nazli Choucri, an Egyptian scholar, proposed many options to distribute the gains from labor migration between the LRAS and ORAS. These options called for an exchange of benefits, the labor exporting countries charge for the migrations of its labor, while the ORAS will have a commitment to investment in the LRAS (Choucri, 1971, pp. 421-451).

4. In 1977 the Crown Prince Hassan Bin Talal of Jordan proposed that the International Labor Organization help to create a compensation system whereby the ORAS would contribute to the development of the LRAS as a part of their compensation for the use of human resources from these countries (Hassan Bin Talal, 1984).

5. In 1982 Serageldin and his colleagues suggested a regional system for the improvement of developing human resources which would coordinate education, training,

migration, and employment in order to avoid a labor shortage between the Arab states (Sherbiny, 1982).

6. President Hosni Mubark of Egypt proposed the establishment of an international labor training facility as a means of dealing with the regional manpower problem in a speech before the International Labor Organization in 1983 (Ilo, 1983).

All of these proposals depend on greater political integration in the region (Choucri, 1971, pp. 421-451). As of yet, no one has shown how regional-wide integration can be achieved. Therefore, it has been suggested that bilateral relations between countries be encouraged in hopes that this will ultimately lead to regional integration (Chantus, 1982, p. 32). Sub-regional entities, it is believed, may help to unify areas with common political and economic levels of development and interest. One such sub-regional entity is the Gulf Cooperation Council established in 1981 which is composed of Bahrain, Kuwait, Oman, Saudi Arabia, Qatar, and the United Arab Emirates. The charter of the Council aims to strengthen policy coordination, consultation, and cooperation in all fields and activities (Gulf Cooperation Council, 1981, pp. 2-3; Nakhleh, 1982, pp. 46-47).

Two other such sub-regional entities, the Meghreb States Cooperation Council between Libya, Algeria, Tunisia, Morocco, and Mauritania, and the Arab Cooperation Council

between Iraq, Jordan, Egypt, and North Yemen were established in 1989. Both aim at increasing cooperation and coordination among its members in all economic, social, and political areas. As of yet these sub-regional entities have not demonstrated that they can advance the cause of Arab integration.

While the call for Pan Arabism of the past might not work, it also is not sure if this incremental call to nearby brothers of similar interest will work either. The region can only continue to dream of its past glories when it was united in one political entity.

The next chapter will focus upon one Arab country, Jordan, and how it has dealt with its labor problems.

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CHAPTER IV
PROFILE OF POLITICAL, SOCIAL AND ECONOMIC
DEVELOPMENT IN JORDAN
1921-1987

The Hashemite Kingdom of Jordan (HKJ), a non-oil country, has faced major challenges since its independence in 1946. This small developing country, with limited resources and all of the problems of national development, has been at the center of a series of Arab-Israeli conflicts. The strategic location of Jordan between the wealthiest and strongest states in the Middle East has been a mixed blessing. On one hand, the fact that it is a buffer state between the strong and rich states in the region has played a major role in its survival. All types of aid have flowed into Jordan from its Arab neighbors as a result of its location. On the other hand, its location makes Jordan most vulnerable to conflicts in the region, as may be seen in the series of wars between the Arabs and Israelis in 1948, 1967, and 1973, the Lebanese crises, the fluctuation in oil prices, and the Iraq-Iran War. All of these events have had serious effects on Jordan and have created major problems for its economic system, especially its labor force.

Conditions Before 1948

The land now making up the Hashemite Kingdom of Jordan was a part of the Ottoman Empire until the end of World War I. After the war and the dissolution of the Ottoman Empire in 1920, both Trans-Jordan (the East Bank) and Palestine (including the West Bank of Jordan) were placed under British mandate by the League of Nations. The British administered the mandate through separate administrations, one for Trans-Jordan and the other for Palestine (Nyrop, 1979, p. 3).

In 1924, Trans-Jordan gained nominal independence when Amir Abdullah Ibn Hussein, who had been a principle figure in the Arab revolt against the Turks, was proclaimed Amir of Trans-Jordan. Although the British continued to maintain control over defense and external affairs, the British mandate finally ended. Trans-Jordan gained full independence on March 22, 1946, with Amir Abdullah Ibn Hussein as the King of the new Hashemite Kingdom of Trans-Jordan (Nyrop, 1979, pp. XIX-XX).

At the time of its independence in 1946, Trans-Jordan occupied an area of 89,763 square kilometers with an estimated population of less than a half million persons. About 20 percent of the population lived in towns such as Amman, Salt, Irbid, and Ma'an which were the commercial centers of the country. The majority of people lived in villages and worked in subsistence agriculture and related activities.

In addition, the nomads and semi-nomads were estimated to be about 80,000 to 100,000 persons (Nyrop, 1979, p. 22; Sayigh, 1978, p. 189).

The poverty of Trans-Jordan is the result of an economy based primarily on primitive agriculture with only 13 percent of the total land able to be cultivated. Since there is a lack of water resources for irrigation, the country is dependent on rain-fed agriculture. However, the rainfall averages only about 8 to 12 inches per year and varies from region to region (Dempsey, 1983).

During the years of the British mandate, there was no industry in the country except for a number of flour mills and two cigarette companies owned by the British. The main non-agriculture enterprises in Trans-Jordan were involved in transit services such as transportation, storage, and others. These enterprises were stimulated by the location of Jordan between the Mediterranean Sea and Arab Peninsula and Iraq. Even these enterprises, however, were owned and operated by nonTrans-Jordanians (Mazur, 1979, pp. 5-8).

There was practically no educational system in Trans-Jordan in the 1920s. Educational affairs continued according to education laws of the Ottoman Empire until 1939 when a Ministry of Education was established. Despite the creation of the ministry, the British mandate administration did very little to promote public education in Trans-Jordan. Expenditures on education declined from an average of 6

percent of the total budget in the 1920s to about 2.5 percent in the 1940s. Lack of capital limited the number of schools and the number of students who were admitted. The ratio of students to the total population from the 1920s to the 1940s was only 1.4 percent in 1922, 1.23 in 1938, and did not exceed 2.4 percent until after 1946 (Al Tall, 1978, pp. 41-67).

Primary education was left entirely to the mosque, which taught basic reading and writing for religious purposes. By the 1930s, there were only 24 schools in Trans-Jordan, of which only four were secondary schools, located in Salt (the only complete secondary school), Irbid, Kerak, and Amman. There was only one vocational school in Amman. No post-secondary school of any kind existed in Trans-Jordan during the mandate period. A few students were either sent by the government, or at their own expense, to pursue their post-secondary education in other countries, but this was a very small number. In 1947, only 107 Trans-Jordanian students were in post-secondary schools in other countries (Al Tall, 1978, pp. 41-67).

During the mandate period, British administration lacked interest in any program to change the new state's economic structure, which hindered the country's development. For instance, no efforts were made to develop new agricultural areas in the Jordan River Valley nor to introduce new methods of agriculture. Also the large phosphate

deposits in the country were not exploited, and no effort was made to exploit the mineral deposits of the Dead Sea, which were being developed by the Palestine Potash Company on the other side of the sea.

Similarly, the hydroelectric power which was developed from the waters of the Yarmouk and Jordan Rivers in 1927 was not transmitted to Trans-Jordan even though the original agreement provided that the Palestine Electric Corporation was to supply electric current for Trans-Jordan as well as for Palestine. All electric power generated from the Rotenburg Power Station located at the point at which Jordan joins Palestine was transmitted to Palestine which was more developed and which was favored by the British (Madi and Mousa, 1959, p. 378). Trans-Jordan was also denied authority to charge a royalty fee on the pipeline owned by the Iraq Petroleum Company which carried oil across Trans-Jordanian territories from the Iraq oil fields to the Port of Haifa on the Mediterranean Sea. Also, Trans-Jordan was denied the right to build an oil refinery using the Iraqi oil from this pipeline to meet its own energy needs (Al Tall, 1978, pp. 15-21).

Despite the fact that there were opportunities for developing Trans-Jordan before 1950, little was done and the people remained miserably poor. Yearly per capita income was less than \$50 in 1946, and probably never more than this during the mandate period. Some argue this poverty was not

due to a lack of resources, but rather development was hindered by the ineffective use of human and natural resources during the mandate administration period and due to the fact that the British always put the interests of Palestine ahead of those of Trans-Jordan (Al Tall, 1978).

The ineffective use of national resources in Trans-Jordan complicated the problem of attaining needed capital from local resources, and the British economic policies prevented foreign capital from making investments in Trans-Jordan. About the only source of funds entering the country came in the form of grants-in-aid from Britain, money that was spent mainly on security matters (Shwadrans, 1959, p. 187). Furthermore, the lack of agricultural storage facilities and food processing industries caused the price of agricultural products to fluctuate widely, falling during good harvest seasons and increasing during poor harvests. Lack of an energy source prevented industrialization and caused the country to remain dependent on foreign industrial products. The lack of education and training facilities hindered the ability of Trans-Jordanian workers to attain employment in foreign labor markets and kept them dependent on the few jobs in the country.

Despite the economic backwardness, certain events contributed to the creation of job opportunities and the improvement of citizens' welfare during the period from 1920 to 1947. One major event was the formation of the Amirate

of Trans-Jordan in 1921 under the strong leadership of Amir Abdullah Ibn Hussein. The new states required the employment of administrators to operate the state's affairs. Many natives, as well as administrators from neighboring countries, found employment in the new state institutions. The scarcity of local professional administrators caused many key positions to be filled with Arabs from other countries, especially Syria and Palestine. Competition for these new posts motivated natives to seek higher education in neighboring countries such as Syria, Lebanon, Palestine, Egypt, and Iraq (Al Tall, 1978).

The establishment of the Arab Legion (the Jordanian Arab Army) was another major event which affected employment. This military unit employed about 10,000 persons by 1948 (Nyrop, 1979, pp. 199-205). The Arab Legion played an important role in the country's security integration and development. It employed a number of Arab soldiers who had returned home or left the Turkish armies during or after World War I. In addition, the Arab Legion employed a number of tribesmen to assist in maintaining law and order which contributed not only to their individual welfare, but also gained tribal loyalties to the new nation-state. Furthermore, the Arab Legion improved security and succeeded in defending Trans-Jordan's frontiers against outside attack, which helped eastward expansion of the settled area (Mazur, 1979, pp. 7-8).

In the years from 1931 to 1934, construction of the Iraq Petroleum Company pipeline to carry oil from Iraq oil fields to the Mediterranean Sea was a third development which created some job opportunities in these early years of the nation. Many workers found temporary work during the construction period, while others were employed in permanent jobs in the three pump stations which were established along the pipeline in Trans-Jordan's territories.

In addition to these job opportunities, movement of seasonal labor took place between Trans-Jordan and Palestine. Palestinian farm workers came to Trans-Jordan during the harvest season, and Trans-Jordanian workers moved to Palestine during the winter to seek work there (Mazur, 1979, p. 7).

It is not surprising that Trans-Jordan's economy remained undeveloped, and that the country was dependent on foreign grants, which provided approximately half (£6 1/2 million sterling) of the government revenues during the entire mandate period (Al Tall, 1978, p. 15). Although data regarding unemployment is not available, it is known that the labor force was dependent on subsistence agriculture, seasonal employment, and that per capita income was very low (Sayigh, 1978, p. 189). With such a poor economic base, the newly independent Kingdom of Trans-Jordan faced a series of serious political, social, and economic problems even before the 1948 war between the Arabs and Jews.

Development After the 1948 War

In the aftermath of the Arab-Israeli War of 1948, significant changes occurred in Trans-Jordan's population, territories, economy, and political development. The population tripled in less than one year as a result of the influx of approximately 350,000 refugees from Palestine. In addition, that portion of Palestine (designated as the West Bank) which was still in the hands of the Arabs after the war, was incorporated in 1950 with Trans-Jordan (designated as the East Bank) into the Hashemite Kingdom of Jordan. The consolidated Kingdom of Jordan then had a total population of 1.3 million. Landwise, the merger added only 5,650 square kilometers, a mere 6 percent, to the total national area, but it accounted for approximately one-third of the total arable land in Jordan (Nyrop, 1979, pp. 26-27; Sayigh, 1978, p. 190).

The sudden augmentation in population dramatically increased demands on the government. Demands for housing, foodstuffs, schools, medical care, and every public service, placed greater pressure on public facilities.

Unemployment soared to 30 to 50 percent of the total labor force in the period from 1948 to 1950. Jordan's frail economy was unable to absorb the increasing number of workers. To make matters worse, Trans-Jordanians who formerly found seasonal work in Palestine lost this labor market and had to compete with newcomers in Jordan's over-

crowded market. Wages dropped approximately 50 percent from an already low level before the war, and an estimated 70,000 males were totally unemployed (Batai, 1958, p. 120). In addition, there were about 120,000 persons who lost all or a substantial portion of their land as a result of the location of armistice lines. Although many of the people had lost almost everything they owned, they were not technically considered refugees by the United Nations Relief and Work Agency (UNRWA) for Palestine refugees in the Near East, because they still owned their homes on the West Bank. Many of these families were destitute and, as other refugees, were in need of urgent assistance (Liefertnick et al., 1957, p. 46).

Before the war, both the West and East Banks were agricultural areas providing farm crops to the coastal area of Palestine which became a part of Israel after the 1948 war. The transportation network was traditionally directed to the West, especially to the port of Haifa, which provided a key market for the East and West Bank's imports and exports. The war and the armistice lines disrupted normal transportation to the traditional markets. As a result, Jordanians were forced to seek new markets and to bear the high transportation cost by redirecting routes along north-south lines to Syria and the port of Aqaba. Political conflicts between Jordan and Syria often caused Syria to close its border to Jordan. Loss of access to the Mediterranean Sea through

Palestine or Syria forced Jordan to develop transportation facilities at its only outlet, the port of Aqaba on the Red Sea (Mazur, 1979, p. 9).

After the war, Jordan had the longest front line with Israel of any of the Arab countries. It had to maintain a much larger army than otherwise would have been necessary. For instance, Jordan's Arab Army increased from 10,000 persons in 1948 to approximately 25,000 persons in 1956, and the defense budget increased from \$24.50 million in 1954/55 to \$60.82 million in the decade of 1955 to 1966 (Mazur, 1972, p. 214; Nyrop, 1979, pp. 199-205). This increase in defense expenditures reduced the amount of finances available for other development programs. It was estimated that Jordan's defense expenditure equalled 12.4 percent of the gross national product over the period 1959-1966, while defense expenditures for less-developed countries rarely exceed 2.5 percent of the gross national product (Mazur, 1979, pp. 58, 77).

Social, economic, and political changes as a result of the 1948 war and its aftermath were truly revolutionary (Al Tall, 1978, p. 81). The differences between the new immigrants to Jordan and the native Jordanians created major social tensions. Despite the fact that both the Palestinian Arabs and the Trans-Jordanians shared a common background in history, language, and religion, they differed from each other in numerous aspects. The Palestinians were a much

more urban and educated group and had undergone entirely different experiences than had the native Jordanians. During the thirty years of British rule of Palestine under the mandate, they had experienced a much more urban, cosmopolitan lifestyle, and had contacted and competed with the Jewish settlers since the turn of the nineteenth century. The unity between the two banks, therefore, introduced profound changes and tensions within Jordan (Sayigh, 1978, pp. 199-202).

The new population not only brought new skills and experiences, but also some of them brought their wealth with which they started new businesses in Jordan. High unemployment and the lack of goods, plus a government which encouraged the introduction of new technology helped new businesses to grow. As a result, Jordan experienced technological progress which suddenly changed its simple rural economy to a more complex economy. The traditional economic order based on families, villages or tribes involved in agriculture gradually declined, and was replaced by modern associations, such as unions, guilds, clubs, employment groups.

The new economic demands forced the government to assume a more active role in the economic system. The old laissez-faire economy was replaced by a nationally planned economy. Free enterprise was still professed, but governmental regulations, control, and investment were essential

parts of the developmental plan (Al Tall, 1978, pp. 102-105).

Politically, the expansion of the new territory and the increase in population caused the government to grow and increase the number of civil servants and security forces. Demands for greater political participation and a voice in governmental decisions increased as a result of these changes in society. Furthermore, Jordan's security and stability became a most important factor affecting the region's stability. This new regional and international importance made Jordan more vulnerable to the external environment and increased its interdependence with friendly Arab and non-Arab countries.

All these revolutionary changes acted both as challenges and opportunities to the State of Jordan. The challenge was to the capacity and ability of the new country. The first priority was to provide jobs for the surge of population. Worldwide, Middle Eastern scholars concurred in their doubts concerning Jordan's economic ability to survive these challenges. The unanswerable question was how could Jordan's primitive economy absorb a new labor force more than twice the size of its original population (Lieftnick et al., 1957; Mazur, 1979).

Jordan had a difficult time meeting these challenges in the early 1950s. The majority of the population was poor. Annual per capita national income in 1953 was estimated to

be not more than \$100, which was comparable to Egypt (\$120), India (\$60), and Pakistan (\$70) (Mazur, 1979, p. 11).

Economic activities were primitive, and had been seriously damaged by the war. The continuing state of tension with Israel plus the tensions in inter-Arab relations following the war and the merger of East and West Bank discouraged foreign investments. Lack of an adequate infrastructure as well as other essential public institutions, plagued the government which was bombarded by increasing demands.

Jordan's policy makers attempted to meet these challenges by capitalizing on the new assets which were a part of the change resulting from the 1948 war. These new assets included the increase in the country's population and territory, as well as the new position of importance Jordan had gained in the Middle-East. An even more important asset which the country enjoyed was a stable government with strong leadership to help shape the structure of a modern state. Security and stability, which are the sine qua non for planning and development, prevailed in Jordan. Only in a stable environment can economic plans be made and development projects implemented (Al Tall, 1978, pp. 81-101).

The merger of the West and East Banks not only added cultivable land, it also enriched Jordan's economic assets because it contained the historical sites and the holy places of the three religions, Judaism, Christianity, and Islam. Pilgrims and tourists attracted to the holy places

and historical sites were an economic asset for industries and services catering to these visitors.

The better educated, more cosmopolitan Palestinian Arabs who became citizens of the new Hashemite Kingdom of Jordan also added significantly to the country's manpower skills. The Palestinian Arabs were better educated and possessed greater skills and had had more sophisticated work experiences than the native Trans-Jordanians. Also, many of the newcomers brought funds estimated to total about \$60 million (£20 million sterling), which were used to establish new businesses in the East Bank (Saygih, 1978, p. 187).

After the 1948 war, Jordan became a buffer state, having the longest Arab front line with Israel. Other Arab countries such as Saudi Arabia, Egypt, Syria, and Iraq recognized the importance of having a strong stable Jordan between them and Israel. As a result, they gave large grants to support Jordan's defense expenses and to promote its economy. The increasing importance of Jordan to the stability of the region also led non-Arab countries such as the United States, England, and others to support it financially.

Jordan's policy makers had adopted different policies using the new assets not only to overcome the burdens of the 1948 war, but to promote the development of the country as well. Systematic national plans calling for development and modernization were adopted.

National Plans in the 1950s and 1960s

The first attempts at national planning were made in the early 1950s. But, because of the uncertainty and changes in the region, it was not until 1962 that the first official national plan was promulgated as an official Five Year Plan.

The first plan stated that the highest priority was to expand the gross domestic product, to reduce unemployment, and ultimately to decrease dependence upon foreign aid (Jordan National Development Council, 1962, p. 16). The uncertainty of the amount of foreign aid that the government would receive, however, forced the government to revise the plan almost immediately (Jordan National Development Council, 1964, p. 21). Two years later in 1964, a new Seven-Year Program for social and economic development was announced for the years 1964 through 1970. The goal of reducing reliance on foreign financial aid again was stated as a priority, and the government hoped to achieve an increase in the gross national product at an average rate of 7.3 percent per annum, which was projected to increase employment opportunities at an average rate of 5.2 percent per year.

Human Resource Development.

Investments in both human and economic resources were the main tool for achieving these goals. In this plan human

resources were considered to be the country's most important asset. Planners sought to capitalize on the skill and education of the inhabitants of the West Bank and on the will and ability to learn of the inhabitants of the East Bank (Kanovsky, 1970, pp. 347-351).

Investments in human capital development programs for the period 1964 to 1970 totaled almost \$148.4 million (JD 53 million) from a total planned outlay of \$767.2 million (JD 274 million). Programs for developing human resources such as education, health care, welfare, the labor force, and others were established to improve the standard of living (Jordan National Planning Council, 1964).

Education was seen as the prime instrument for human capital development. Education was thought to serve both as an agent of change and a factor of integration by bridging the gap between Jordanians from the two banks (Al Tall, 1978, pp. 83-85).

School enrollment in the country rose rapidly during this period from only 12,120 students in 1946 to 414,907 by 1966. Educational expenditures also increased dramatically from less than \$150,000 (JD 50,000) to \$12.2 million (JD 4,361,675) in the same period. Also by 1966, there were thirty-one vocational schools, of which four were agricultural, seventeen technical, and ten commercial. Combined student enrollment was 3,503 students. In addition, a new university, the University of Jordan, was

established in 1962. The number of Jordanian students at the university level in 1966 totaled 18,326 students. Jordan became the educational leader in the region as a result of this emphasis on human development and was able to contribute to the development of the region, especially the oil-rich Arab states (Birks and Sinclair, 1980, p. 280).

Economic Development.

At the same time the government was promoting human capital, it was also emphasizing economic development by adopting a number of economic policies. Jordan's economy, which had been a market-oriented economy with the market driving the economy, evolved into much more of a planned economy, with the government playing a dominant role in stimulating growth (Day, 1986, pp. 109-111). The market mechanism was modified by administrative decisions in a large segment of the economy (Al Tall, 1978).

Essential infrastructure, such as irrigation, roads, port facilities at Aqaba, communication, and power resources, as well as sewage and portable water facilities were constructed by the public sector to promote growth in the economy. The private sector was encouraged to invest in such enterprises as transportation industries, housing, and other commercial activities.

Agricultural Development.

Since the 1950s, Jordan's government has also undertaken a number of programs aimed at increasing agricultural productivity. Agriculture always has been a significant sector in Jordan's economy. It contributed an average of 20 percent or more to the gross domestic product (average 20 percent) during the entire period of 1950 to 1966, and further more than 35 percent of Jordan's labor force works in agricultural activities (Mazur, 1972, p. 218).

Although most of the land in the East Bank lies within the sub-cultivation level of rainfall, only 43,700 hectares of the nearly 600,000 hectares of cultivated land was under irrigation. Before the 1948 war, the agricultural area in the East Bank produced enough foodstuff to be self-sufficient. Since 1950, Jordan has had to import foodstuffs despite the merger with the West Bank, which added another 243,500 hectares of farm land of which 32,200 hectares were under irrigation. In the immediate postwar period, some of this food came as a gift from the United States to meet the increasing demand caused by the influx of Palestinian refugees (Eglin, 1979, p. 121).

Fortunately, Jordan did not have as severe a maldistribution problem in agricultural land as did most developing countries (Sayigh, 1978, p. 212). However, the distribution of land holdings as shown in Table 10 reveals that over eighty-five percent of farm holdings are less than

ten hectares, which severely limits the opportunity to introduce mechanization or irrigation. The medium-sized farms of less than one hundred hectares make up approximately one-eighth of the total agricultural land, while large holdings in excess of one hundred hectares and over account for only one-third of one percent of the total, and most of these large holdings depend on rain-fed agriculture (Jordan Department of Statistics, 1967).

TABLE 10
DISTRIBUTION OF LAND HOLDINGS IN JORDAN

Size Group (Hectares)	No. of Holdings	Percent of Total
Less than 1	33,986	36.3
1 but less than 5	32,573	34.9
5 but less than 10	14,221	15.2
10 but less than 50	11,748	12.6
50 but less than 100	688	0.7
100 but less than 200	198	0.2
200 but less than 500	60	0.1
500 but less than 1,000	16	--
1,000 and over	2	--
Total	93,492	100.0

Source: Department of Statistics, Report on Agricultural Census 1965 (Amman, 1967), p. 86.

Although the distribution of land in Jordan did not constitute as serious a socio-economic problem as in other Arab countries such as Syria, Iraq, and Egypt, the

continuous division and redistribution of land caused by the Islamic law of inheritance created a growing threat to the agricultural economy. Under Islamic law, inheritances from parents are divided between all children. Under certain circumstances, other relatives may also receive a share of the estate. The already small size of farms continues to be subdivided as a result of this law and practice. The small size of agricultural holdings, coupled with the lack of water resources for irrigation, makes it impracticable to spend the large sums necessary for irrigation or for mechanization of agricultural projects.

The construction boom in housing following the 1948 war took some of the best farm lands located around cities out of cultivation. In addition, the continuing internal migration in the country from the rural to the urban areas caused some potential cultivable lands to be left undeveloped (Nyrop, 1979, pp. 120-127).

In an attempt to improve agricultural productivity, the government began a major irrigation project called the Jordan Valley Development Authority (JVDA) which emulated many of the programs of the Tennessee Valley Authority (TVA) in the United States. The Jordan Valley Development Authority was to develop the waters of the Yarmouk and Jordan rivers in addition to small wadis in the East and West Banks. The total flow of these rivers and streams carried an estimated 1,250 million cubic meters (MCM) of water into

the Dead Sea. This amount of water is far more than enough to supply the 760 MCM of water estimated to be needed to irrigate the Jordan Valley (Mazur, 1972, pp. 258-265).

Jordan and Syria agreed in 1953 to build the Yarmouk River Project at the point where the Jordan and Yarmouk rivers merge. This project was expected to irrigate approximately 52,000 hectares in the Jordan Valley and generate about 200 million kilowatts of electricity. The estimated cost of \$160 million was to be financed by various members of the Arab League. A dispute over the rights to this water between Jordan, Syria, and Israel disrupted the project despite the United States' mediation (Sayigh, 1978).

After both the Arab states represented by the Arab League and Israel failed to agree on the proposed mediation for utilizing this water in a regional-wide plan, in the early 1950s Israel began a project to divert the waters from these rivers to Israel. Jordan also went ahead with its irrigation projects to use its uncontested water right of 475 MCM from the Yarmouk River within its own borders plus 123 MCM and 78 MCM of water from the wadis in the East Bank and the West Bank. The project, called the East Ghor Canal Project, began in 1957, and was expected to irrigate 15,000 hectares at a cost of \$18 million, much of which (\$13 million) was donated by the United States. When the project was completed in the mid 1960s, approximately 12,000 hectares came under irrigation. In addition, another 12,000

hectares were later irrigated from dams built on various wadis in both banks (Mazur, 1979, pp. 177-184).

As a result of the attempt to improve irrigation facilities, the government enacted a number of laws aimed at limiting the size of farms so that irrigation and mechanization would be more feasible. Irrigated lands were classified according to quality, and minimum and maximum sizes permitted were established by law. Under these laws, the best irrigated lands were divided into sites of not less than three hectares, and sites of a lesser quality were to be divided into sites not less than five hectares. Although this is still a very small size, policy on distribution of land had to balance incentives for increasing mechanization and irrigation with the need to keep farm workers from moving to the cities and becoming unemployed (Mazur, 1979, pp. 184-192).

The government also encouraged the creation of agricultural cooperative societies by providing credit, training, and guidance. It also created demonstration farms to show the benefit of using more modern farming practices. By mid-1966, 337 agricultural cooperative societies were helping farmers in a host of ways to market their products. Five agricultural institutions such as the Agricultural Credit Corporation, Jordan Central Cooperative Union, the Department of Lands and Surveys, the Department of Taxes, and the Natural Resources Authority, in addition to the loans from

commercial banks were helping to modernize the agricultural sector (Mazur, 1979, pp. 1984-1992).

Mining and Industrial Development.

As a result of the severe limitations on agriculture, the industrial sector was considered to have the most promising potential for Jordan's development. A mining industry was envisioned since Jordan has relatively large deposits of such minerals as magnesium bromide, sodium chloride, and vast deposits of phosphate. Uranium ore, which is found in the phosphate deposits, is still another mineral resource found in Jordan. In addition to these metallic mineral resources, there are huge sources of non-metallic minerals such as marble, limestone, gypsum, and sands. Such industries as quarries, cement factories, ceramic and glass factories, and brick manufacturing were seen as potential industries using these resources (Eglin, 1979, pp. 134-136).

Although oil and natural gas have not been discovered in commercial quantities in Jordan, the search for oil continues. Even without new oil discoveries, it was believed that Jordan could profit from energy-type industries. A pipeline across Jordan to the Mediterranean Sea and perhaps refineries were seen as potential industries for Jordan. In the early 1950s, the Trans-Arabian pipeline (TAPLINE) was developed to transport crude oil from Saudi

Arabia to ports in Lebanon. In the late 1950s, a refinery was built beside the pipeline to provide gasoline and other types of oil products.

Jordan hoped to acquire energy for electrification of the country from hydroelectric developments on the Yarmouk and Jordan rivers. Political conflict in the region, however, prevent regional development of these hydroelectric projects, and, although some national developments were made, Jordan did not obtain the amount of energy it needed. Jordan also has looked at other energy sources. It has an abundance of oil shale, geothermal and solar energy, which could be exploitable when technology becomes available (Eglin, 1979, pp. 134-138).

The government enacted a number of policies to promote industrial development. It underwrote some new enterprises by agreeing to purchase shares in private firms which were to engage in industrial activities such as phosphate mining, cement production, tanning, and petroleum refining. The government also made funds available in the form of loans to the private sector through newly-created financial institutions, such as the Industrial Development Bank, the Agricultural Bank, the Housing Bank, and several others. The Industrial Promotion Law of 1955 included government incentives for private investors, such as exemption from or reduction in various taxes and custom duties, as well as

direct governmental assistance programs in the form of subsidies (Mazur, 1979, pp. 22-32).

Other major industries such as petroleum refining, cement companies, and tanneries were given concessions protecting them against competition from less expensive imports or the establishment of competitive firms. In some instances the government fixed prices for these protected firms. Also Jordan's development board assisted prospective entrepreneurs by undertaking feasibility studies at no charge to investors (Mazur, 1972, pp. 225-229).

Although labor unions exist in Jordan, and workers have the freedom to choose their employment and to migrate to any destination of their choice, the labor law of 1953 regulated compensation and the working hours, and prohibited strikes (Liefertnick et al., 1952, p. 254). Fortunately, the country has enjoyed peaceful labor relations, partly because the economy grew rapidly in the period of 1950 to 1966, and because there were opportunities to migrate to the ORAS and Europe for high-paying jobs, all of which helped to absorb unemployed persons (Share, 1986, p. 183).

New transportation facilities were developed, including the Port of Aqaba, the airports in Amman and Jerusalem, in addition to the establishment of the Royal Jordanian Airline (Alia). A network of highways between Aqaba, Syria, and the West Bank were built. A network of roads within the country and transportation enterprises, such as bus companies and

taxi services were created to serve the countryside and the cities in both banks during this period.

Development of the Service Sector.

Since the 1950s, the government has also promoted tourism by improving facilities such as hotels, restaurants, rest areas, and making these more accessible through the improvement in transportation and communication networks. Also the government encouraged banks to grant loans for tourist enterprises, and 15 percent of the total loans granted by the Industrial Development Bank in 1966 were designated for tourism enterprises.

In addition to encouraging tours to the holy places and historical sites in Jordan, the government also promoted region-wide excursions to include sites in Lebanon, Syria, and Egypt. As a result of these efforts, the number of tourists rose from 104,000 in 1958 to 938,000 in 1966, increasing Jordan's earning of foreign currency from about \$30 million (JD 12 million) to \$35 million (JD 12 million) in the same period (Sayigh, 1978, p. 218). The service sector, including such activities as banking, transit, insurance, transportation and others has been stimulated by the development in both the agricultural and industrial sectors.

Chenery and his colleagues stated that the services sector in Jordan far out-performed comparable service

sectors in typical developing countries. Normally, the service in a typical developing country adds an average of 42.3 percent of the gross domestic product (GDP) and employees add 26 percent of the labor force (Chenery et al., 1960, pp. 624-654). In Jordan, the service sector added a total value to the GDP of 66.4 percent and employed 39.3 percent of the total labor force in 1961. The exceptionally high growth in Jordan's services sector is explained by Michael Mazur as being caused in part by the large receipt of foreign aid, remittances, earnings from tourists, and in part by the fact that a large portion of the GDP is spent on service producing functions such as defense, education, and the importation of goods (Mazur, 1972).

Following the 1967 war, and its aftermath, tourism declined because of the loss of the Holylands in the West Bank and continuing civil disturbances.

Regional Development.

Jordan's foreign policy also helped the economic and labor situations in the country. Jordan's foreign policy is based on the principles of the Arab revolution, which contends that Jordan is an integral part of the Arab, the Muslim, and the free world. These principles were translated into action by attempting to maintain good relations with other Arab countries and by supporting peace efforts in the Middle East. Jordan's leadership has continuously

promoted Arab-economic cooperation and integration, and has maintained friendly relations with most of the international community in an attempt to support the country's social and economic development. Foreign grants and assistance from Arab and non-Arab countries are a major factor in the country's development, and Jordan's receipt of foreign aid during the period 1950 to 1966 totalled over \$1 billion (JD 348.2 million), or approximately 13 to 15 percent of the gross national product (Mazur, 1979; Sayigh, 1978, p. 199).

The economy of the Middle Eastern region is important to Jordan's economy. Sixty-seven percent of Jordan's export of goods, mainly agricultural crops, go to other Arab countries, such as Saudi Arabia, Kuwait, Iraq, Syria, and Lebanon. Jordan's merchants also have profited from the transit trade across the country between the Mediterranean Sea and Saudi Arabia, the Gulf states, and Iraq (Jordan National Planning Council, 1980, p. 23).

The rapid growth of the oil industry in the region has directly and indirectly benefited the development of Jordan. It receives a royalty fee from the pipeline carrying oil across the country from Saudi Arabia oil fields to the Mediterranean Sea. More significantly, the only petroleum refinery in Jordan gets crude oil from this pipeline. Energy from this refinery is vital to Jordan's economy and security, and the refinery is now the largest employer in the private sector (Mazur, 1979, pp. 204-237).

The rapid growth of the oil industry in the region has also provided employment for Jordanian workers in the ORAS. In 1961, 60,000 Jordanian workers were employed in the oil-rich Arab states. The number has grown continuously, reaching 100,000 in 1966, and has grown even more in the past two decades. This outside employment helped in part to reduce unemployment from approximately 15.5 percent in 1955 to 4 to 5 percent in 1966. Furthermore, the remittances of these workers, which were estimated to be \$22.17 million in 1960, and almost doubled by 1966 to reach \$45.6 million, are an important source of Jordan's foreign exchange earnings (Yahya, 1976, p. 153).

In addition to these remittances, Jordanian workers abroad stimulated Jordanian exports of goods by their demand for goods from home. Also, many of the newly-wealthy Arabs from the ORAS sought to escape to Jordan from the hot summer climate in the Arab peninsula. These new summer tourists stimulated the service sector and increased Jordan's earning from foreign currency (Mazur, 1972, pp. 221-230).

Evaluation of Economic Performance in the Period 1950 to 1967

Although many in the 1950s thought Jordan had little economic future, the performance of Jordan's economy has run completely counter to these pessimistic expectations (Mazur, 1972, pp. 214-215). Jordan's gross domestic product

increased approximately 10 percent per year in the period 1950-1966. Economic development has occurred in all economic sectors in this period, as may be seen in Table 11.

TABLE 11
JORDAN'S ECONOMIC ANNUAL GROWTH
RATE BY SECTORS (PERCENTAGE)

	1955	1960	1966
Agriculture, value added	7	7.5	7
value added in crops and forestry	5	7	3.5
value of crops and forestry output	5	6.5	4
intermediate costs	6.5	6	7
value added in livestock	12	10	14
value of livestock output	11.5	8.5	15
intermediate costs	11	3	18
Nonagricultural value added	11	13	9
Mining, manufacturing and electricity	14	10.5	17
construction	16	22	11
transport	9	15.5	3.5
trade and banking	10.5	12.5	9
ownership of dwellings	11	14	8.5
public administration and defense services	8.5	12	6
services	11	13	9
GDP at factor cost	10	12	8.5
indirect taxes	14	14	14
GDP at market prices	10.5	12	9
factor income from abroad	12	10	14
GNP at market prices	10.5	12	9

Source: Michael Mazur, "Economic Development of Jordan" in Charles Cooper and Sidney Alexander (eds.) Economic development and population growth in the Middle East (New York: American Elsevier Publishing Co. Inc., 1972) p. 216.

The agricultural output increased approximately 10 percent per year during the period, and employment in the

agricultural sector was able to absorb much of the expanding labor force. The agricultural sector continued to employ about 35.7 percent of the enlarged national labor force, and many food-related industries also flourished in the period.

The number of industrial establishments reached 6,630 in the period employing 33,132 workers. The share in the gross domestic product from industry increased from near zero after the 1948 war to about 11.2 percent by 1966 (Mazur, 1972, p. 219).

Within the industrial sector, such industries as mining, manufacturing, electrical, and transportation grew constantly over the period. Jordan's production of phosphate increased to about one million tons by 1966. A new potash company was started in 1956 to excavate potash from the Dead Sea. Unfortunately, this project was disrupted because of financial and security reasons. As a result, the potash industry was not put into production until the 1980s (Ghantus, 1982, p. 73).

Other new industries producing domestic products were established during the period 1955 to 1966 including food processing, soft drink bottling, manufacturing of soap and matches, shoes and clothing, textiles, furniture, and cigarettes. In addition, new industries such as porcelain, plastic products, batteries, and pharmaceuticals were established. As previously mentioned, an oil refinery was built in the early 1960s. In addition, electrical power

production increased drastically, from an installed capacity of only 10,315 kw in 1955 to over 178.8 million kw in 1966 helping to provide most of the country with electricity (Sayigh, 1978, pp. 215-219).

Generally speaking, before the 1967 war, Jordan had made great strides in meeting its economic challenges and was achieving a high degree of integration between the people from the two banks. Jordan optimistically believed that it had a bright economic future when the 1967 war began. In part, this optimism about the future came from Jordan's successes in dealing with the problem of unemployment. In less than two decades (from 1950 to 1966), the Jordanian economy absorbed a large number of workers and reduced the level of unemployment to only 3 to 4 percent, which is considered by economists to be full employment goal (Pechman, 1975, p. 29). The total employed work force in 1966 was 442,600 persons. Jordan had created 72,600 new jobs since 1955. Of these workers, 41 percent were employed in full-time jobs, and 46 percent were in temporary and part-time employment in all economic sectors, as can be seen in Table 12 (Mazur, 1979, pp. 29-35).

In addition, approximately 100,000 Jordanian workers worked in the oil-rich Arab states (ORAS) and other countries (Mazur, 1972, p. 327). Jordan's development, as can be seen, was influenced by both external and internal factors. The changes made under the national plans helped

TABLE 12
LABOR FORCE AND SECTORAL EMPLOYMENT 1961-1966

	Employment (Thousands)		Average Annual Percentage Change 1961-66	Absolute Change 1961-66 (Thousands)
	1961	1966		
Agriculture	137.2	155.2	2.5	18.0
Mining	9.2	10.1	1.8	.9
Manufacturing and utilities	34.2	43.4	5.0	9.2
Construction	39.9	58.7	8.0	18.8
Commerce	31.4	36.3	3.0	4.9
Transport	11.9	13.8	3.0	1.9
Services	53.5	70.7	5.7	17.2
Not adequately described	45.4	54.4	3.7	9.0
Total employed	362.7	492.6	4.0	79.9
Labor force	390.0	458.7	3.3	68.7
Seeking work	27.3	16.1	--	-11.2
Seeking work as percent of labor force	7.0	3.5	--	--

Source: Michael P. Mazur, Economic development of Jordan in Charles Cooper and Sidney Alexander (eds.), Economic development and population growth in the Middle East (New York: American Elsevier Publishing Co. Inc., 1972) p. 236.

generate the economy, but without the additional jobs provided in the ORAS, the continuing drag of unemployment would have slowed its development.

The enhancement of educational opportunities in Jordan helped to qualify Jordanian workers for the new jobs in the ORAS. Furthermore, the Jordanian labor force was better

able to absorb new technology and changes, which resulted in a greater efficiency in the productive process because of the increase in education. With the coming of the 1967 war, Jordan's development again was disrupted.

Development After 1967

The 1967 war in the Middle East burdened Jordan with a seemingly staggering host of problems as a result of the changes in its territory and population (Mazur, 1978, p. 81). In June 1967, Israel occupied the West Bank, a relatively small area of only 5,650 square kilometers, but an area of vitally important for Jordan's agricultural and tourist sectors. Not only did Jordan lose its most productive agricultural lands, it lost its tourist attractions. At the same time, the population of the East Bank increased by one-third in one year because of the inflow of approximately 400,000 to 500,000 persons from the West Bank and Gaza Strip (Jordan National Development Council, 1973 pp. 6-8).

The government faced increased demands from both the East and West Banks. Despite the loss of the West Bank, the government had to provide assistance to the destitute people in the occupied territories of the West Bank and to the public institutions such as schools, holy places, and others to help them withstand the occupation and to keep additional persons from fleeing their homes and adding to the already

crowded ranks of refugees. Also, there were more than 400,000 persons displaced by the war in the East Bank, and the government had to provide emergency assistance in the form of shelter, food, medical care, and other necessities (Al Tall, 1978, pp. 107-108).

Defense expenditures also increased to about 61 percent of the total expenditures as the government sought to rebuild the military forces in the face of the daily attacks by Israel. Expenditures for all of these war-related problems seriously strained the national economy.

In 1966 the West Bank had contributed 45 percent of the total gross national product. Before the war the West Bank produced 37 percent of the gross domestic product from agriculture, 19 percent from industry, 33 percent of agriculture, 45 percent of transportation, 43 percent of electricity and water, 37 percent of banking and insurance, 43 percent of wholesale and retail trade, and 55 percent of the services. Obviously, loss of the West Bank seriously crippled the Jordanian economy (Odeh, 1972, p. 37).

Although contacts continued between the two banks after the war, generally speaking, the Jordanian farmers and tradesmen in the East Bank lost the West Bank market. Although Israel permitted goods produced in the occupied West Bank or Gaza Strip to be exported across the river to the East Bank, they imposed a high tariff on goods coming from the East Bank (Mazur, 1979, pp. 212-213). Also, the

daily shelling by Israel caused farmers in the bordering areas to flee from their farms, causing agricultural production to decrease. Since a major part of the transportation network in both banks had been destroyed, economic activities, as well as life in general, were disrupted throughout the region (Jordan National Development Council, 1973, pp. 6-7).

The industrial sector also suffered from the occupation of the West Bank. The mining industry, which depended on foreign markets, was seriously hurt by the closure of the Suez Canal following the war. Jordan was forced to transport its exports through the Mediterranean Sea via Syria or the newly developed port facilities at Aqaba. This increased the cost of transportation and caused delay of delivery, which in turn caused Jordan to lose some of its important markets in Turkey and Europe (Mazur, 1979, pp. 81-82). Similarly, tourism and the service sector were badly affected by the loss of the West Bank, since most of the holy places and tourist facilities are located in the West Bank. Thus, earnings from tourism declined from more than \$35 million (JD 12 million) in 1966 to less than \$10 million in 1971.

Jordan's labor market was hurt by the sudden population surge, coupled with the decline in all sectors of the national economy. Work opportunities in the East Bank were reduced as a result of the suspension of major development

programs, and unemployment rate increased to almost 14 percent. As a result of these changes after the 1967 war, Jordan's reliance on foreign financial assistance in its budget grew from 25.4 percent of total public revenues in 1966 to 50.4 percent in 1971 (Jordan National Development Council, 1973, pp. 6-7).

A number of fortuitous factors, however, helped the Jordanian economy to weather these trials. Jordan had several years of good weather, and more rainfall than normally. As a result, agriculture products doubled. International demands for phosphate kept the price high, and Jordan was able to export through Syria and the new facilities at Aqaba approximately one million tons in 1968 and 1969.

Additional good fortune came to Jordan in the form of grants from the oil-rich Arab states after Khartoum summit in 1967. Large grants were received from Kuwait, Libya, and Saudi Arabia totaling more than \$105 million and \$130 million in the years 1967 and 1968, respectively. In addition, Jordan's good relations with the Western alliance paid off. Grants from the United States, the United Kingdom, and the United Nations amounted to over \$140 million for the years 1967 and 1968. Also, local expenditures increased, and markets were energized by the increased spending of Iraqi, Saudi Arabian, and the Arab commando

groups who were stationed in Jordan after the 1967 war (Mazur, 1972, p. 238).

As a result of these fortuitous events, foreign exchange reserves rose from \$195.3 million in 1966 to \$306 million in 1968, helping to strengthen the Jordanian currency and to stabilize Jordan's balance of payments. Because of this, the government was able to pump an increased amount of resources into the economy through needed public work projects, and subsidies, and was able to make credit available to economic firms in financial trouble (Mazur, 1972, p. 238).

By 1969, the national economy experienced a remarkable recovery. Gross national product registered an increase of 12.4 percent in 1967, and 17.3 percent in 1968. The industrial and service sectors recovered from the serious slump of the war period. Favorable tariff reductions in neighboring Arab states also encouraged Jordanian exports. Loss of the West Bank markets was, to some degree, compensated by exports or increases in local demands. Stimulated by the new wave of refugees, construction and housing projects boomed (Mazur, 1972, p. 239).

The tourist and agricultural sectors of the economy continue to be depressed because of the tensions in the region and the destruction of important parts of the irrigation facilities in the Jordan Valley. Despite the

continuing depression in these sectors, the country appears well on the road to recovery.

The dramatic surge of refugee increased Jordan's East Bank population by one-third in one year after the war, creating massive unemployment problems. Although there are no complete unemployment statistics, it is estimated that the unemployment rates far exceeded 10 percent in the immediate years after the war. Several events helped to reduce the level of unemployment during 1967 to 1970 period. For one thing, Jordan's security forces were expanded by 28,000 new soldiers, plus the recruitment of commandos for the Palestinian resistance movement in Jordan helped to absorb many of the young workers who otherwise would have been unemployed. Governmental employment provided work for many of the unemployed, since the government had to increase its services to meet the needs of the increased population (Mazur, 1972, p. 239).

The boom in housing construction to house the displaced persons also was a main factor in creating new jobs in the immediate post-war period. Furthermore, labor migration to the oil-rich Arab states continued at an average rate of 7,000 to 10,000 workers per year (Jaber and Anani, 1980, p. 46).

The rapid revival in Jordan's economy in the post-1967 war years suffered a serious setback in 1970 because of internal disturbance. The outbreak of hostilities between

the government and the Palestinian resistance movement groups in Jordan caused disruption of normal economic activities. More than \$40 million in damages were caused to private and public property as a result of this civil conflict. As a result, the gross national product dropped from its 1969 level of \$700 million (JD 231.5 million) to about \$600 million (JD 204.5 million) in 1970. Private investments and spending declined. In addition, Kuwait and Libya suspended their financial assistance to Jordan, which was approximately \$65 million (JD 23 million) per year as reaction to Jordan's action against the commando groups (Eglin, 1979, pp. 108-111).

The economic situation was further complicated in July 1971 by the decision of both Iraq and Syria to close their borders with Jordan as well as their air spaces to Jordanian planes to demonstrate their support with the commando groups (Odeh, 1971, p. 48). The blockade of land and air spaces from the two Arab neighboring countries had a serious consequence on Jordan's exports and imports, since the Suez Canal continued to be closed as a result of the 1967 war. Jordan's export of agricultural products suffered a severe decline while the export of phosphate stopped completely. During the same period, Jordan's imports via Syrian and Lebanese ports were blocked. Jordanian goods piled up in the ports, which were not reopened until the end of 1972 in

Syria and in October 1971 in Iraq 1971 (Al Tall, 1978, p. 109).

Jordan's government undertook a number of measures to alleviate the problems and stimulate the economy after the 1970-1971 civil disturbance. Government expenditures became the instrument not only to rehabilitate and repair essential public services and compensate for the damaged private property, but also to revive private investments and to restore public confidence (Al Tall, 1978, p. 109). Governmental expenditures totaled approximately \$249.4 million (JD 83.148 million) in 1971, and reached \$304.3 million (JD 101.452 million) in 1972 (Central Bank of Jordan, 1983, p. 39).

By the end of 1971, Jordan, had restored its traditional reputation as a secure, stable country, and the economy again began its recovery. By 1971, all economic sectors were expanding and the government resumed its systematic development efforts after following an essentially adhoc approach during the 1967 to 1972 period (Mazur, 1979, p. 84).

The 1973 Development Plan.

A three-year development plan was initiated by the government for the years 1973 to 1975. The plan aimed at creating 70,000 new jobs in all sectors, achieving an 8 percent annual growth rate of GDP and reducing the reliance

on foreign assistance (Jordan National Planning Council, 1972, pp. 120-121). Total investments for this plan was projected to be over \$537 million (JD 170 million). The investment funds were to come from both the public and the private sectors, with the public sector contributing a projected 55.6 percent, and the private sector 44.4 percent (Jordan National Planning Council, 1972, p. 34).

In the first year of this plan, the 1973 war broke out between the Arabs and Israel, again creating a crisis in the region. Jordan contributed to the war efforts by dispatching armored units to support the Syrian front. As a result of the war efforts by Jordan, Kuwait resumed its financial assistance which had been suspended in 1971 (Eglin, 1974, p. 116).

After the 1973 war, Jordan enjoyed relative stability, which helped to promote its economy and the development plans of 1973-1975. Regional events such as the economic boom in the oil-rich Arab states brought about by the oil price revolution in 1973 through 1981 had a spill-over effect on the Jordanian economy. It stimulated economic development in Jordan as it similarly impacted the oil exporting countries. The new wealth affected the Jordanian economy in several ways:

1. The demand for Jordanian workers from the ORAS grew from between 150,000 in 1975 to 305,000 in 1980 (Al-Etoom, 1988, p. 27).

2. The remittances from those workers in the ORAS increased from \$44 million in 1973 to over \$1 billion in 1984, the peak year, after which remittances started to decline (Jordan Central Bank, 1988).

3. At the same time, Arab grants to Jordan, as a front-line defense against Israel, expanded from \$71.8 million in 1973 to over \$1 billion in the years 1980, 1981, 1982, before it began to decline also (Central Bank of Jordan, 1988).

4. The value of Jordan's exports increased from \$120 million in 1973 to over \$500 million in 1981 (Central Bank of Jordan, 1983).

5. During the period 1973 to 1981, growth of the gross national product (GNP) of Jordan increased at an annual rate of 11 percent, and unemployment dropped to a mere 2 percent, or the equivalent of full employment (Jordan Ministry of Planning 1985).

6. For the first time in its modern history, Jordan experienced a shortage in its domestic labor force. As a result of the economic boom and the shortage of labor in Jordan, it opened its doors to guest workers from Arab and non-Arab countries such as Syria, Egypt, and Pakistan. This in-migration increased from 3,803 in 1973 to 94,402 in 1981, and reached 153,519 at its peak in 1985 (Jordan Ministry of Planning, 1985).

Also in 1974, the ten largest phosphate-producing countries in the world, Morocco, the United States, Jordan, Togo, Tunisia, Senegal, Algeria, Israel, and others copied the cartel practice of OPEC and agreed not to sell phosphate for less than \$27 per ton. Thus, Jordan increased its production to over 1.5 million tons in 1974, and its earnings increased from approximately \$12 million (JD 4 million) in 1973 to approximately \$58.5 million (JD 19.5 million) in 1974 (Central Bank of Jordan, 1983, p. 28).

Several other factors also influenced the region and Jordan's economy and beyond. The reopening of the Suez Canal in 1975, which restored Jordan's link with the world through the Aqaba port, stimulated the phosphate trade by lowering transportation costs. The civil war in Lebanon diverted to Jordan some capital and other economic activities. Many of the Lebanese who fled the civil war came to Jordan, and other international firms moved their regional offices from Beirut to Amman. Also as a result of the civil war in Lebanon, many wealthy persons from the oil-rich Arab states began to vacation in Jordan, increasing the tourist sector and stimulating construction and other services. All of these favorable economic activities increased Jordan's earnings from foreign exchange (Mazur, 1979, pp. 81-86).

In addition to the favorable events which occurred in the early 1970s and which enabled Jordan to carry out its ambitious plans for the years 1976 through 1980, three other

regional events in this period aided Jordan's economic efforts. The Camp David peace treaty between Egypt and Israel in September 1978, the Iranian revolution, and the following confrontation between Iraq and Iran in 1979 all helped Jordan's economic development directly or indirectly.

As a result of widespread Arab opposition to the Camp David peace treaty, financial aid poured into Jordan to strengthen its position in facing pressure to join this treaty. At the Arab summit at Baghdad in 1978, some of the ORAS agreed to pay a total of \$1.25 billion annually for ten years to assist Jordan in its front-line defense against Israel (Day, 1984, p. 99).

Additionally, the dramatic increase in the price of oil from about \$11 per barrel to more than \$30 per barrel after the Iranian revolution increased revenues in the ORAS to over \$100 billion. These revenues translated into a huge growth in the demand for labor and goods from the neighboring countries including Jordan (Sherbiny, 1984). The outbreak of the Iraqi-Iranian war also stimulated economic activities in Jordan, since Jordan became Iraq's main access for imports and exports.

The impact of these events in the Middle East labor market was even more favorable for the Jordanian workers. As an example, some of the ORAS curtailed their demands for Egyptian workers because of Egypt's acceptance of the Camp

David accord. One country, Libya, deported all the Egyptian workers who were working in Libya (Ibrahim, 1982).

The Iraqi-Iranian war had the effect of reducing the supply of workers in the Middle East, since the war absorbed all of the laborers in these countries. Furthermore, Iraq was forced to import a hugh number of foreign workers, especially from Egypt and other Arab and non-Arab countries to replace its manpower who were mobilized to the war efforts. Thus, demand for Jordanian workers from the increasingly rich ORAS increased from 150,000 in 1975 to 305,000 workers in 1980, effectively eliminating the problem of unemployment in Jordan in the late 1970s (Jordan Ministry of Labor, Annual Report 1985).

In combination, these external and internal fortuitous events in the 1970s caused unprecedented changes in Jordan's economy as well as its labor market. The importance of agriculture in the economy declined while the share of GDP from service, mining, and manufacturing sectors increased. Jordan's labor market also changed dramatically in this period, and Jordan became an exporter and importer of workers. The capital inflow to Jordan increased significantly because of growth in financial aid, loans, remittances, tourists, and exports (Jordan Ministry of Planning, 1986, p. 11).

The 1976-1980 Plan.

These changes were reflected in the objective and pattern of investment in the Five-Year Plan, 1976 through 1980. The plan sought to achieve an annual economic growth rate of 12 percent in GDP, to create 110,000 new jobs in all sectors, to distribute development gains to the various regions of the Kingdom, and to increase reliance on domestic revenues in order to reduce the deficit in the balance of trade. The total investment under the plan was estimated to be about \$2,295 million (JD 765 million), equally divided between the public and private sectors (Jordan's National Development Council, 1976, pp. 26-30).

As a result of favorable internal and external economic developments, Jordan's economy during the period 1975 to 1980 experienced an annual growth rate in GDP of 12.1 percent, and the growth rate in all economic sectors met or exceeded the target of the plan. Jordan's economy functioned effectively, and demonstrated an ability to respond to changes and the capacity to absorb large investments (Jordan Ministry of Planning, 1986, pp. 2-25).

The 1981-1985 Plan.

Motivated by these economic successes during the 1970s and encouraged by the seemingly favorable environments in the region, Jordan's policy-makers and planners were confident in their ability to direct the economy through national

planning at the beginning of the 1980s. A second Five-Year Plan for 1981 to 1985 was formulated in an atmosphere of optimism on the assumption that the positive trends would continue in the 1980s. The plan projected an 11 percent annual growth rate in GDP and further proposed to change the structure of the national economy so that it would become a commodity-producing country as the plan was designed to create 204,000 new job opportunities. It further proposed strengthening economic cooperation with other Arab countries. The total proposed investments under this plan were estimated at \$9,900 million (JD 3,300 million), which was almost a four-fold increase in expenditure over the period 1976 to 1980. The public sector was projected to provide \$6,069.6 million (JD 2,023.2 million), while the private sector share was projected at \$3,830.4 million (JD 1,276.8 million) (Jordan Ministry of Planning, 1985).

The rosy projections ran into difficulties as a result of economic recessions which followed the decline of oil prices from over \$30 per barrel to less than \$20 per barrel in the period 1982 to 1987. The Iraqi-Iranian war acted as a negative factor on Jordan's and the region's economy. Many of the ORAS began to divert funds which formerly went to poor Arab countries, including Jordan, to support the Iraqi war efforts. Also, the cohesion of oil producing exporting countries (OPEC) and the Arab oil-producing Arab

countries (OPAC) was lost as these countries increased their production to finance the war.

Furthermore, the Lebanese civil war took on new dimension as a result of the Israeli invasion of Lebanon in 1982. It affected the Jordanian economy negatively, since the war closed the Lebanese ports and industries on which Jordan had depended, and it caused Arab support to be diverted to the Lebanese cause.

Although Jordan's economy demonstrated remarkable ability to withstand pressures and to adapt to changing circumstances, it suffered the result of the economic downturn more than its wealthy neighbors in the following ways.

1. The demand for Jordanian workers was curtailed, resulting in a decline in the number of out-migration to less than 5,000 workers per year during the period 1981 to 1987.
2. Workers' remittances decreased, falling about 30 percent from its level in 1984, when it totaled about \$1.1232 billion, to about \$765.9 million in 1987. Arab grants to Jordan were cutback from approximately \$1.2 billion in 1982 to \$672 million in 1987, a decline of almost 50 percent. Other Arab states failed to meet their commitment to support Jordan financially (Table 23).
3. The value of Jordan's exports fell from \$550 million in 1982 to less than \$500 million in 1983, and the

value of exports continued to fluctuate from year to year (Central Bank of Jordan, 1988, pp. 56-57).

4. Jordan's GNP, which had increased throughout the 1970s and had grown 13.5 percent in 1981, slowed in the following years to 9.2 percent in 1982, 4.4 percent in 1983, and 2.4 percent in 1984. The growth rate for 1985 increased to 2.7 percent, but the recession in 1986 and 1987 caused the growth rate to continue to decline at a negative rate of -1.9 percent and -2.4 percent, respectively.

Despite all these economic difficulties since the early 1980s, Jordan's economy achieved an average annual growth rate of 4.2 percent for the period 1981 to 1985. Although this achievement was low compared with the planned goal of 12.5 percent average growth rate, this achievement is very close to the international standard of 4 percent growth rate per year in all of the nations.

The relatively slow economic growth rate in the 1980s caused a serious economic problem. Jordan was transformed from having full employment in the 1970s to a surplus of labor when the unemployment rate rose to a peak of 9 percent in 1987. Since there is no unemployment insurance in Jordan, unemployment results in great suffering and causes social and political problems (Staloff, 1986; Share, 1986; Smadi et al., 1987; Saket et al., 1983; Jordan Ministry of Planning, 1985).

The 1986-1990 Development Plan.

As a result of the external shock to its economy, planners and policy makers in preparing the 1986 to 1990 plan were much more conservative, and increasingly looked to the nation's own potential resources. The new plan was designed to reinforce the domestic economy and develop its own potential without as great a dependency on the regional economy. This change in orientation may be seen in the less ambitious goals of the plan. The plan projected an annual growth rate of only 5 percent and the creation of 201,000 new jobs, of which only 25,000 new jobs are expected to be in the ORAS. The projected total investment was estimated at \$9,346.5 million (JD 3,115.5 million), with the public sector contribution at \$4,900.2 million (JD 1,633.4 million). The private sector share was projected at \$4,446 million (JD 1,482 million) (Jordan Ministry of Planning, 1985).

As the previous discussion clearly demonstrated, the Jordanian economy is influenced by both the external and internal factors which have helped shape and determine its social, economic, and political developments throughout the period of 1921 to 1987. The following chapter will examine the impact of these factors on Jordan's labor market, and how labor policies have developed during the last decades.

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CHAPTER V

JORDAN'S LABOR MARKET AND LABOR POLICIES

1961-1987

The previous chapters demonstrated that the socio-economic and political developments which have occurred in the region since 1950 have influenced Jordan's economy in general and the structure, characteristics, and distribution of its labor force in particular. This regional interdependence causes Jordan's labor market to be vulnerable to the instability and uncertainty in the region. The wide fluctuations in Jordan's labor force demonstrate how dependent it is on regional events.

Although Jordan has had a surplus of labor since its independence, it has experienced full employment as a result of employment opportunities for Jordanian workers in the ORAS. After 1973, Jordan even had a shortage of unskilled and semi-skilled labor and had to import foreign workers to replace the out migration. With the decline in oil prices in the 1980s, Jordan again suffered from problems of unemployment as work opportunities in the ORAS declined. Thus, the level of employment or unemployment depends to a large degree on external events occurring in the region.

Throughout its history, creating job opportunities in order to reduce the level of unemployment has been a major concern of Jordanian policy makers and planners. Both external and internal events have been considered by these labor policy makers. External factors in the form of political and economic conditions in the entire region affected the level of financial support for Jordan, the demand for its goods, and perhaps most importantly, the demand for Jordanian workers. Additional internal factors such as population growth, education, and economic activities have directly impacted Jordan's development process and its labor market, both in the short and long run. These internal factors will be discussed in the following section to elucidate their influence on Jordan's labor force and labor policy.

Characteristics of Jordan's Labor Market

There is a lack of reliable data about Jordan's labor force. This is due in part to the lack of agreement on the definition of the labor force. Generally, economists define the labor force as that portion of the total population which participates in the production of goods and service, including both the employed and those seeking employment. For instance, John Durand (1975) includes in his definition of the labor force

The paid employees, employers, and self-employed persons who work for profit and unpaid family workers

(relatives who assist without pay in the family-operated income producing enterprises, such as farms, stores, handicraft industries, etc.). Unemployed workers are included, as well as those actually employed in income-producing jobs at any given time (pp. 8-11).

That portion of the population who are not working for profit, such as housewives, children, students, the retired, disabled persons, institutional inmates, and others who do not work at income-producing jobs, although they may receive income in the form of rents, dividends, pensions, etc. are not counted as a part of the labor force.

For the purpose of this study, this definition of the labor force will be used. However, for the purpose of this research, employment figures will include only those persons actually employed in either the domestic, public, and private sectors. The unemployed, as well as migrants and members of the armed forces, are excluded from the employment figures. Also, foreign workers in Jordan are not included in the labor force statistics.

In 1961 Jordan's total labor force was estimated to be 309,000 and has grown at an average annual growth rate of 3.3 percent during the period 1961 to 1975, while domestic employment grew at an average annual growth rate of 3.5 percent during the same period (see Table 13). From 1976 to 1980, the growth rate of employment jumped from approximately 4 to 8 percent per year (Mazur, 1979, p. 260). During this five-year period, the number of new entrants to

TABLE 13

JORDAN'S POPULATION AND LABOR FORCE DISTRIBUTION ACCORDING TO SEX, AGE,
RURAL/URBAN AND RATE OF DISTRIBUTION (1961-1987)
(THOUSANDS)

	1961	1966	1968	1972	1975	1979	1982	1985	1987
Population									
- total	1706	2025	1436	1668	1900	2133	2399	2670	2908
- male	NA	NA	NA	NA	NA	1116	NA	1396	1518
- female	NA	NA	NA	NA	NA	1017	NA	1273	1384
- growth rate						4.9			3.9
Age Group %									
- < 15 years		45.4	NA	NA	NA	50.7	NA	54.0	54.0
- > 15 years		47.7	NA	NA	NA	45.2	NA	46.0	46.0
Distribution %									
- rural		56	NA	NA	NA	41	NA	31	25
- urban		44	NA	NA	NA	59	NA	69	75
Labor Force									
- total	390	459	279	322	355	405	451	502	555
- male	NA	NA	262	300	330	375	407	444	489
- female	NA	NA	17	21	24	29	43	57	48
- participation ratio	24	24	NA	NA	22	22	NA	20	20.9
- annual growth rate		3.5		3.3	2.4	2.4			4.1
Employment									
- total	363	443	252	277	338	391	432	472	509
- male	NA	NA	26	31	4	13	12	19	32
- employment growth rate		3.5	3.5	3.5	3.5	8.0	3.1	3.1	3.4
Unemployment									
- total	27	16	28	45	17	14	19	30	46
- male	NA	NA	237	262	316	362	396	426	407
- female	NA	NA	15	15	22	29	36	46	51
- % of unemployed	7	3.5	NA	14	8	2.9	4.3	6	8.3

Note: All figures after 1966 exclude the West Bank.

Sources: Michael P. Mazur, 1979, Economic Growth and Development in Jordan, Boulder, Westview Press; Jordan Ministry of Planning, Five-Year Plan for Economic and Social Development 1986-1990, Amman, Jordan; Royal Scientific Press, pp. 13-19; Jordan's Ministry of Labor, Annual Reports, various issues.

the labor force increased by an estimated 40,100 workers per year (Jordan National Planning Council, 1975, p. 277), and approximately 30,000 workers migrate to the ORAS each year. The number of Jordanian workers in the ORAS increased from 150,000 in 1975 to 305,000 in 1980 (Smadi, 1986). This massive outflow left a net annual increase in Jordan's domestic labor force of only 10,000 workers and reduced the annual labor force growth rate to 2.4 percent (Kirwan, 1983, pp. 671-695).

In 1975, Jordan experienced almost full employment and was faced with a shortage of labor. Since 30,000 of the country's natural increase in manpower were lost to migration, only 10,000 new workers per year were left to fill the 80,000 new positions which were projected in the Five-Year Plan of 1976 to 1980. To meet this expected shortage in labor, the government enacted policies to permit the importation of foreign workers. The number of foreign workers increased yearly and totalled 79,565 by 1980 (Jordan National Planning Council, 1975, p. 11; Smadi et al., 1987, p. 27).

The deceleration of economic growth in the ORAS and Jordan in the 1980s resulted in a decreased demand for workers, both in Jordan and the ORAS. As a result, many of the migrants returned home and entered the labor market. This increase, coupled with the natural growth in the labor force, caused Jordan's labor force to increase at an average

growth rate of 4.1 percent annually during the period of 1980 to 1985. It is forecast that the labor force growth rate will continue at this pace until 1990 (Smadi et al., 1987, p. 22). At the same time Jordan was experiencing this increase, the growth rate in employment declined to approximately 3.3 percent per year during the entire 1980s. Unemployment soared in this period.

Growth in the labor force in Jordan has increased at an average of approximately 3.4 percent per year during the period 1961 to 1987 (See Table 13), while employment increased at an average rate of 4.8 percent. The rosy view of employment, however, tends to give a false account. If the period 1967 to 1980 is excluded, the average growth rate in employment is only 3.3 percent, which means that more new workers were entering the labor force than there were jobs being created. The growing unemployment which reappeared in Jordan in the 1980s can better be understood if one uses the lower employment growth rate. The growth rate in Jordan's labor force of 3.4 percent annually after this readjustment almost equaled the employment growth rate of 3.4 percent annually for the period from 1961 to 1987.

In comparison to other developing countries, Jordan's labor force growth rate during the last three decades has exceeded the average labor force growth rate in other developing countries which averaged only 2.5 percent per year (Mazur, 1979, pp. 218-220).

If one relies on the assumption embraced by the United Nations that the labor force rate of growth will normally equal the population growth rate when other reliable data is unavailable, then Jordan's labor force rate of growth of 3.4 per year for the period 1961 to 1990 does not seem unusual, since its population growth rate averaged 3.5 percent per year for the same period. Similarly, the high growth rate of employment in Jordan, according to Michael Mazur, is related in part to the high rate of economic growth in the country and the huge demand for Jordanian workers in the ORAS (Mazur, 1979, p. 44).

The composition and structure of Jordan's labor force is influenced by the country's demographic, economic, and social development. Individuals normally enter the labor force after completion of the compulsory education which requires attendance until the age of fifteen. Since more than half of the population is less than fifteen years of age, there is a low participation rate in the labor force. As the country has experienced a high birth rate since the 1960s, there is an increase in the number of children who are under fifteen years of age. The participation rate in the labor force reflects this population growth as the rate of labor participation has declined from 22 percent in 1961 to less than 20 percent in the 1980s (see Table 14).

Today approximately one-half of the population attends high school and post-high schools, and by 1987 the

enrollments in these schools and colleges reached almost 1,000,000. The trend of staying in school longer also has lowered the participation rate in the labor force. Many of those with high school and college degrees specialize in fields not needed in the labor market. As a result, there are many unemployed holders of high school certificates and college degrees in the humanities and social sciences, while at the same time there is a shortage of persons with technical, vocational, and natural science backgrounds. This imbalance in educational specialization is due in large part to the traditional beliefs that one should become a lawyer, religious leader, medical doctor, or an engineer. The majority of students entering universities major in these traditional fields. Technical and vocational schools and colleges have only been established in recent decades, and they still have difficulty in recruiting students.

The gender structure in Jordan also greatly affects the labor force. Participation by women in the labor force is still very low, with only approximately 12.5 percent of women in the labor force in 1985, compared to an average of 32 percent in the rest of the world (Durand, 1975, p. 30). Although the level of education among Jordanian women has increased significantly since the 1950s, their participation in the labor force has increased slowly; from less than 3.1 percent in 1961, to 7.7 percent in 1979, to 12.5 percent in

1985 and a decline to 10 percent in 1987 (Jordan Ministry of Planning, 1986, p. 197).

The pattern of marriage and family restricts the number of females entering the labor market. The normal age of marriage for women is eighteen to twenty-four years of age, and many girls marry younger, since earlier marriages are encouraged by both the religion and culture. These factors are partially responsible for the low participation rate by women in the labor force, and also affect the sectoral distribution of working women.

Official records in Jordan indicate that women's participation in the labor force is not increasing according to their level of education and the level of urbanization in the country. This low participation ratio may be explained by the fact that a high portion of educated women marry and accompany their husbands to the ORAS, where they join the labor force through interior contracts, which is mostly unreported to the Jordanian authorities.

The participation rate in the labor force in Jordan is affected by an early retirement policy for the military and civilian bureaucracy, the largest single employers in the country. Many military and public employees retire in their early forties, and governmental policies discourage them from seeking a second career. Early retirement not only lowers the labor participation rate, but it also increases governmental expenditures from retirement funds.

Another characteristic of Jordan's labor market in the last three decades is its orientation toward service sectors. Table 14 shows that 41.8 percent of the labor force was engaged in these sectors in 1961. This percentage increased dramatically to reach 62.9, 68.6, and 69.7 percent in 1979, 1984, and 1987, respectively (Mazur, 1979; Smadi et al., 1986).

The labor market in Jordan is unique in the sense that Jordan, which has always had a surplus of labor, became, after 1973, a large scale labor-exporting as well as labor-importing country. It is estimated that about 40 to 50 percent of Jordan's manpower works in other countries, while the imported workers estimated to be approximately 25 percent of Jordan's labor force (Jordan Ministry of Labor, 1987, pp. 15-30). This migratory phenomena in Jordan's labor market also differs from the labor pattern in other developing countries. Jordan is known as an exporter of skilled workers and professionals but importer of semi or unskilled workers (Jordan Labor Magazine, 1988, p. 12).

These characteristics of the labor market in Jordan were the result of a combination of factors which will be briefly presented in the following pages.

Impact of Population Change on Employment.

From the 1967 war, when that portion of Jordan called the West Bank was occupied by Israel, until the recent

TABLE 14
DISTRIBUTION OF JORDANIAN LABOR FORCE BY ECONOMIC ACTIVITIES
1961-1987

Economic Activities	1961		1979		1987	
	#	%	#	%	#	%
Agriculture	137.2	35.7	45.961	11.3	37.736	7.4
Mining and Quarrying	9.2	2.8	6.054	1.5	53.556	10.5
Manufacturing	34.2	9.8	32.133	7.9		
Utilities (Electricity, Gas, Water)	NA	NA	2.382	0.6	8536	1.7
Construction	39.9	12.4	63.736	15.7	53.360	10.5
Trade	31.4	9.2	41.323	10.2	49.677	9.8
Transport and Communication	11.9	3.7	26.775	6.6	47.107	9.2
Financial Services	53.5		8.227	2.1	16.861	3.3
Other Services	45.4	26.4	178.683	44.1	242.511	47.6
Total	362.7	100	405.274	100	509.344	100

Source: Jordan Department of Statistics, 1964, First Census of Population and Housing 1961, Vol. 3, p. 10, Amman, Jordan; Michael Mazur, Economic Growth and Development of Jordan, Boulder, CO: Westview Press, 1979, p. 112; Mohammad Smadi et al., The Unemployment Problem in Jordan: Characteristics and Prospects, Amman, Jordan: Royal Scientific Society, 1987, p. 24; Jordan Ministry of Labor Annual Report, Amman, Jordan: Printing Workers Cooperation, 1987, p. 16.

declaration by King Hussien on July 31, 1988 formally severing relations with the West Bank, the state of Jordan in reality has consisted only of the East Bank. The population of Jordan as well as its demographic distribution has been influenced by a variety of social, economic, political, and cultural factors, such as the flight of refugees after the 1948 and 1967 wars, movements from rural to urban areas as the country developed, and the out migration of workers to the ORAS and other countries.

It can be seen from Table 13 that Jordan's East Bank population increased from 680,000 in 1952 to 2.22 million in 1980 and to 2,670,000 by 1985. The population is expected to exceed 3 million by the year 1990 (Smadi et al., 1986, p. 23). The annual growth population rate in Jordan, as a result of migration and natural births, has averaged 3.9 percent since 1952. This growth rate is larger than the growth rate in most developing nations (Jordan Ministry of Planning, 1986, p. 58).

Several factors contribute to Jordan's high population growth rate. First, the forced migration from the occupied territories in the West Bank and Gaza Strip caused over 400,000 persons after the 1967 war to move into the East Bank. Secondly, the increase in birth rates during the seventies and eighties, coupled with a declining death rate (a result of the improvements in health care and the rise in the standard of living), greatly increased the population in

Jordan. Since 1980, the total number of live births per year has averaged about 100,000, while deaths in the country have declined to less than 10,000 per year (The Europa Yearbook, 1987, pp. 1587-1602). The net result is a rapid growth in the Jordanian population. The religion and culture of the country encourages early marriages and favors large families. At the same time, birth control and abortion are frowned upon by religious and cultural norms. Also, the memory of the high death rate of infants in the past still perpetuates the belief that of ten children, three or four are expected to die before the age of five. These factors, coupled with the increasing prosperity of people, encourage rapid population growth, which directly affects the domestic labor market.

Jordan's dependent population (i.e., persons under 15 years of age and over 65) has increased from 45.4 percent in 1961 to 50 percent in 1985, despite the reduction in family size from the average ten children to seven in the last decade (Jordan Ministry of Planning, 1985, p. 68). At the same time, the productive age group from fifteen to fifty-nine years has declined from 47.7 percent to 46 percent. Although the average life expectancy in Jordan rose from forty-six to sixty-seven years for men and from forty-seven to seventy-one years for women during the period 1952 to 1985, the ratio of those over fifty-nine years of age declined from 6.9 percent in 1961 to 4 percent in 1985.

This is due in part to the large increase in the number of children and youths in the population for the same period.

The age-sex structure and the pattern of urban-rural distribution of population has also changed as the population has increased. These changes in the composition of the population also affect the labor force. Surprisingly, the ratio of male to female has remained on an even level of 105 to 100 percent, despite wars and migration, which normally reduce the number of young males. Perhaps this can be explained by the fact that young men were more likely to flee the occupied territories of the West Bank than were young women, and as a result Jordan took in more males.

Jordan has experienced, as many other developing countries, an increase in urbanization as more and more people leave the rural areas to seek employment and a better life in the cities. Also, after the 1948 and 1967 wars, refugee camps were located around the cities because of the availability of governmental services and the possibilities of job opportunities (Sayigh, 1978). The concentration of businesses and factories in the Amman-Zarqa region has increased the concentration of population in these areas which today contain 56.7 percent of the country's total population. All other regions in Jordan registered a decline in their population during the period 1950 to 1985. Thus, the urban population has continued to grow from 44

percent in 1961 to approximately 69 percent in 1985, as shown in Table 14.

Impact of Education and Training on Employment

Advances in the field of education have been the most prominent development in Jordan since the 1950s. School enrollment increased from 149,670 students in 1950 to 292,000 in 1967, to 963,352 in 1987. The number of teachers has grown from 476 to approximately 35,000 during this same period (Al Tall, 1978, p. 135; Ministry of Education, 1985). In addition, school facilities have been greatly expanded, and the number of schools has increased from 141 to 3,222 (Jordan Ministry of Planning, 1986, p. 232). Educational expenditures have grown from less than \$1 million to \$247 million (JD 82,497 million) (Central Bank of Jordan, 1987). As shown in Table 15, the average cost per student per year reached \$309 (JD 103) in the 1980s.

To meet the increasing demand for skilled and professional workers, three new universities were established, giving Jordan a total of four universities. In 1987 over 90,000 Jordanian students attended colleges or universities. In addition, there were forty-five community colleges with a total enrollment of 35,000 students. Also, there are twenty vocational high schools and seventy-one vocational centers with a combined enrollment of approximately 30,000 students (Jordan Ministry of Planning 1985, pp. 68-69).

TABLE 15
 AVERAGE COST PER STUDENT BY EDUCATIONAL CYCLE
 AND CATEGORY IN JORDAN IN THE 1980S
 JD.1 and Dollar

<u>Cycle and Category</u>	<u>Average Cost</u>	
	<u>JD</u>	<u>Dollar</u>
Elementary	57.5	172.5
Preparatory	85.9	257.7
Elementary and Preparatory	76.4	229.2
Secondary/Academic (Arts and Science ***)	105.8	317.4
Preparatory and Secondary	98.9	296.7
Elementary, Preparatory, and Secondary	84.3	254.7
Comprehensive Schools	165.5	496.5
Industrial Schools	277.3	831.9
Commercial Schools	120.2	360.6
Agricultural Schools	429.4	1,288.2
Vocational Training Centers	<u>187.2</u>	<u>561.6</u>
Overall Average Cost Per Student	102.4	307.2

Source: Ministry of Planning, The Five-Year Plan for Economic and Social Development 1986-1990 (Amman: Jordan, 1986), p. 233.

As a result of expansion in education, the literacy rate in Jordan reached 72 percent, the highest rate in the Arab world (Birks and Sinclair, 1980, p. 280). Despite the significant achievements by Jordan in the field of education, the educational system is still influenced by cultural norms and values which favor traditional university degrees. There is a relatively small number of students who are willing to attend vocational and technical schools, even

though these are the fields needed by the country's labor market. This situation has created an imbalance in the labor market because the country suffers from a shortage in technical and vocational skills while at the same time Jordan has a surplus of degree holders in the traditional fields (Al Tall, 1978, pp. 143-150). Table 16 shows the distribution of specializations being pursued by students.

The culture also discourages females from pursuing higher education, since this pursuit usually requires living away from home. It is yet not fully acceptable for women to attend college in foreign countries without being accompanied by a male family member. Another factor limiting the number of women in higher education is the cultural attitude restricting their participation in the labor force. As previously mentioned, only 12.5 percent of women are active in the labor force (Ministry of planning, 1985, p. 197).

In general, the educational system in Jordan has not yet been able to fully direct the force of education to the needs of the labor market. As a result, there continues to be an imbalance between the educational experiences of the labor supply and the labor needs in the country.

Impact of Economic Activities on Employment

Despite the difficulties faced by the Jordanian economy, most economic sectors have achieved a high rate of growth and the country's annual growth rate has averaged

TABLE 16

THE DISTRIBUTION OF STUDENTS BY SPECIALIZED
FIELD IN HIGHER EDUCATION
IN 1985

Profession	Undergraduate		Graduate		Community Colleges & Institutions	
	Students	%	Students	%	Student	%
Arts and Humanities	6217	23.7	325	8.6	9713	35.7
Education	914	3.5	757	2.9	8783	32.8
Islamic Law	1007	3.9	34	.2	1891	6.5
Law	396	1.5	36	.2	4083	15.0
Economics and Administrative Science	4201	16.2	89	.4	1764	6.5
Sciences	4196	16.2	220	.8	60	.2
Engineering and Technology	2804	10.8	155	.6	32	.1
Medicine	372	1.5	89	.4	Commercial Aviation	32
Public Health and Paramedical	456	1.8	37	.2	Hotel Training	236
Dentistry	42	.2	0	0	Communication and Transportation	92
Nursing	462	1.8	0	0	Social	519
Pharmacy	485	1.9	0	0		
Agriculture	994	3.9	0	0		
Special Students	1287	5.0	0	0		
Military Sciences	300	1.1	0	0		
Total	25,929	100.0	1742	0	27,205	100.0

Source: Ministry of Planning, 1986, The Five-Year Plan for Economic and Social Development 1986-1990 (Amman, Jordan: Royal Scientific Press) pp. 259-261; Ministry of Education, The Statistical Educational Yearbook, Several issues (Amman, Jordan).

around 10 percent for the period 1950 to 1987 (Smadi, 1986, p. 18). Growth rates for different economic sectors have varied, leading to changes in their relative importance in the country's economy and in their share of the total employment. As may be seen from Table 15, the percentage of employment in agriculture has declined from 33.7 percent in 1961 to 7.4 percent in 1987.

As the number of agricultural laborers has declined, the number of workers in the manufacturing and mining sectors have increased from 22,300 to 53,000. Despite these increases in the number of workers in manufacturing, the capacity of manufacturing and mining to absorb labor is limited. The small size of the domestic market and the fact that increases in demands for industrial goods usually leads to greater mechanization, which limits industries' abilities to absorb large numbers of workers. Employment in the manufacturing and mining sectors has remained at approximately 10 percent of the country's total employment throughout the period of 1961 to 1987. The service sector in Jordan continued to grow in the last two decades for several reasons. For one thing, the Jordanian economy relies heavily on the international market, and this kind of economic dependency promotes services activities such as banking, trade transit, insurance, and other services (Mazur, 1972, p. 219). In 1985 the service sector produced approximately 67 percent of the GNP, while the percentage of

labor working in the service sector to the total labor force increased from 39.3 in 1961 to 69.9 percent in 1987 (Jordan Ministry of Labor, 1987, p. 16).

Although Jordan's economy attained a high rate of growth, it has had a difficult time absorbing the increasing number of new workers coming into the labor force. The challenge to absorb these new laborers is expected to become even more of a problem as the huge number of youths come of age and enter the labor force in the next decade. As urbanization and secularization increase, more women are expected to enter the labor force. As a result, in the coming decade Jordan will be faced with a huge increase in unemployment unless its manpower policies can increase the number of jobs required to absorb these new workers.

Impact of Immigration on the Jordanian Labor Force.

The labor market in Jordan is affected both by the emigration of Jordanian workers and the emigration of non-Jordanian workers into the country (Zaghal, 1983, p. 189). The migration of labor from Jordan to other countries before the oil-price revolution of 1973 was generally considered to have a favorable impact on Jordan's labor market and was generally regulated through state-to-state missions. In this pre-1973 period, by 1967 an estimated 100,000 Jordanian workers went to the ORAS and other countries (Mazur, 1972, p. 231). Following the 1967 war, the number of Jordanian

workers migrating to the ORAS increased to an average of 7,000 to 10,000 workers per year (Jaber and Anani, 1980).

The ORAS increased national revenues after the oil price revolution in 1973, permitting these states to undertake very ambitious development plans requiring a large number of laborers. The local labor shortage forced them to open their borders to a massive inflow of imported workers from Jordan and other countries.

As can be seen from Table 17, the migration of Jordanian workers in the late 1970s reached unprecedented levels. The number of Jordanian workers abroad, which was estimated to be 150,000 in 1975, doubled by 1980, reaching 305,000 workers (Al-Shaab, 1986). Despite the economic decline in the region since the early 1980s, the net Jordanian workers migration continued at an average of 4,000 to 5,000 per year during the period 1981 to 1987, increasing the number of Jordanian workers abroad to approximately 330,000 in 1987 (Khasawneh, 1988, pp. 9-20).

Jordan ranks among the highest labor exporting Arab countries and has over 40 percent of its labor force employed outside the country. Table 18 shows that in 1987, 80 percent of Jordanian labor migrants worked in the Arab world. The other 20 percent migrated to such countries as the United States, Canada, Australia, West Germany, and other European countries (Jordan Ministry of Labor, 1988, p. 28).

TABLE 17

ESTIMATE OF LABOR MIGRATION IN JORDAN AND
REMITTANCES IN/OUT FLOW
1973-1987

Year	Jordanian Workers Abroad	Guest Workers in Jordan	Inflow of		Outflow of		Net Remittances in Millions of U.S. Dollars
			Remittances in Millions of U.S. Dollars	U.S. Dollars	Remittances In Millions of U.S. Dollars	U.S. Dollars	
1973	140,000	376	44.1	---	---	44.1	
1974	145,000	519	72.3	---	---	72.3	
1975	150,000	3,803	159.9	---	---	159.9	
1976	180,000	4,790	409.2	20.4	20.4	388.8	
1977	210,000	7,778	464.2	45.0	45.0	419.2	
1978	240,000	30,289	478.1	60.0	60.0	418.1	
1979	270,000	38,970	541.2	72.0	72.0	469.2	
1980	305,000	88,407	710.0	138.0	138.0	572.0	
1981	312,000	113,780	1,022.6	156.0	156.0	866.6	
1982	317,000	126,418	1,145.5	187.2	187.2	958.3	
1983	322,000	137,256	1,208.7	218.4	218.4	990.3	
1984	325,886	155,519	1,427.7	292.5	292.5	1,135.2	
1985	328,693	143,000	1,208.7	278.85	278.85	929.8	
1986	328,860	133,000	1,243.5	259.35	259.35	984.1	
1987	330,000	123,000	953.1	187.20	187.20	765.9	

Note: JDI.0 = \$3.0

Source: Central Bank of Jordan: Annual Report, Several Issues; Jordan Ministry of Labor and Social Development, Annual Report, Several Issues; Smadi et al., The Unemployment Problem in Jordan: Characteristics and Prospects (Amman, Jordan: Royal Scientific Press) 1987, p. 27. Jordan Ministry of Labor Annual Reports, several issues; Jordan Labor Magazine, several issues.

TABLE 18
ESTIMATE OF JORDANIAN LABOR FORCE ABROAD
FOR 1980 AND 1987

Country	1980	1987
Arab countries	261,500	277,200
Saudi Arabia	140,000	160,930
Kuwait	75,000	81,000
Qatar	7,250	8,300
U.A.E.	19,000	10,860
Bahrain	3,250	3,000
Oman	6,500	6,000
Libya	6,500	3,000
Iraq	---	2,000
Others	4,000	2,110
Foreign Countries	43,900	52,800
U.S.A.	23,000	24,550
West Germany	10,000	10,000
France	---	1,000
Australia	3,000	3,000
Canada	5,000	5,200
Britain	1,500	3,000
Venezuela	---	1,000
Spain	---	500
Others	1,400	4,550
Total	305,400	330,000

Source: Mansour Al-Etoom, Jordan's and Arab and International Cooperation for Manpower Development, In Arabic, Labor Magazine, 43, 1988, p. 27; Jordan Ministry of Labor Annual Report, 1987, p. 28.

Jordanian workers represent approximately 17 percent of the total foreign labor force in the ORAS. The high portion of Jordanian workers migrating to the ORAS may be explained by several factors. For one thing, the fact that the ORAS are close and have the same language and cultural background

make them most attractive to Jordanian workers. The economic growth in Jordan and the region after 1975 created a high demand for Jordanian workers from domestic and foreign markets. The massive outflow of Jordanian workers resulted in a domestic labor shortage. Instead of restricting its labor outflow, Jordan imported workers from Arab and non-Arab countries. As can be seen in Table 17, the number of guest workers mounted from 3,803 in 1975 to over 150,000 in 1985, comprised of mostly semi-skilled or unskilled workers. In addition to replacement of Jordanian workers abroad, these guest workers often were employed in jobs which Jordanian workers would not take because of cultural attitudes. In a survey by Smadi and his colleagues, (see Table 19) it was found that two of the main reasons these foreign workers were employed were that they would work for less wages, and they would take jobs which Jordanians normally would not take (Smadi et al., 1986, p. 43).

Unemployment and the Labor Force.

Despite the high rate of employment growth in Jordan since 1961, unemployment has always been a threat to Jordan's development. The rate of unemployment reflects the interaction between the labor market and economic development in Jordan, as well as in the Arab world (Birks and Sinclair, 1980, p. 1). As can be seen from Table 13, unemployment in Jordan ranged from over 15 percent in the

TABLE 19
REASONS EMPLOYERS EMPLOY
GUEST WORKERS, 1984

Economic Activity	Reasons for Employing Guest Workers						No. of Establishment
	1	2	3	4	5	6	
Agriculture	9	90	3	5	31	92	96
Mining, Quarrying	2	2	4	0	0	1	4
Manufacturing	27	97	0	102	5	100	133
Electricity	0	0	0	0	0	0	0
Construction	20	22	12	36	2	6	71
Trade	69	62	21	151	2	121	261
Transport	7	6	8	21	0	16	23
Finance	2	0	0	4	0	1	7
Other Services	87	187	107	250	4	213	413
Total	223	466	155	569	34	550	1,008

- Notes:
- (1) Lack of qualified and experienced Jordanian workers
 - (2) It is easy to get guest workers
 - (3) The general behavior of guest workers
 - (4) The low wages of guest workers
 - (5) The wise of Arab and/or foreign investor/owner
 - (6) Jordanians refrain from doing such jobs

Source: Smadi et al., The Socio-economic Impact of Guest Workers in Jordan, Vol. 1 (Amman, Jordan: Royal Scientific Society, 1986), p. 43.

aftermath of the 1948 and 1967 wars to a low of 2 percent in the oil boom years in the mid-1970s. The variation in the level of unemployment tends to follow development in the domestic and foreign labor market in Jordan and the region.

The unemployment rate in the 1950s, estimated to be in

the 15 percent range, declined to about 3.5 percent by 1966 as a result of the remarkable economic growth in Jordan in pre-1967 war period (Mazur, 1979). Between 1967 and 1972, however, the unemployment rate again rose to almost 15 percent as a result of the 1967 war and its aftermath, which disrupted the economic activities in Jordan. In the period after the war, from 1967 to 1972, internal as well as external factors interacted to reduce the number of unemployed. The expansion of Jordan's security forces by 28,000 persons in the immediate post-war period, the recruitment for Arab commando groups, in addition to labor migration to the ORAS all helped in reducing the rate of unemployment in Jordan to about 8 percent by 1972 (Mazer, 1979). Increasing demand for Jordanian workers from the ORAS after the oil price revolution in 1973 helped Jordan to experience full employment for the first time, and predicated the policy to import foreign workers into Jordan (Smadi, 1986).

Again in the 1980s, Jordan's labor market experienced growing unemployment because of a surplus of labor (Smadi, 1986) which was caused by the cutbacks in the demands for Jordanian workers in the ORAS and a decline in domestic development in Jordan. It was estimated that in the period 1981 through 1987 approximately 12,000 to 18,000 workers returned to Jordan from the ORAS (Jordan Ministry of Labor, 1987).

As can be seen from Table 20, the unemployment rate was the highest among the young population group, including the new graduates of the high school, the community colleges and universities, and young females (Smadi et al., 1987, p. 34-41).

In their survey about the unemployment in Jordan in 1987, Smadi and his colleagues concluded that unemployment in Jordan has resulted from various internal, external, and objective causes which they summarized as follows:

1. At the top of the list of internal factors has been the slowdown in economic activities as a consequence of the sluggishness of domestic demand. And, in turn, the retreat of gross capital formation. Three major factors have affected adversely domestic demand, namely the decline in unrequited transfers, export proceeds, and growth rate of remittances of Jordanian workers abroad.
2. The significant growth in college and university graduates of unrequired specialization, leading to a notable excess in the labor supply of the domestic labor market.
3. The continuous inflow of guest workers into the country.
4. The rigidity of wages in the country.
5. The lack of a suitable information system about job vacancies.
6. Behavioral unemployment.

As for the external factors, the slowdown in economic activity in the Gulf states has been the major one. This has influenced Jordan negatively through the following:

1. The decline of demand in the Gulf states for Jordanian manpower.
2. The return of a number of Jordanian migrants.
3. The decrease in growth rate of remittances of Jordanians working abroad as mentioned above (Smadi et al., 1987, p. 96).

TABLE 20

DISTRIBUTION OF UNEMPLOYED BY GOVERNORATE,
AGE, AND LEVEL OF EDUCATION IN
JORDAN (JULY-AUGUST 1986)

Governorate	Unemployed by Governorate			Unemployed by Level of Education			Unemployed by Age Group							
	Male	Female	Total	Percent	Education	Male	Female	Total	Percent	Age	Male	Female	Total	Percent
Amman	634	324	958	46.41	<elementary	93	0	93	4.51	15-	52	50	102	4.94
Zarga	331	117	438	21.22	Elementary	202	3	205	9.93	20-	581	418	999	48.40
Balga	147	58	205	9.93	Preparatory	411	12	423	20.49	25-	339	113	452	21.90
Irbid	164	80	244	11.82	Secondary	397	115	512	24.81	30-	175	34	209	10.13
Mafrag	32	10	42	2.03	Lower									
Tafila	20	11	31	1.50	Diploma	184	327	511	24.76	35-	108	9	117	5.67
Karak	50	25	75	3.63	UNV BA. BSC	125	143	273	13.22	40-	71	2	73	3.54
Ma'an	70	1	71	3.44	Master and Higher									
					Diploma	25	27	47	2.28	45-	62	0	62	3.00
					Doctoral	0	0	0	0.00	50+	50	0	50	2.52
Total	1,438	626	2,064			1,438	626	2,064			1,438	626	2,064	
Percent of Total	69.67	30.33	100.00			69.6	30.3	100.00			69.6	30.3	100.00	

Source: Smadi, Mohammad, et al., 1987, *The Unemployment Problem in Jordan: Characteristics and Prospects*, (Amman, Jordan: Royal Scientific Press), pp. 111, 160.

Labor Policies and Institutions in Jordan

Labor problems have presented a major challenge to Jordan's development throughout its history. After each of the wars with Israel, the country's economy was disrupted, and there was a flood of refugees who had to be absorbed into the work force. Although Jordan has a free market economy, the government was forced to intervene because the economy was underdeveloped and unable to employ the huge influx of workers.

Since the early 1960s, national planning has been undertaken in an attempt to meet the employment problems by stimulating economic growth and development. In 1969 the National Planning Council established a manpower planning section to incorporate manpower planning into general development planning. All of these plans recognized that human resources are Jordan's main asset, as well as its main challenge. Jordan's policy makers and planners point out the importance of human resources to the country's development. In his opening speech to the Jordanian Development Conference in 1972, his majesty King Hussein emphasized the importance of human resources to the development of the country, as well as the importance of meeting human needs when he stated

The Jordanian citizen is our most valuable resource and asset . . . our main objective will continue to be betterment of his lot and provision of amenities and facilities which would improve his life condition (Jordan National Planning Council, 1972, p. 3).

The allocation of resources in the plans also reflected the importance of human resource development. It is difficult to separate expenditures for economic development from those for human capital development since many programs promote both economic and human resources development (Schultz, 1961). Therefore, the percentages of expenditures allocated in the national plans directly for human capital development were used in this study. As can be seen in Table 21, the percentage of total expenditures allocated directly for human resources development has constantly increased from 19 percent in the Seven-Year plan for 1964 through 1970, to 36 percent of the total proposed expenditures in the Five-Year plan for 1986 through 1990 (Jordan Ministry of Planning, 1986).

Direct expenditures on human resource development are spent on a wide range of programs such as education, health, social welfare and labor, housing, and women and youth affairs as can be seen from Table 21. During the different periods, expenditures have been influenced by domestic and external circumstances and conditions of the time. For instance, expenditures for housing and governmental building and village affairs received the lion's share of expenditures in the aftermath of the 1948 and 1967 wars, reflecting the need for housing for displaced persons. The growth of governmental activities and responsibilities in these periods are also reflected in the huge allocations of

TABLE 21
DEVELOPMENT AND HUMAN DEVELOPMENT EXPENDITURES FOR
FIVE PLANS 1964-1990
(US \$ MILLION)

Plan	Total Outlay	Outlay on Human Capital	%	Education	%	Health	%	Social Welfare & Labor	%	Housing & Government Buildings	%	Municipal & Village Affairs	%	Others	%
The Seven-Year Plan 1964-1970	822.0	159.0	19	21.0	13.0	4.8	3.0	9	6.0	27.0	17.0	1.5	1.0	96.3	62.0
The Three-Year Plan 1973-1975	537.0	192.0	36	31.2	17.0	4.5	2.0	4.5	2.0	104.4	54.0	44.1	23.0	4.2	2.0
First Five-Year Plan 1976-1980	2295.0	552.0	24	103.8	19.0	27.0	5.0	14.4	3.0	258.0	46.0	116.4	21.0	34.2	6.0
Second Five-Year Plan 1981-1985	9900.0	2598.0	26	732.0	28.0	302.1	11.5	73.0	3.0	924.1	35.5	526.8	20.0	41.4	2.0
Third Five-Year Plan 1986-1990	9346.5	3382.2	36	829.2	24.5	187.2	5.5	87.6	2.5	167.4	49.5	462.3	13.5	141.9	4.5

Others: for the Seven-Year Plan are Municipal and Village Affairs, Statistics and Endowment; for the Three-Year Plan are Statistics, Science, and Technology; for the First Five-Year Plan are Alawqaf, Statistics, Royal Scientific Association; for the Second Five-Year Plan are Alawqaf, Science, Technology, and Statistics; for the Third Five-Year Plan are Alawqaf, Women's Affairs, and Youth.

Source: Jordan National Planning Council Seven-Year Development Plan 1964-1970; Three-Year Development Plan 1973-1975; Five-Year Development Plan 1976-1980; Five-Year Plan for Social and Economic Development 1981-1985; and Jordan Ministry of Planning Five-Year Plan for Social and Economic Development (Amman, Jordan).

resources to these programs. Similarly, the increasing enrollments in schools since the 1950s, which required expansion in the educational facilities, caused educational expenditures to increase greatly. Table 21 shows the direct expenditures on human capital during the periods of the national plans.

The pre-1975 plans and labor policies generally were concerned with creating jobs to reduce the level of unemployment, which ranged from 8 to 15 percent in this period. During the entire period from 1950 to 1975, Jordan had a surplus of labor (Mazur, 1979, p. 258).

Many of the unemployed workers in Jordan during the 1950s and 1960s migrated to the developed countries in Europe and the United States, Canada, and Australia in search of employment opportunities. During these earlier decades, the number of labor immigrants to the ORAS was relatively small and consisted mainly of teachers, medical personnel, and engineers. During this period, the out-migration to the ORAS was regulated through state-to-state missions.

Labor migration was seen as being beneficial to both countries' development efforts during the pre-1975 era. As the ORAS received needed human talent, Jordanian workers received needed employment and were able to send home remittances from their pay which helped to balance the nation's balance of payments. This labor migration was also

considered as a safety valve to reduce social and political pressures by shifting the cost of supporting the migrants' families to the receiving countries.

Labor affairs were managed by the Department of Labor in the Ministry of Social Affairs and Labor. The Department of Labor had responsibility for the industrial relations between laborers and employers. The Department directed its attention to the problem of unemployment and lack of technical and vocational skills among Jordanian workers. In 1969 the Department of Labor established the Labor Education Institute to provide educational and training courses for improving labor education. Also, the Department of Labor established an employment office to help in finding work for the unemployed in cooperation with the Civil Service Commission.

The labor policy for the 1976 to 1980 period no longer was faced with the problem of unemployment. The primary manpower question for this period, therefore, was no longer one of providing job opportunities; instead, the new manpower question was how to keep the growing manpower shortage in Jordan from hindering the country's developmental efforts (Mazur, 1979).

This mass exodus of mainly professional and skilled workers had a serious impact on Jordan's economic development. Scholars, as well as policy makers, began to question the wisdom of this open-door migration labor policy.

Critics of the policy argued that Jordan's development was being adversely affected and the benefits received by the migrant workers were not adequate to compensate the country for its loss (Choucri, 1971, 1986; Hassan Bin Talal, 1984; Ibrahim, 1982; Jaber and Anani, 1980; Kirwan, 1980).

As a result of these debates, the government of Jordan created the Ministry of Labor to monitor the labor market situation and to maintain strong industrial relations among the three parties of the production process: the government, workers, and employers (National Planning Council, 1981, p. 295). In the same year, the government organized labor unions under the auspices of the General Labor Union in its efforts to coordinate labor activities.

Jordan's labor law allows workers to organize either by establishing unions or through professional associations such as the Jordanian Doctors' Association, Engineers' Association, the Lawyers' Association, and others. Although workers in the public sectors may not establish and join unions, these employees may join any of the professional associations, providing they could meet the requirements and qualifications.

In 1977, a technical committee of manpower of the National Planning Council was established to investigate the impact of labor migration on the country's development. The committee submitted recommendations of proposed actions which would reduce the number of migrants to the ORAS. In

an attempt to slow out-migration, the committee called for increases in salaries for domestic workers, subsidies on housing, plus financial loans as a means to improve domestic workers' welfare. It also proposed that procedures be reinstated to limit the number of highly-skilled workers from leaving the country through bilateral agreements between Jordan and the ORAS. The committee also called for increasing the domestic labor supply by encouraging more female participation in the labor force and more overtime work by employees. Importing foreign workers to augment the labor force was also suggested, as well as increasing technical and vocational educational programs to upgrade unskilled workers. Finally, the committee called for regular manpower surveys to gather data necessary to facilitate manpower planning (Share, 1983, p. 80).

The recommendations of the special labor committee did not suggest general restrictions on out-migration, but rather proposed slowing the outward migration, by improving the financial conditions of and fringe benefits for Jordanian workers and importing foreign workers to substitute for the Jordanian workers who migrated to the ORAS (Mansour, 1983, p. 99). These recommendations were basically accepted by the government. Regulatory policies enacted by the government sought to slow the outflow of workers, as the committee had suggested, without entirely restricting migration. The regulations provided that

selective restrictions be placed on certain essential skills in the major industrial establishments. Employees with essential skills were required to receive a release from their employers showing that they were no longer needed by the firm before they could obtain permission to migrate to the ORAS or elsewhere for work. Public administrative employees were not allowed to migrate unless they received the same kind of permission from their agencies.

In addition to the restrictions on migration, the government established an advisory tripartite committee consisting of representatives from the labor unions, employees, and government for the purpose of making recommendations pertaining to the wage structure in an effort to minimize inflationary pressures. While the committee's proposals were advisory in nature, the Ministries of Labor and Economy tended to follow them. The Ministry of Labor strengthened its activities by establishing two additional employment offices throughout the country. In addition, in 1977 a Department of Women's Affairs was established to deal with women's matters and to encourage female participation in the development process. The government also created a central agency, the Vocational Training Corporation, for the purpose of promoting training for technicians and vocational workers. The government enacted a law creating a social security corporation which has the responsibility of insuring workers against injuries, death, and retirement. The

retirement program, similar to the social security program in the United States, taxes both the employee and employer and is mandatory for all workers except those covered under the military or other governmental retirement programs. Finally, the government encouraged foreign guest workers by easing restrictions on entry permits and resident regulations. As a result, guest workers increased from less than 4,000 in 1975 to over 150,000 by 1985 (Smadi, et al., 1986).

As the number of foreigners increased in Jordan, questions arose about the wisdom of importing such workers and their impact on the economy. In his study of the socio-economic impact of guest workers in Jordan, Smadi and his colleagues concluded that they were beneficial to the country. They argued that, since Jordanian workers were better educated and more productive than the average guest worker, the nation benefited when its workers earned the higher wages abroad and were replaced by the guest workers whom were paid less. They pointed to the remittances sent by guest workers, which had increased from about \$15 million in 1977 to \$292 million in 1984, while in the same period, remittances from Jordanians overseas rose from \$419.1 million to \$1,132.5 million (Central Bank of Jordan, 1983). They concluded that from the difference in remittances, Jordan obviously gained in the migration process (Smadi et al., 1986).

A rebuttal to this argument, however, was presented by Birks and Sinclair, who asserted that Jordan's development suffered from "lost opportunities" as a result of losing its highly-professional and skilled workers who could have developed its own economy (Birks and Sinclair, 1978, p. 30). These writers proposed placing limits on the number of the highly-skilled migrants permitted to leave the country.

The large inflow of guest workers also created new social, economic, and administrative problems. Jordanian manual laborers now had to compete with the guest workers who were willing to accept lower wages than were customary in Jordan. This, in turn, caused Jordanian employers to employ foreign workers who tended to accept wages 20 to 30 percent less than wages normally paid to Jordanians. As the number of foreign workers increased from less than 80,000 in 1980 to over 150,000 in 1984, competition between Jordanian and foreign workers grew more intense, especially when unemployment again became a major problem in the country. Consequently, Jordan's federation of trade unions demanded that the government restrict the inflow of foreign workers. The Ministry of Labor, in cooperation with the Ministry of Interior, responded by adopting measures to regulate the inflow of foreign workers. The new regulations required that employment priority be given to Jordanian workers first, then, to other Arab workers, and finally to non-Arab workers.

In order to ensure that the priority policy was followed, the government required that Jordanian workers represent at least 50 percent of the total workers in every firm in the industrial and productive sector and 25 percent from the construction sector. To limit importation of non-Arab workers, Jordanian and foreign employers were required to obtain advance approval from the Ministry of Labor, as well as the interior ministry. Importation of Arab workers was excluded from this residency requirement. The penalty for violating the residence law in Jordan, or not having valid work permits, was increased greatly in the mid-1980s in an attempt to control the inflow of non-Arab guest workers.

The increasing unemployment level in the 1980s and the need to create jobs for Jordanian workers required more effective measures in order to control the inflow of foreign workers into Jordan. In 1984 the Ministry of Labor enacted a regulation requiring guest workers to obtain annual work permits prior to taking jobs in Jordan. To ensure that employers followed these requirements, the Ministry of Labor opened offices in every major city in Jordan in an effort to inspect and regulate employment of foreign workers. Also, more investigations of wage discrimination against Jordanian workers have been carried out by the wage authority in the Ministry of Labor.

monitor the influx of guest workers, it has not yet been successful in finding jobs for the increasing number of unemployed Jordanians, and most of the foreign workers have not gone home as the labor market in Jordan has declined. The general labor union estimates the number of guest workers in Jordan to be approximately 250,000, while other sources estimate their number to be much less (Al-Jamal, 1988). Table 22 shows the conflicting estimates of the number of guest workers still in the country.

As unemployment in Jordan again became the main problem of the 1980s, the primary manpower question for the 1986 through 1990 plan became how to provide jobs for the huge number of new entrants into the labor force either as recent school graduates or those workers returning from abroad (Jordan Ministry of Planning, 1986, p. 167).

Despite the fact that a significant portion of Jordanian workers must find employment outside of the country, Jordan has relatively little control over the demand and supply for labor to the ORAS. Jordan can only negotiate with these countries to maintain the demand for Jordanian workers (Smadi et al., 1987, p. 114). Jordan's open-door policy toward migration has helped Jordanian workers to find employment in the ORAS and the developed countries. The third Five-Year plan for 1986 through 1990 forecasts that a total of approximately 25,000 to 50,000 more job opportunities for Jordanians workers will be available in the ORAS

TABLE 22
ESTIMATE OF GUEST WORKERS IN JORDAN
1978-1987

Year	Number of Work Permits	Ministry of Labor	Ministry of Planning	Ministry of Labor Department of Research
1978	18,737	30,289	--	--
1979	26,315	38,970	41,042	38,970
1980	79,566	88,407	79,566	125,300
1981	93,402	113,780	93,402	109,400
1982	61,280	126,418	120,000	139,000
1983	58,441	136,256	130,000	157,700
1984	153,519	155,519	153,591	162,800
1985	101,484	143,000	143,300	162,100
1986	97,885	133,000	133,000	159,000
1987	79,761	123,000	123,000	155,000

Source: Al-Jamal, Ali, 1988, *The Guest Workers In Jordan in Labor Magazine*, 43:28-40.

during the plan period (Jordan Ministry of Planning, 1986, p. 108).

To encourage the continuing employment of Jordanian workers abroad, the Ministry of Labor has enacted bilateral labor agreements with Morocco, Tunisia, Sudan, and the United Arab Emirates. Labor agreements have been signed with Pakistan and Turkey in an attempt to open other labor markets. Jordan has appointed labor attaches in Kuwait, the United Arab Emirates, Qatar, and Saudi Arabia to help in collecting and providing information about Jordanian workers and job opportunities. Furthermore, through its membership

in the Arab Labor Organization, Jordan has sought to promote employment of Arab workers instead of non-Arabs in the Arab labor market (Jordan Ministry of Planning, 1986, p. 108).

Jordan's interest in human resources was one of the major goals in establishing the Royal Scientific Society to attract Jordanian talents to be a part of the development process of the country. According to this policy, in 1985 Jordan policy-makers called for the first conference of Jordanians abroad. The conference emphasized the importance of the role of Jordanians abroad in the country's development plans by strengthening the ties between them and their motherland (Ministry of Labor, 1988, pp. 16-17). Since 1985, an annual conference has taken place in July of each year to discuss the proposals and suggestions of common interest for both the Jordanians abroad and in the country.

The importance of these conferences was instituted by establishing a department for Jordanians abroad in the Ministry of Labor and Social Development to coordinate relations between the Jordanians abroad and in the country.

As unemployment increased, as shown in Table 13, a ministerial committee on unemployment in 1986 recommended the establishment of a governmental agency to market Jordanian labor in the ORAS. In addition to these policies, the government of Jordan has encouraged local newspapers to advertise job opportunities in other countries (Smadi et al., 1987).

Unfortunately, Jordan's economic activities tend to follow the regional economic cycles and to decline at the very time many workers are forced to return from the ORAS. Jordan's most recent plan for the period 1986 through 1990 proposes to stimulate Jordan's economy so as to balance the supply and demand for labor. Thirty-six percent of the total investment for this development plan is designated for human capital development. The plan also calls for the creation of 201,000 new jobs to meet a labor force increase of approximately 267,200 persons during the period. Also, by distributing development benefits to the various regions in the country, it is believed that employment opportunities will be made available for many workers who for some reason cannot easily move to find employment (Jordan Ministry of Planning, 1986, pp. 80-87).

The plan proposes a new strategy for economic investments which will emphasize domestic factors in which Jordan has a comparative advantage (Smadi et al., 1987, pp. 118-129). This new proposed investment strategy, called the export strategy, suggests that finished goods be imported and resold throughout the region after assembly or modification, similar to the Lebanese experience before the civil war. The new strategy differs from Jordan's previous policy which was based on the concept of import substitution-industrialization in which parts and raw materials were imported and assembled mainly for the Jordanian domestic

industrialization in which parts and raw materials were imported and assembled mainly for the Jordanian domestic market. The new strategy is expected to increase employment more than the former strategy, since the market for Jordanian goods will be enlarged to include the local, regional, and even international markets (Krueger, 1983, pp. 30-49).

The new economic strategy will stress labor-intensive industries rather than the capital-intensive industries that were followed in the 1970s. Small and medium-size projects which may prosper because of Jordan's comparative advantage will be emphasized. The plan also recommends greater cooperation and coordination between the public and the private sectors so as to upgrade Jordanian products and to promote and finance Jordanian exports (Jordan Ministry of Planning, 1986, pp. 105-107).

Wage and incentive policies for labor were proposed to help transform the size structure and the sectoral occupational distribution of manpower to better meet developmental needs (Jordan Ministry of Planning, 1986, p. 108). A proposed flexible wage system will encourage more women to participate and to take part-time jobs. Recommended employee benefits in the form of nursing and baby care facilities will make it possible for more women to participate in the labor force.

Wages and incentive policies are to be tied to an increase in labor productivity. Wage increases should not be given only on an annual basis, but also should be limited to increases in productivity. Wages and other employment benefits should be modified in such a way as to encourage people to specialize in those fields needed by the country. Incentives were proposed for employees working in less-developed regions as a means of attracting workers to these areas.

Under the plan, the private sector is encouraged to follow the labor-intensive strategy. Tax reductions and other types of subsidies are to be given to those following the plan. Also, public workers will be discouraged from holding more than one job in an effort to spread available work to more people. A national information system for the labor market in Jordan is to be established. A Jordanian occupation manual describing all employment positions and the education and training required for them is to be published as a means of helping individuals, colleges, and firms in preparing for these positions (Jordan Ministry of Planning, 1986, pp. 111-112).

The national plan for 1986 through 1990 also recognizes that if Jordan is ever to solve its labor problem, it is going to have to reduce the huge number of workers coming into the market each year. Suggestions have been made for controlling the high birth rates through the family planning

programs. Also, it has been recommended that stronger control be placed on the inflow of guest workers into the country. Guest workers are not to be permitted to replace Jordanian workers and are to be given entrance visas only if they will not compete with Jordanian workers (Labor Magazine, 1988, pp. 28-39).

A new law enacted June 8, 1986 required the prior approval of the Ministry of Labor before guest workers could receive entry permits into the country. Stiff penalties were provided against employers who did not abide by these measures. In addition, the law raised the work permit fee to almost \$1,000 for non-Arab workers per year.

The Five-Year Plan 1986-1990 also recommends that educational and training institutions reevaluate their curricula to ensure that the courses offered are compatible with the needs of the country, for various specializations. As mentioned before, wages, incentives, scholarships, and allowances are recommended to be used to redirect Jordanian students toward the required specialization and studies needed in the labor market. The plan also envisages expansion of the scope of vocational training programs to be in line with the demand for labor, so as to combat structural unemployment in order to achieve greater equilibrium in Jordan's labor market (Jordan Ministry of Planning, 1986, p. 112).

Jordan's economic and labor policy, as has been illustrated, must adjust to conditions in both the domestic and foreign environments. Deciding which policies best serve the nation is a difficult task without knowing the determinants of the labor force or size of employment in Jordan. The task of identifying the determinants of the size of employment will be the subject of the next chapter.

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CHAPTER VI
DETERMINANTS OF THE LABOR
MARKET IN JORDAN
1961-1987

The purpose of this chapter is to quantitatively identify the relative influence of the factors which affected the size of employment in Jordan during the period from 1961 to 1987. This period is divided into two periods for comparison, 1961 to 1972 and 1973 to 1987. The period from 1961 to 1972 was a period of instability in Jordan and the entire region, while the period from 1973 to 1987 was a time of relative stability in Jordan as shown in Table 24. The choice of this time division is supported by the development and changes which took place in Jordan and the region in the pre- and post-1973 periods.

During each of these periods, Jordan adopted and adjusted its labor policies in reaction to various internal and external factors which influenced the country's labor market. The objective of the labor policy was always to create new job opportunities either in the domestic or foreign labor markets. Jordan's labor policies must consider both internal and external factors influencing the labor market. The focus of this chapter is to identify these factors to determine and to compare their relative

influence on the size of employment in the two periods, 1961 to 1972 and 1973 to 1987.

Procedure of Analysis

A total of twelve economic, social, and political variables, which were perceived to have an impact on the size of employment in Jordan, were chosen from a heuristic model of the labor force (Table 1). The data for the variables (Table 23) were compiled and assembled from a variety of published sources identified in Chapter I.

The variable representing instability was assembled from a number of indicators identified by Taylor and Jodice (1983) in the Handbook of Political and Social Indicators. These indicators are shown in Table 24. Two of these variables, the instability indicator and total population, were not included in the model for statistical analysis. The former variable, instability indicator, was not used because it was evident that instability was found only in the first period, 1961 to 1972, and especially in the year 1970, when there was a major civil disturbance in the country. The second variable, total population, was not included in the model, since population was used to transform some of the variables to a per capita basis.

The size of employment in Jordan (EMP) was chosen as the main dependent variable. This variable represents the totality of employment, both in public and private sectors

TABLE 23

FACTORS CHOSEN FROM THE HEURISTIC MODEL AND WHICH AFFECT THE SIZE OF THE EMPLOYED LABOR FORCE IN JORDAN 1961-1987

Year	Size of employment EMP	Investment in U.S. dollars INV	Remittances in million U.S. dollars RMT	Educational expenditures in million U.S. dollars EXP	Foreign aid in million U.S. dollars FAD	Military personnel MP	Gross national product in million U.S. dollars GNP	Foreign Workers in Jordan GWF	Number of students STD	World oil price WOP	Jordanian workers abroad JWA	Population POP
1961	328,000	57	15.6	8.4	60.9	35,000	327	---	300,677	1.80	60	1,691,000
1962	339,000	66	18.6	8.7	56.7	35,000	330	---	326,929	1.80	70	1,763,000
1963	351,000	60	18.3	10.2	52.2	35,000	354	---	353,603	1.80	77	1,860,000
1964	364,000	57	27.9	10.8	69.9	45,000	405	---	386,543	1.80	84	1,935,000
1965	377,000	72	27.3	11.7	48.0	45,000	447	---	414,907	1.80	91	2,016,000
1966	390,000	84	31.8	12.9	49.5	55,000	432	---	446,144	1.80	98	2,100,000
1967	393,000	84	19.8	10.5	154.5	50,000	420	---	289,793	1.80	105	1,391,000
1968	251,600	153	12.3	16.5	159.0	60,000	498	---	322,700	1.80	112	1,436,000
1969	255,300	201	20.7	16.2	137.1	55,000	591	---	350,341	1.80	113	1,483,000
1970	258,900	105	16.5	16.5	117.0	60,000	561	---	387,886	1.73	120	1,531,000
1971	267,800	159	14.7	20.4	106.2	70,000	597	---	416,713	2.14	127	1,581,000
1972	276,900	185	22.2	21.3	197.7	65,000	663	---	466,083	2.45	134	1,688,000
1973	296,000	153	44.1	20.7	183.0	70,000	726	376	497,125	2.37	140	1,741,000
1974	316,400	222	72.3	22.2	253.2	70,000	837	519	534,985	11.25	145	1,841,000
1975	338,100	264	159.9	35.7	414.0	73,000	1,155	3,803	572,162	11.02	150	1,900,000
1976	363,300	420	388.8	44.4	368.1	80,200	1,713	4,790	611,834	11.89	180	1,976,000
1977	371,000	465	419.2	55.8	500.7	68,000	2,013	7,778	647,590	12.95	210	2,029,000
1978	380,900	507	418.1	66.8	307.8	68,000	2,374	31,308	687,951	12.98	240	2,088,000
1979	391,100	576	469.2	78.9	954.0	68,000	2,808	38,970	730,508	19.00	270	2,133,000
1980	405,300	1,191	572.8	107.1	1,172.4	67,200	3,597	79,566	762,425	31.51	305	2,278,000
1981	418,400	1,551	866.4	118.8	1,245.9	70,000	4,398	93,402	795,922	35.01	311	2,307,000
1982	431,800	1,599	958.2	152.1	1,126.2	72,000	5,108	120,000	820,113	35.01	317	2,399,000
1983	445,300	1,365	990.3	184.5	890.4	76,200	5,340	130,000	856,286	29.00	322	2,495,000
1984	458,500	1,257	1,132.5	191.7	717.0	73,000	5,655	153,000	878,943	29.00	325	2,595,000
1985	472,300	1,242	929.7	196.5	580.8	70,300	5,646	143,000	899,309	28.00	328	2,670,000
1986	492,500	1,362	984.0	211.2	910.2	70,200	5,757	133,000	919,645	15.00	328	2,796,000
1987	509,300	1,401	765.9	236.1	671.4	80,300	5,604	123,000	963,252	17.00	330	2,903,000

Notes: Data after 1967 is for East Bank only. Variable converted from Jordanian dinar to U.S. dollar, 1 JD = approximately U.S.\$3. Sources: Central Bank of Jordan Annual Reports and Monthly Statistical Bulletin, several issues (Amman, Jordan); Jordan Department of Statistics, Population Census, 1961, 1979; Jordan Ministry of Education, The Statistical Educational Year Book, Amman, Jordan, several issues; Jordan Ministry of Labor, Annual Reports, Amman, Jordan, several issues; Jordan National Planning Council Development Plans Plan for Economic and Social Development, Amman, Jordan; Royal Scientific Society, several reports and publications; Ahmad Al Talli, 1978 Education in Amman, Jordan, several issues; Jordan Royal Scientific Society, several reports and publications; Ahmad Al Talli, 1978 Education in Jordan Islamabad Pakistan; National Bank Foundation; Eliyahy, Kanovsky 1968 The Economic Impact of the Six-Day War, Israel, the Occupied Territories, Egypt and Jordan, (New York: Appleton Century Crofts, Mohammad Snadi et al., 1986, The Socio-Economic Impact of Guest Workers in Jordan, Amman, Jordan; Royal Scientific Society; Mohammad Snadi et al., 1987 The Unemployment Problem in Jordan. Characteristics and Prospects (Amman, Jordan: Royal Scientific Society; Monther Share (ed.), 1986 Jordan's Place Within the Arab Oil Economics, Irbid, Jordan: Yarmouk University; Saleh Khasawneh, 1988, Women in Jordan's Labor Market, in Arabic Jordan Labor Magazine pp. 13-19; World Bank World Tables 1988, 1989 (Baltimore: John Hopkins University Press.

TABLE 24

INSTABILITY INDICATORS IN JORDAN
1961-1987

	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
Protest																											
Demonstration	0	0	8	7	5	2	6	1	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0
Regime Supp.																											
Demonstration	3	3	1	1	0	0	0	0	1	2	0	0	0	1	0	1	0	1	1	1	0	0	0	1	0	0	0
Political																											
Strike	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riots	1	1	5	1	0	2	3	0	0	15	4	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0
Armed Attacks	2	2	4	1	0	1	1	4	3	81	45	6	0	1	0	2	0	0	0	0	0	0	0	1	0	0	0
Assassination	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Death of																											
Violence	1	3	9	6	2	1	5	30	0	1726	319	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
Imposition of																											
Sanctions	22	28	35	0	0	4	5	9	4	22	8	2	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0
Relaxation of																											
Sanction	3	5	6	0	0	4	3	5	1	0	8	3	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Political																											
Execution	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ex-transfers	0	1	2	1	1	0	3	0	2	5	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Total	32	46	73	17	8	14	26	45	11	1860	380	15	5	7	0	4	0	3	3	2	0	1	0	8	0	0	
Grand Total	= 2559																										

Sources: Charles L. Taylor and David Jodice, eds., 1983, World Handbook for Political and Social Indicators, v. 1, 2 (Yale University Press); Jeke Bacharach, ed., 1984, A Middle East Handbook (Washington: University of Washington Press, pp. 54-75; Middle East Chronology of Events 1945-1985, 1986, (Washington: Congressional Quarterly, Inc.); Ashraf Al-Awsat Newspaper, London; Al Ra'a News Paper, Jordan; Arthur Bank et al., ed., 1975, Political Handbook of the World (New York: McGraw Hill Book Co.).

of the economy. Ten other variables represent the independent variables in this study and are abbreviated as follows:

<u>Factor</u>	<u>Abbreviation</u>
1. Gross national product	GNP
2. World oil prices	WOP
3. Number of Jordanian workers abroad	JWA
4. The net amount of remittances	RMT
5. Number of non-Jordanian workers in Jordan	GWF
6. Total expenditures for education	EXP
7. Total number of students enrolled in school	STD
8. Total amount of investment	INV
9. Total amount of foreign aid to Jordan	FAD
10. The number of military personnel	MP

The impact of these independent variables on the size of employment is hypothesized as shown in Chapter I.

The unit of analysis in this study is the individual employee. The data are gathered on a by-year basis over the period 1961 to 1987. This period is divided into two periods, 1961 to 1972, which includes 12 observations, and 1973 to 1987, which includes 15 observations.

Analytical Methods: Multiple Regression.

A multiple regression analysis technique was used to test hypotheses one through ten to determine the relative influence of these independent variables on Jordan's employment size.

A multiple regression analysis technique is a general and flexible data analytic system that may be used whenever a dependent variable is to be studied as a function of, or in relationship to, any factors of interest (expressed as

independent variables). The virtue of this technique lies in its capacity to almost completely mirror the complexity of the relationships that characterize the social science domain (Cohen, 1975, pp. 151-152).

As a result of the initial refinement of the variables, the multiple regression model includes ten variables. At the preliminary stage, the model considered is as follows:

$$\begin{aligned} \text{EMP} = & a_0 + \beta_1 (\text{INV}) + \beta_2 (\text{RMT}) + \beta_3 (\text{GNP}) \\ & + \beta_4 (\text{JWA}) + \beta_5 (\text{WOP}) + \beta_6 (\text{FAD}) \\ & + \beta_7 (\text{GWF}) + \beta_8 (\text{MP}) + \beta_9 (\text{EXP}) \\ & + \beta_{10} (\text{STD}) + e \end{aligned}$$

Multiple Regression Models.

A series of multiple regression models are presented for the purpose of identifying the significant factors in determining the size of employment in Jordan during different periods. In addition, the regression models are used to indicate the various associations of each model's independent and the dependent variables. Also the Pearson correlation coefficient (r) is presented as a preliminary estimation of the relationships among all variables. The programs of these models are shown in Appendices A, B, and C for the periods 1961 to 1987, 1961 to 1972, and 1973 to 1987, respectively.

In each of these regression models, I have analyzed the following indicators, and the regression that best explains

the variation in the dependent variables in each period was chosen for analysis. First, the coefficient of determination, R square (R^2), which indicates the amount of variation in the dependent variable accounted for by the independent variables in a regression equation was reported. In other words, the R square (R^2) indicates the percentage of the total variation in the dependent variable values attributable to, or explained by the independent variables in a regression equation (Mendenhall and Sincich, 1989, p. 102).

One drawback of using the R^2 criterion is that the value of R^2 will increase when new independent variables are added to the model. Therefore, the decision of when to add or not add new variables to the regression model becomes a subjective one (Mendenhall and Sincich, 1989, pp. 212-213). Hence, the values of adjusted coefficient of determination (\bar{R} square) which indicate whether adding or eliminating a variable will result in a significant increase or decrease in the total explanatory variables estimates are reported in this study.

The F value, which is a criterion to evaluate the overall usefulness of the regression model in analyzing, predicting, or explaining the variation in the dependent variables also is reported (Bohrnstedt and Knoke, 1982, pp. 210-211). In this study the model is statistically significant, if the P value of F is smaller than .05 ($\text{Prob} > F$), which is the level of significance.

The Durbin-Watson d statistic also is reported in this study as a statistical tool to test for the presence of residual correlation, which is a possibility when using time series data. The measure of this test ranges from 0 to 4. If the value of the Durbin-Watson test is near zero, it indicates a presence of significant positive autocorrelation, while a value close to four implies the presence of a significant negative autocorrelation. A value near two indicates that there is little or no significant autocorrelation, which means that all pairs of error or residual terms are independent and that the regression analysis is useful (Mendenhall and McClave, 1981, pp. 270-273).

The parameter of estimate (B value) and P value (P significance) also are important indicators in the regression analysis. The parameter of estimate (B) provides a useful interpretation of the relationship between independent and dependent variables. The B value, which may be either positive or negative, indicates the amount of increase or decrease in a dependent variable for one unit of difference in the independent variable, controlling for the other independent variables. The P value corresponding to each coefficient of estimates refers to the level of significance of that independent variable. If the P value of the independent variable is less than the level of significance, which in this study is 0.05, it indicates that the independent variable has a significant relationship with the

dependent variable, holding other independent variables in the regression equation constant (Bohrnstedt and Knoke, 1982, pp. 189, 365-380).

Regression Model I: 1961 to 1987.

A regression model including the ten independent variables was designed to determine the significance in the size of employment during the entire period 1961 to 1987.

The results show that only two variables, total school enrollment (0.0136) and the number of military personnel (0.0892) were significant at 0.05 or 0.10 levels of significance.

Since this does not provide much guidance for policy makers, a stepwise procedure (forward, backward and maximum R^2) and regression R^2 were used to select the significant factors or the combinations of factors which may have the highest R^2 . Through these procedures, it was found that the same variables, total school enrollment (STD) and number of military personnel (MP) were selected in all stepwise procedures (see Table 25 and Exhibit 1A).

Regression Models 2 and 3.

Since the purpose of this study was to compare the impact of the independent variables on the size of employment in the two periods 1961 to 1972 and 1973 to 1987, regression models 2 and 3 were designed to test the impact of the independent variables on the size of employment in

each period. Because of the small sample size of each period, the models were expected to be insignificant.

Regression model 2 for the period 1961 to 1972 is shown as follows:

$$\begin{aligned} \text{EMP} = & A + \beta_1 (\text{GNP}) + \beta_2 (\text{WOP}) + \beta_3 (\text{JWA}) \\ & + \beta_4 (\text{RMT}) + \beta_5 (\text{EXP}) + \beta_6 (\text{STD}) \\ & + \beta_7 (\text{INV}) + \beta_8 (\text{FAD}) + \beta_9 (\text{MP}) \\ & + 3 \dots \dots \dots (2). \end{aligned}$$

Regression model 3, for the period 1973 to 1987, includes the variable foreign guest workers (GWF), since these workers started to immigrate to Jordan after 1973 only.

$$\begin{aligned} \text{EMP} = & A + \beta_1 (\text{GNP}) + \beta_2 (\text{WOP}) + \beta_3 (\text{JWA}) \\ & + \beta_4 (\text{RMT}) + \beta_5 (\text{EXP}) + \beta_6 (\text{STD}) \\ & + \beta_7 (\text{INV}) + \beta_8 (\text{FAD}) + \beta_9 (\text{MP}) \\ & + \beta_{10} (\text{GWF}) + e \dots \dots \dots (3) \end{aligned}$$

The findings, as shown in Table 26, indicate that despite the high R^2 both regression models were insignificant (see Exhibits 2B and 3C).

The results of regression models 1, 2, and 3 revealed that the models needed to be improved. As a result, a stepwise procedure was used to select among the variables.

Stepwise Regression.

The systematic approach to building a model with large numbers of independent variables is difficult because of the problem of deciding which of these independent variables to

TABLE 25
REGRESSION RESULT OF MODEL I
1961 to 1987

Independent Variables	Parameter Estimate β	P Value	Stepwise	Prob > \underline{F}
Intercept	365315.51	0.0001		
INV	303.38182	0.9720		
RMT	202.242	0.3789		
EXP	1913.253	0.3017		
FAD	5.21632	0.2443		
MP	-3.17462	0.0136	MP	0.0001
GNP	-90.6385	0.5378		
JWA	-119.116	0.7045		
GWF	-0.46528	0.6938		
WOP	1203.010	0.6938		
STD	0.3712719	0.0892	STD	0.0001

$R^2 = 0.8526$

Adj. $R^2 = 0.7605$

\underline{F} value = 9.255

Prob > \underline{F} = 0.0001

DW = 1.3

Sample Size = 27

include in a regression model. Therefore, stepwise regression is a useful screening procedure in this situation (Mendenhall and Sincich, 1989, pp. 202-210).

A stepwise procedure is a powerful tool for identifying significant variables. Through this method, variables that meet the selection criteria of producing an \underline{F} statistic at the 0.05 level are added to, or eliminated from, the model. In addition to these procedures, the maximum \underline{R}^2 and \underline{R}^2 regression are used in the selection processes to identify

TABLE 26
RESULTS OF REGRESSION MODEL 2 FOR THE TWO PERIODS
1961-1972 AND 1973-1987

Independent Variables	1961-1972		1973-1987	
	Parameter Estimate β	P Value	Parameter Estimate β	P Value
Intercept	141599.38	0.4465	42114.3711	0.6007
INV	-196.46103	0.7819	13.6412202	0.4722
RMT	5868.1994	0.4353	13.1910956	0.7460
EXP	-9795.3270	0.7404	-108.2049	0.7937
FAD	-519.3266	0.3537	-2.943572	0.8093
MP	-0.2752335	0.9416	-0.1679595	0.8007
GNP	156348.34	0.3339	1.1356338	0.9663
JWA	391.711860	0.1486	-347.4286	0.1307
GWF	---	---	-0.135722	0.6942
WOP	156348.34	0.1314	-411.9238	0.5359
STD	-0.46368940	0.6852	0.6362323	0.0149

1961-1972

$R^2 = 0.9791$
 $R^2 = 0.8848$
 F value = 10.39
 Prob > F = 0.0908
 DW = 2.9
 Sample size = 12

1973-1987

$R^2 = 0.9791$
 $R^2 = 0.9927$
 F value = 191.5
 Prob > F = 0.0001
 DW = 2.6
 Sample size = 15

See Exhibits 2 and 3

the variables or the combination of variables that have the highest R^2 .

The results of these selection procedures for the entire period 1961 to 1987, and the subperiods 1961 to 1972 and 1973 to 1987, show that different variables were signi-

ficant in each period as shown in Table 27. As can be seen in the entire period 1961 to 1987, only school enrollment and number of military personnel were selected, whereas in the first period 1961 to 1972, four factors, gross national product, remittances, world oil price, and Jordanian workers abroad were selected. In the second period, 1973 to 1987, also four factors, gross national product, guest workers in Jordan, world oil prices and Jordanian workers abroad were selected.

Next, a series of regression models were run to test hypotheses one through five regarding these selected variables on the size of employment in each period 1961 to 1972 and 1973 to 1987.

Regression Models for the Period 1961 to 1972.

Two multiple regression models using a different combination of selected variables were run to determine the impact of these factors in the size of employment during this period.

The results of this regression model are summarized in Table 28 (see Exhibit 4B). The high R^2 indicates that there is a high degree of relationship between the size of employment and the independent variables. This means that 91 percent of the variation on the size of employment could be explained by the independent variables in this model. Also the F value (19.8) and P value of F (0.0006) implies that

TABLE 27
 VARIABLES SELECTED IN EACH PERIOD BY
 DIFFERENT STEPWISE PROCEDURES

1961-1987	1961-1972	1973-1987
Total school enrollment (STD)	Gross national product (GNP)	Gross national product (GNP)
Number of military personnel (MP)	Jordanian workers abroad (JWA)	Jordanian workers abroad (JWA)
	Remittances (RMT)	Remittances (RMT)
	World oil price (WOP)	World oil price (WOP)

Regression Model 4 for the Period 1961 to 1972.

This model is shown as follows:

$$\begin{aligned}
 EMP = A + \beta_1 (GNP) + \beta_2 (JWA) \\
 + \beta_3 (WOP) + \beta_3 (RMT) \\
 + e \dots \dots \dots (4)
 \end{aligned}$$

this model is useful to explain the variation in the size of employment.

The P values of gross national product ($P = 0.0028$), Jordanian workers abroad ($P = 0.0318$), and remittances ($P = 0.0010$) reveal that these variables significantly affected the size of employment in Jordan during the first period 1961 to 1972. The P value of world oil prices ($P = 0.1903$) shows that this variable had no independent impact on the size of employment in Jordan during this period.

TABLE 28
RESULTS OF REGRESSION MODEL 4
FOR THE PERIOD 1961-1972

Independent Variables	β	$\frac{t}{\text{Ratio}}$	P (Significance)
Intercept	266829.41	4.349	0.0034
GNP	-804.96930	-4.509	0.0028*
JWA	2170.5956	2.674	0.0318*
WOP	54741.799	1.450	0.1903
RMT	5537.3819	5.408	0.0010*

$R^2 = 0.9188$

Adj. $R^2 = 0.8724$

F value = 19.800

Prob > F = 0.0006

DW = 3.5

Sample size = 12

*P < .05

The only drawback with this model is the high residual correlation in this model as indicated by the Durbin Watson test (DW = 3.5) (Mendenhall and McClave, 1981, p. 271). As a result, another regression model was tested using different combinations of variables.

Regression Model 5 for the Period 1961 to 1972.

In an attempt to improve the result of regression model 4, the Jordanian workers abroad variable (JWA) was eliminated from the regression model, since it had a high correlation with other variables in the model (see Appendix B).

Regression model 5 includes only three variables and is shown as follows:

$$\text{EMP} = a + \beta_1 (\text{GNP}) + \beta_2 (\text{WOP}) \\ + \beta_3 (\text{RMT}) + e \dots (5)$$

The results of this model are shown in Table 29 (see Exhibit 5B). R^2 of 0.83 indicates that the independent variables, gross national product, world oil price, and remittances explained 83 percent of the variation on the size of employment during the period 1961 to 1972. In addition, the Durbin Watson test (2.2) shows no correlation between the residuals which lends more confidence to the explanatory variables.

Regression Models for the Period 1973 to 1987.

Next, a number of regression models with different combinations of variables were run to choose which model best explains variations in the dependent variables during the period 1973 to 1987.

Regression Model 6 for the Period 1973 to 1987.

This model includes the variables gross national product, Jordanian workers abroad, world oil prices, and foreign guest workers in Jordan. It should be noticed that this model includes the variable guest worker which was not included in the first period, since there were none in Jordan in this period. Model 5 is shown as follows:

TABLE 29
RESULTS OF REGRESSION MODEL 5

Independent Variables	Parameter Estimate	t Ratio	P Value
Intercept	300618.503	3.765	0.0055
GNP	-365.211	-3.957	0.0042*
WOP	42950470	0.862	0.4140
RMT	5421.831	3.985	0.0040*

$$R^2 = 0.8359$$

$$R^2 = 0.7743$$

$$F = 13.6$$

$$\text{Prob} > F = 0.0017$$

$$DW = 2.2$$

$$\text{Sample Size} = 12$$

$$*P < .5$$

$$\begin{aligned} \text{EMP} = a + \beta_1 (\text{GNP}) + \beta_2 (\text{JWA}) \\ + \beta_3 (\text{WOP}) + \beta_4 (\text{GWF}) \\ + e \dots \dots \dots (6) \end{aligned}$$

The result of this regression model is presented in Table 30 (see Exhibit 6C). The R^2 value of .9778 shows that the four independent variables accounted for almost 97 percent of the variation in employment size in the period 1973 to 1987.

The high F value of 110.325 and P value of F (0.0001) indicate that this regression model is useful for explaining the variation in size of employment. The value of Durbin-Watson of 1.8 implies that there is no significant autocorrelation in this model.

TABLE 30
RESULTS OF REGRESSION MODEL 6 FOR
THE PERIOD 1973 - 1987

Independent Variables	Parameter Estimate β	t Ratio	P Value
Intercept	257214.1	11.995	0.0001
GNP	055.3791	3.828	0.0033*
JWA	0151.744	0.767	0.4610
WOP	-1447.82	-2.316	0.0431*
GWF	-0.7955	-2.629	0.0252*

$R^2 = 0.9778$
 Adj. $R^2 = 0.9690$
 F value = 110.325
 Prob > $F = 0.0001$
 DW = 1.8
 Sample Size = 15
 * $P < .5$

The P values of gross national product ($P = 0.0033$), world oil prices ($P = 0.0431$), and guest workers in Jordan ($P = 0.252$) indicate that these variables significantly affected the size of employment in Jordan during the second period 1973 to 1987. Only the Jordanian workers abroad variable had no significant impact ($P = 0.4610$) on the size of employment in this period.

Since this regression model did not include the factor of remittances as the models for the period 1961 to 1972, another regression model including remittances was presented for the period 1973 to 1987.

Regression Model 7 for the period 1973 to 1987.

Since results of regression model 5 show that the variable Jordanian workers abroad (JWA) had no significant affect on the size of employment, this variable was replaced by the variable remittances (RMT) in Model 7 as shown below to test if remittances has an independent influence on the size of employment during this period.

$$\begin{aligned} \text{EMP} = & a + \beta_1 (\text{GNP}) + \beta_2 (\text{WOP}) \\ & + \beta_3 (\text{GWF}) + \beta_4 (\text{RMT}) \\ & + e \dots \dots \dots (7) \end{aligned}$$

The result of this model is shown in Table 31 (see Exhibit 7B). It indicates that no real improvement is made in the explanatory variables for explaining the size of employment. The results of model 7 show that world oil price ($\underline{p} = 0.0963$) and remittances ($\underline{p} = 0.0742$) did not have a significant impact on size of employment during the period 1973 to 1987, which contradicts with the literature and the writer's expectations.

Comparison of the Results of the Regression
Models Between the Periods 1961 to 1972
and 1973 to 1987

An evaluation of the seven regression models shows that regression model 5 for the period 1961 to 1972 and regression model 6 for the period 1973 to 1987 are the models for identifying the factors which significantly influenced the size of employment in Jordan in the two periods (see Table

TABLE 31
 RESULTS OF REGRESSION MODEL 7 FOR
 THE PERIOD 1973-1987

Independent Variables	Parameter Estimate β	t Ratio	P Value
Intercept	263864.46	22.187	0.0001
GNP	76.0878	7.748	0.0001*
WOP	-784.101	-1.836	0.0963
GWF	-0.990538	-3.818	0.0034*
RMT	-64.6665	-1.993	0.0742

$$\bar{R}^2 = 0.9832$$

$$\underline{R}^2 = 0.9765$$

$$\underline{F} = 146.4$$

$$DW = 1.6$$

$$\text{Sample Size} = 15$$

$$*P < .5$$

32). It can be concluded that the dependent variable size of employment in Jordan during the periods 1961 to 1972 and 1973 to 1987 was significantly affected by the different independent variables used in these models. During the period 1961 to 1972, only two independent variables, gross national product ($P = 0.0042$) and remittances ($P = 0.0040$) significantly impacted the size of employment. In the second period 1973 to 1987, gross national product ($P = 0.0001$), world oil prices ($P = 0.0252$), and guest workers ($P = 0.0431$) significantly impacted the size of employment during this period.

TABLE 32

COMPARISON OF THE RESULTS OF REGRESSION MODEL 4
FOR THE PERIOD 1961 TO 1972 AND
REGRESSION MODEL 6 FOR THE
PERIOD 1973 TO 1987

Regression Model 4 1961 - 1972			Regression Model 6 1973 - 1987	
Independent Variables	Parameter Estimate β	P Value	Parameter Estimate β	P Value
Intercept	300618.503	0.0055	257214.1	0.0001
GNP	-365.211	0.0042*	055.379	0.0033*
WOP	42950.470	0.4140	-1447.82	0.0431*
RMT	5421.831	0.0040*		
GWF			-0.7955	0.0252*
JWA			151.744	0.4610
$R^2 = 0.8359$ $R^2 = 0.7743$ F value = 13.6 $\text{Prob} > F = 0.0017$ $DW = 2.2$ Sample size = 12 $*P < .5$			$R^2 = 0.9778$ $R^2 = 0.9690$ F value = 110.325 $\text{Prob} > F = 0.0001$ $DW = 1.8$ Sample size = 15 $*P < .5$	

Results of the analysis indicate that different variables influenced total employment in Jordan in the two periods, as is evident from the following statistical results from model 5 for the period 1961 to 1972 and model 6 for the period 1973 to 1987 of testing hypotheses one through five.

1. The variable gross national product significantly affected the size of employment differently in the two

periods. In the first period, gross national product had a significant negative impact on the size of employment ($P = 0.0042$). The partial correlation coefficient of -365.211 indicates that if all other variables in the first period were held constant, a one million dollar increase in gross national product would reduce the size of employment by 365 jobs. In the second period, 1973 to 1987, however, gross national product had a significant positive influence on the size of employment ($P = 0.0033$). The partial correlation coefficient of $+55.379$ indicates that, holding all other variables in regression model 6 constant, a one million dollar increase in gross national product would create 55 new job opportunities.

2. The variable world oil price had a different effect in the two periods. For the first period, 1961 to 1972, world oil price had no influence on the size of employment ($P = 0.4142$). In the second period, 1973 to 1987, this variable had a significant negative impact on the size of employment ($P = .0431$), indicating that an increase in the price of oil reduces the size of civilian employment in Jordan. The partial correlation coefficient of -1447.82 for world oil price implies that if other variables were held constant, a one dollar increase in the world price of oil is accompanied by a decrease in the size of employment in Jordan of about 1,448 jobs.

3. Results of regression model 5 for the period 1961 to 1972 show that remittances had a significant positive affect on the size of employment ($P = 0.0040$). Also the partial correlation coefficient of 5421.831 indicates that if all other variables were held constant, a one million dollar increase in remittances would lead to the creation of 5,422 jobs in Jordan.

In the second period from 1973 to 1987, the affect of the variable remittances on the size of employment was tested separately in model 7 and inferred via the Jordanian workers abroad variable in model 6. The results of both models indicate that remittances were found to be insignificant (P value of remittances from model 7 = 0.0742).

4. The influence of the variable Jordanian workers abroad for the first period, 1961 to 1972, was tested in model 4 and through their remittances in model 5. Results from model 4 show that Jordanian workers abroad ($P = 0.0318$) and their remittances in model 5 ($P = 0.0040$) were found to significantly influence the size of employment. In the second period, 1973 to 1987, the variable Jordanian workers abroad was tested in the final model (model 6) and was found to be insignificant ($P = 0.4610$). This indicates that either Jordanian workers abroad or their remittances had no effect on the size of employment in Jordan.

5. Since there were no foreign workers in Jordan during the period 1961 to 1972, the influence of this

variable on the size of employment was tested only for the period 1973 to 1987. Results from model 6 indicate that this variable had a significant negative affect on the size of employment ($P = 0.0252$) in Jordan. An increase in the number of guest workers tended to decrease job opportunities for Jordanians in the civilian sectors. The partial regression coefficient of -0.7955 from model 6 further implies that, controlling for other variables in this model, an inflow of one thousand foreign workers to Jordan reduces job opportunities for Jordanian workers by 79 positions.

The conclusions and policy implications of hypotheses one to five are considered in the following chapter.

Hypotheses six through ten regarding the following variables were not statistically tested, either because there were few observations or because of correlation with other variables. These variables, namely expenditure for education, total number of school enrollment, military personnel, investment, and foreign aid, were examined in Chapters one to five through qualitative methods, which suggest that many of these variables may affect Jordan's labor market and labor policies. Policy implications of these variables are also discussed in the following chapter.

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CHAPTER VII

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

Summary

The purpose of this study is to examine the labor market in Jordan and to identify the main determinants of employment (labor force) during the period from 1961 to 1987 in order to advise policy makers as to the best course of action to achieve full employment. This period was divided into two periods: 1961 to 1972 and 1973 to 1987 for comparative purposes.

Labor policy makers in Jordan face factors over which they have little or no control in their attempts to balance labor supply and demand. In general, the central concern of the study is to identify the factors which are believed to have an impact on Jordan's labor force and to demonstrate their significance.

First, the problems in Jordan's labor market, the fluctuation of demand and supply in the labor force, and its impact on the level of employment and unemployment in the country were explored, and a theoretical framework for public policy was presented to guide this study.

Next, the Arab labor market and the circulation of labor in the Arab world were examined.

After the oil price revolution in 1973, millions of workers crossed the borders between the Arab states seeking employment in the ORAS. The impact on both LRAS and ORAS of this mass migration was explored. The capital and labor flow between Arab states was examined to determine if it served as an integrative force for the region.

Jordan's social, economic, and political development since the 1920s was surveyed next in order to understand the factors which affect Jordan's labor market. After reviewing the major events in Jordan and the region which have impacted the labor force, the main characteristics of Jordan's labor market were examined.

Jordan's attempts to organize the labor market were reviewed in Chapter V. All of Jordan's development plans have aimed at the creation of job opportunities, and the development of human resources has been a major goal. Many different policies have been included in the national plans. In addition, the country has entered into labor agreements with other Arab and non-Arab countries in an attempt to enhance Jordanian workers' opportunities abroad. Regulations and rules have been enacted to regulate the inflow of guest workers and to encourage private investments in an effort to increase the employment opportunities inside Jordan.

After this qualitative examination of Jordan's labor market, an attempt was made to quantitatively test hypotheses one through ten concerning the factors affecting the labor force. A multiple regression analysis was used. For statistical reasons, the analysis began by screening the variables to select the variables which meet the selection criteria of the 5 percent level of significance through stepwise and R^2 regressions. As a result of these selection procedures, only five variables were included in the multiple regression models for the two periods, 1961 to 1972 and 1973 to 1987. Therefore, only five of the hypotheses were quantitatively tested.

Regression model 5, for the first period, 1961 to 1972, included gross national product, world oil price, and remittances. Regression model 6, for the second period, 1973 to 1987, included gross national product, world oil price, Jordanian workers abroad and guest workers in Jordan.

Although the other variables were not included in the final regression models, their impacts on the size of employment during the two periods were explored through qualitative analysis for the labor market or were inferred through their relationships to one or more of the tested variables.

Conclusions

One major conclusion regarding Jordan's labor market and labor policies over the last three decades is that Jordan's labor market has been influenced by the changes and events, not only in Jordan, but by the changes and events in the entire region. Therefore, the major determinants on the labor force and size of employment used in the multiple regression models are gross national product (GNP), world oil prices (WOP), Jordanian workers abroad (JAW), guest workers in Jordan (GWF), and the amount of remittances (RMT). The hypotheses regarding these variables were tested through a series of multiple regression analysis and yielded the following results.

Hypothesis 1: It was hypothesized that gross national product is expected to increase the level of economic activities and, as a result, the level of employment.

This hypothesis was found to be valid in part. Gross national product has a significant impact on the size of employment in both periods. However, in the first period, gross national product has a significant negative influence on the size of employment ($P = 0.0042$). In the second period, 1973 to 1987, gross national product positively affected the size of employment ($P = 0.0033$). The partial correlation coefficients of -365.21 for the first period and 55.38 for the second period indicate that, holding other variables constant, a one million dollar increase in the

gross national product reduced job opportunities by 365 jobs in the first period, while it created 55 jobs in the second period.

This finding may partially be explained by the fact that in the first period, which was a period of instability, a high portion of the gross national product was spent on defense, security, and welfare programs for the large number of refugees, which did not create employment. Also, in the first period, governmental actions encouraged increased mechanization of such industries as mining and large irrigation projects, which could be operated by a relatively small force of professionals and technicians. Many unskilled and manual jobs were lost because of this increase in mechanization during this period. In addition to these factors, the occupation of the West Bank of Israel in 1967 and the following internal events which lasted until 1972 disrupted economic activities in the country. Governmental spending was used to restore security in the country and to pay for the damages to private and public property. Although this helped the economy to recover, it did not create a great number of jobs (Al Tall, 1978, pp. 105-110; Mazur, 1979, pp. 58-77).

In the second period, 1973 to 1987, the gross national product showed a significant positive impact ($P = 0.0033$) on the size of employment. An increase in gross national product generated an increase in the size of employment.

This positive impact can partially be explained by the fact that there was relative stability in Jordan during this period. The percentage of gross national product spent on security was reduced in the second period (Central Bank of Jordan, 1988). A portion of defense expenditures in this period came from Arab support, especially after the Camp David Treaty between Egypt and Israel in 1978. Foreign financial assistance for Jordan after 1973 increased to over \$1 billion during the 1980s (Table 24), which enriched the gross national product and to spend for defense without reducing the amount of governmental revenues to be spent on social and economic development.

During this period, a series of national developmental plans were implemented by the government. These developmental programs stimulated the creation of new job opportunities (Jordan's Ministry of Planning, 1986).

Furthermore, in the second period in general, all of Jordan's economic sectors were energized by the increasing demands for Jordanian products, services, and labor from the ORAS. Demands for Jordanian products and services increased as a result of the imposition of a boycott on Egyptian products after the Camp David Treaty and the disruption of Lebanese markets as a result of the civil war.

Hypothesis 2: It was hypothesized that the level of oil prices influence economic activities and investments in

both the ORAS and Jordan and consequently increases job opportunities for Jordanian workers in the ORAS and Jordan.

This hypothesis was found not to be valid in the first period, 1961 to 1972, while it was valid for the second period, 1973 to 1987. World oil price showed no significant impact ($P = .0414$) on the size of employment in the period 1961 to 1972, while in the second period it had a significant negative impact ($P = 0.0252$) on the size of employment.

These findings may be partially explained by the fact that during 1961 to 1972, oil prices averaged less than \$2 per barrel for the entire period. Jordan, as a non-oil producing nation, benefited from cheap oil prices and operated its only refinery. The ORAS provided little assistance to Jordan during these years, and what was provided was spent mainly on purchasing military equipment. World oil price did not generate enough revenue to stimulate economic activities in the region (Mazur, 1979, pp. 204-240).

During the second period, 1973 to 1987, the variable world oil price had a significant negative impact ($P = 0.0252$) on the size of employment in Jordan. The partial correlation coefficient of -1447.82 implies that, holding other variables constant, a one dollar increase in world oil price caused the size of employment to decrease by 1,448 jobs. This may be explained in the following manner. The sudden increase in the oil prices affected Jordan's economy,

causing the government to subsidize oil so that Jordanian industries could continue to hold their price down. The high cost of fuel forced industries to cut costs and reduce the number of employees. Also, the influence of the oil price revolution on the international market after 1973 seriously affected Jordan's economy. The increasing cost of imports from international markets reduced Jordanian industries' ability to export and compete in the foreign market. This in turn reduced their demands for labor.

Although Jordan received large amounts of foreign aid from the ORAS during this period, much of this aid was directed to defense or was sent to the occupied territories in the West Bank and the Gaza Strip to ease the economic pressures on the people in the occupied territories.

Inflation fueled by the oil price revolution negatively affected Jordan's development, and the government was forced to subsidize many essential consumer items, which reduced the public allocations for investment.

Hypothesis 3: It was hypothesized that the number of Jordanian workers abroad is proportional to the level of oil price, since increases in oil prices stimulate economic activities and investment in the ORAS which in turn increase the demand for Jordanian workers. This additional demand for labor in the ORAS also is expected to increase the size of employment in Jordan. Replacement of migrant workers to

the ORAS opens jobs for others, and increased expenditure from remittances creates additional demands and jobs.

This hypothesis was not tested directly in the final model (model 5) for the first period, since there were relatively few Jordanian workers in the ORAS, and since it was correlated with other variables. The hypothesis about Jordanian workers abroad was tested in an initial model (model 4) and was found to be significant ($P = 0.0028$). For statistical reasons which the high residual correlation in this model, this variable was replaced by remittances in the final regression model for the period 1961 to 1972. As remittances in this period were found to have a significant affect on employment ($P = 0.0040$), it was concluded that Jordanian workers abroad in the period 1961 to 1972 had a significant impact on the size of employment.

In the second period, the hypothesis about Jordanian workers abroad was found not to be valid. Increases in the number of Jordanian workers abroad did not have a significant influence ($P = 0.4610$) on the size of employment. Also, increase in the number of Jordanian workers abroad did not increase the size of employment, either as a result of the replacement by other Jordanians or as a result of increased economic activities caused of workers' remittances.

These findings may be explained partially by the fact that the highly-skilled, professional, and experienced

Jordanian workers going to the ORAS cannot easily be replaced as was the case in the first period, 1961 to 1972, since there was no longer a surplus of these professionals. In addition, the political developments in the region during this period, such as the Lebanese crisis, the Camp David Treaty between Egypt and Israel, and the Iraqi-Iranian War reduced the supply of labor in the Middle East labor market. At the same time that a shortage of labor market was retracting, the ORAS increased their demands for workers.

The massive outflow of skilled, semi-skilled, and unskilled Jordanian workers to the ORAS after 1973 caused a labor shortage in Jordan's domestic labor market. Also many of these migrants took their families with them, reducing further the local labor supply. As a result of this outflow of labor, the domestic labor supply was unable to respond to domestic and foreign demands without importing thousands of foreign workers.

Hypothesis 4: It was hypothesized that increases in remittances from Jordanian workers abroad increase economic activities and investment in Jordan and augment the size of employment. This hypothesis is found to be valid only in the first period. Remittances had a significant positive impact ($P = 0.0040$) on the size of employment in the first period. The partial correlation coefficient of 5421.83 indicates that a one million dollar increase in remittances

increased the size of employment by 5,422 jobs if other variables are held constant.

Total remittances in the first period did not exceed \$30 million per year (Table 24). These remittances, however, were important for migrants and for the country at that time (Yahya, 1980, p. 153).

A large portion of the remittances were spent on the construction of homes which activated employment in the construction sector. In addition, remittances motivated many professional workers with college degrees, especially medical doctors, engineers, and other highly-trained professionals to migrate to the ORAS for higher salaries. In turn, this migration opened job opportunities for others in society with similar backgrounds which were in surplus at that time.

For statistical reasons, remittances were not tested directly in the final model (model 6) for the second period, which included only gross national product, world oil price, Jordanian workers abroad, and guest workers. The hypothesis about remittances was tested in regression model 7, which included also gross national product, world oil price, and guest workers. As shown in regression model 7, remittances replaced the Jordanian workers abroad variable, which was insignificant as shown in Table 31. The remittances variable also was found to be insignificant in the period 1973 to 1987. Therefore, it is concluded that remittances had no

significant impact on the size of employment in Jordan during the period 1973 to 1987.

Hypothesis 5: It was hypothesized that, *ceteris paribus*, increases in the number of non-Jordanian workers are expected to decrease the job opportunities for Jordanian workers in Jordan.

There were no foreign workers in Jordan in the first period, 1961 to 1972. Jordan began importing foreign workers in the second period, 1973 to 1987. Therefore, the impact of this hypothesis was tested only in the second period. In this period, guest workers showed a significant negative impact ($P = 0.0431$) on the size of employment. The affect of guest workers in Jordan's labor market was indicated in the partial correlation coefficient of -0.7955 , that holding other variables constant, one thousand guest workers decreased the size of employment by 79 jobs. Guest workers compete mainly with Jordanian manual or unskilled who are workers depending on the local labor market. Furthermore, since these workers generally are willing to accept 20 to 30 percent less wages than typical Jordanian workers, they are preferred by employers (Smadi et al. 1986). The impact of guest workers on the size of employment in Jordan was most obvious in the mid-1980s after Jordan's economic growth began its slow down and the demands for Jordanian workers in the ORAS declined. During the current economic turn down, Jordanian businesses, especially

the service sectors, still employ guest workers instead of Jordanians because of the wage differential (Al-Jamal, 1988).

Policy Implications

One general conclusion from this research supports Jordan's planning efforts to develop its human resources and to attempt to decrease its dependence on the foreign labor markets. The study also clearly demonstrated that Jordan's economy and labor market are interdependent with other Arab countries. Thus, Jordan should continue in its effort to enhance the efforts of regional integration.

The study also indicates that factors influencing the labor market differ under different conditions. The impact of independent variables tested in the study differ between the two periods, 1961 to 1972 and 1973 to 1987. Policy which may serve the country's best interests during the time of stability and crisis may not be in the country's best interest in times of stability and peace.

Findings from the statistical analysis show that five variables significantly affected Jordan's labor market. The first of these variables, gross national product, was a significant factor affecting employment in both periods. The results of model 5 for the period 1961 to 1972 show that gross national product negatively influenced the size of employment. In the second period, 1973 to 1987, gross

national product positively affected the labor force. These findings imply that the labor market and job opportunities do not necessarily improve as the country develops.

One policy implication of this is that the country should continue its planning efforts for development, but it must consider the relative advantage of having a surplus of labor and invest in labor intensive projects. Economic and financial plans and policies should continue to seek promotion of the gross national product. Continued efforts also should be made to encourage capital inflow in terms of foreign aid, since this aid helps finance necessary defense expenditures and frees up domestic funds for investment and development. Furthermore, Jordan should continue its efforts to promote financial integration of the economies of the Arab world, since its economic well being to a large degree depends upon the prosperity of the Arab economic market. Finally, Jordan should continue to support stability in the region, since stability advances the country's, as well as the region's, development.

The second finding was that world oil prices had a different influence on the size of employment in the two periods. As a result of low oil prices in the pre-1973 period, oil prices had no significant impact on the size of employment in Jordan ($P = 0.4140$), although the country benefited from the cheap energy source. The ORAS' limited

oil revenues in this period were not significant in stimulating major development in these or the region.

The impact of world oil prices changed dramatically in the post-1973 period. In this period, oil prices had a significant negative impact on the size of employment in Jordan ($P = 0.0252$). This negative impact of oil prices in this period may be explained partially by the fact that Jordan as an oil importer had to pay higher prices for its imported energy, which in turn made its product less competitive. Also the ensuing worldwide inflation hurt Jordan's economy. These developments in oil and other material prices reduced Jordanian industries' ability to compete in foreign markets. As a result, these industries tended to cut down their costs by reducing the number of employees.

The huge oil revenues in this period helped the ORAS to implement huge development plans and increased its demand for Jordanian workers. But the massive outflow of Jordanian workers caused a shortage in the Jordanian labor market which required the inflow of foreign workers which complicated Jordanian labor problems (Kirwan, 1981, pp. 671-195).

Even though the ORAS contributed larger amounts of foreign aid to Jordan during this period, much of the aid was in the form of military equipment purchases which added little to the gross national product and which did not create additional jobs in Jordan. The decline of oil prices in the 1980s affected Jordan's economy more than it did to

the ORAS. Demands for Jordanian workers, goods, and services had declined. In addition to that, some of the Jordanian workers returned home. As a result, the amount of remittances in the late 1980s declined. Also, as a result of the decline of world oil prices, the ORAS' financial assistance decreased also, as shown in Table 23 (Central Bank of Jordan, Monthly Statistical Bulletin).

One policy implication of this situation is that Jordan should intensify its efforts to become more self-reliant in energy. The search for oil in its territory should be vigorously pursued. Also, the country should pursue regional joint ventures in building refineries or petrochemical industries in Jordan. Such projects not only give work to increase the number of Jordanian workers at home, the project would benefit from the large pool of well-trained Jordanian workers. In addition, these types of joint ventures will stimulate regional development and integration. Such projects also may lessen the impact of future oil price increases on Jordan's development.

The third and fourth findings from hypotheses 3 and 4 regarding the Jordanian workers abroad and the remittances variables were interrelated. As mentioned before, these two variables were separately tested in each period and via each other.

The final model (model 5) for the first period, 1961 to 1972, included remittances as an independent variable. The

Jordanian workers abroad variable was included in model 4 for this period. Both variables, remittances and Jordanian workers abroad, were found to have a significant impact on the size of employment during this period despite the fact that both the number of Jordanian workers and their remittances were relatively small.

Also, in the second period, 1973 to 1987, these two variables, Jordanian workers abroad and remittances, were tested separately in models 6 and 7. The statistical results of these two models showed that neither variable had a significant influence on the size of employment during the period 1972 to 1987.

The significant affects of Jordanian workers abroad and their remittances during the first period may be explained by the fact that the majority of migrant workers were sent to the ORAS for a fixed period of time under a state-to-state mission program not to exceed five years. As a result, there was a rotation of Jordanian workers going and coming from the ORAS during this period. This policy contributed to better distribution of income among more citizens and may have caused some migrants to save and to invest their remittances in a more rational manner.

In the second period, the insignificant impact of the two variables, Jordanian workers abroad and remittances, may partially be explained by the fact that during the second period the majority of workers individually contracted with

employers from the ORAS and remained as long as they were employed. There was less rotation and Jordanian migrants were more permanent in their position. Since they were not planning to return home soon, they were not as interested in investing in businesses in Jordan. This perhaps explains why remittances were not invested by workers in the second period in productive activities in Jordan as much as they were in the first period (Quaraan, 1988).

Another result of the massive migration of Jordanian workers to the ORAS in the 1973 to 1987 period was that it tended to drain the country's human resources, which adversely affected its developmental efforts and caused the country to permit thousands of foreign replacement workers to migrate to Jordan (Birk and Sinclair, 1988).

The policy implications of these findings that the government should consider returning to the state-to-state mission process of sending workers to the ORAS, which would help to regulate the labor movement between Jordan and other labor market at least till the Arab labor market is more fully integrated. Also, the government should review the tax provisions and other investment regulations to insure that there are incentives for Jordanian workers abroad to invest at home.

The last variable in the statistical model which was found to have a significant negative affect on the size of employment in Jordan is foreign guest worker (GWF). As was

seen before, these foreign workers generally are willing to work for less wages than Jordanians, and the competition between the two groups creates political and social problems. Since Jordan is dependent upon an open labor market in the Arab world, it should strive to better control the balance between labor supply and demand by regulating the state-to-state labor mission procedures as a means of controlling both inflow and outflow of labor into Jordan (Labor Magazine, 1988, pp. 28-39).

The long run solution has to come through greater economic integration throughout the Arab world, and Jordan should continue to help build the political climate that will make this possible.

As previously mentioned, not all factors which were perceived to influence the labor market in Jordan were statistically tested because of a number of statistical problems. The impact on the labor market of such factors as the total expenditures for education, total number of students enrolled in school, total amount of investment, total amount of foreign aid to Jordan, and number of military personnel were considered only through qualitative analysis.

Since Jordan is a country with few natural resources, it has been forced to rely heavily on its human resources to develop its economy. As a result, education has been emphasized in all of the country's development plans. The

country's successes in this field may be seen from the fact that Jordan has the highest literacy rate (72 percent) in the Arab world, and from the fact that Jordanian workers are much sought after because of their educational attainments (Jordan Ministry of Planning, 1986, p. 112).

In the initial selection procedures, stepwise and R^2 regression, the variables expenditures for education and total number of students enrolled in schools were selected as significant factors in the whole period. However, there were some statistical problems, such as the problem of time lagging between the time expenditures enacted and the time students entered the labor market, that resulted in these variables not being included in the refined models of the two periods.

Despite the fact that it cannot be shown statistically that these two factors are significant in these two periods, from what has been found in the qualitative study, it is obvious that expenditures for education and total number of students enrolled in school are major factors influencing the labor market in Jordan. Throughout the entire period under consideration, schools had kept a large number of youth out of the labor market, while improving their knowledge and skills. Even greater manpower challenges face Jordan in the future, since 47 percent of the population is under the age of 15 (Jordan Ministry of Planning, 1985, p. 68). Schools and colleges can help keep many of these

youths from flooding the labor market while at the same time preparing them for jobs which require greater skills and knowledge. The policy implication of this is that the country should continue to develop schools, colleges, and vocational training facilities for developing its human resources and to direct educational programs toward the needs of the local labor market and stage of economy.

Total amount of investment and total amount of foreign aid to Jordan are two variables thought to affect the labor market in Jordan. These two variables were not included in the final regression models because of the small number of observations and the fact that they were correlated with other variables.

The qualitative analysis indicates that investments are very important factors in economic development and impact directly on the labor force. Capital intensive industries, however, may have a negative impact on the labor market because of greater mechanization (Krueger, 1983, pp. 30-52). A policy implication of this is that the national plans should promote investment in labor intensive industries rather than capital intensive.

Also, qualitative analysis indicates that foreign aid was an important part of Jordan's national income during the entire period, 1961 to 1987. Even though it may affect the gross national product, it may not positively impact the labor market, since much of the foreign aid was directed

mainly for defense purposes. Aid for this type of expenditure has no major impact on the labor market. The policy implication is that foreign aid should be sought to free up funds for investment and development. Jordan should continue its effort to encourage the inflow of capital. It is recommended that this be done in the manner recommended by Crown Prince Hassan Bin Talal when he called for more Arab "hand-in-hand" cooperation and integration instead of going to Arab brothers and friends with "hat-in-hand" asking for assistance. Such an approach has the further advantage of promoting regional integration and will use the comparative advantage for each Arab country (Jordan Ministry of Planning, 1986, pp. 1-10).

The size of the military in Jordan is still another variable which is thought to affect the labor market. In the qualitative analysis, it was found that the military affected the labor market during the whole period. The military provided employment for many who otherwise would have been unemployed. Furthermore, the military provides valuable education and training for personnel which may be valuable to the civilian labor force when service men leave the military.

The policy implication of this is that efforts should be made to coordinate educational and training programs for the military personnel with ministries of education, labor,

and planning so that both the needs of the military and civilian labor force can be achieved.

Policy makers should also consider that Jordan's military forces contribute to the country's and region's stability, which is essential for economic growth. Even during periods of peace and relative stability, the military may play an important role in developmental projects similar to the Corps of Engineers in the United States.

In conclusion, it should be recognized by all Jordanian policy makers and planners that the very existence of the nation depends on how well it meets the challenge of its rapidly growing labor force. Should Jordan fail to absorb these new workers, national insecurity and instability are inevitable. Furthermore, it appears that in the long run the ability of Jordan in meeting these challenges lies in greater regional integration. Therefore, it is urged that Jordan continue its traditional efforts to bring about the long-held dream of Arab unity and integration.

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APPENDIX A
REGRESSION MODELS FOR ASSESSING THE IMPACT OF
VARIOUS FACTORS ON THE SIZE OF THE
EMPLOYED LABOR FORCE IN JORDAN
1961-1987

OBS	YR	EMP	INV	GNP	EXP	STD	WOP	IWA	GMF	RHI	FAO	MP	POP
1	61	328000	57	327	8.4	300677	1.40	60	0	15.6	90.9	35000	1641000
2	62	351000	66	330	10.2	329929	1.40	70	0	18.6	56.7	35000	1763000
3	63	384000	57	359	10.2	353603	1.40	77	0	18.3	52.2	35000	1875000
4	64	377000	72	405	11.7	425974	1.40	84	0	20.1	48.0	45000	2016000
5	65	390000	84	447	11.7	463974	1.40	91	0	21.1	48.0	45000	2100000
6	66	355000	84	470	11.7	463974	1.40	91	0	21.1	48.0	45000	2100000
7	67	255300	103	498	11.7	322741	1.40	105	0	15.4	51.0	50000	1346000
8	68	255300	105	501	11.7	322741	1.40	113	0	12.7	153.0	50000	1431000
9	69	267800	105	507	10.4	387788	1.73	120	0	16.5	127.0	50000	1521000
10	70	276800	135	587	20.7	418713	1.73	127	0	16.5	127.0	50000	1521000
11	71	296000	135	623	21.0	468742	2.15	140	0	17.2	127.0	50000	1521000
12	72	296000	135	623	21.0	468742	2.15	140	0	17.2	127.0	50000	1521000
13	73	319100	124	629	21.0	5274962	2.15	145	376	17.4	127.0	50000	1521000
14	74	319100	124	629	21.0	5274962	2.15	145	376	17.4	127.0	50000	1521000
15	75	371100	144	713	35.4	5771134	11.02	150	3803	22.3	143.0	70000	1841000
16	76	380100	144	713	35.4	5771134	11.02	150	3803	22.3	143.0	70000	1841000
17	77	391100	157	779	45.8	641590	11.89	180	3803	159.9	414.0	70000	1900000
18	78	391100	157	779	45.8	641590	11.89	180	3803	159.9	414.0	70000	1900000
19	79	405300	157	808	55.8	681951	12.91	210	4790	388.8	318.1	80000	1976000
20	80	418400	151	822	68.8	730508	12.91	240	7778	419.2	500.7	80000	2088000
21	81	431800	151	839	77.9	767422	19.00	270	31308	419.2	500.7	80000	2088000
22	82	445300	159	854	101.1	795922	31.51	311	38970	469.2	607.8	80000	2173000
23	83	458500	1365	874	111.8	820113	35.01	311	79566	572.8	854.0	80000	2270000
24	84	472300	1257	895	184.5	878748	29.00	322	92402	468.4	1172.4	77000	2370000
25	85	495300	1242	917	216.1	918649	35.00	323	120000	508.2	1272.9	70000	2369000
26	86	509300	1401	930	233.1	963252	35.00	328	133000	474.7	1426.2	70000	2459000
27	87						17.00	330	123000	974.7	710.0	70000	2595000
28	88						17.00	330	123000	974.7	710.0	70000	2595000
29	89						17.00	330	123000	974.7	710.0	70000	2595000
30	90						17.00	330	123000	974.7	710.0	70000	2595000
31	91						17.00	330	123000	974.7	710.0	70000	2595000
32	92						17.00	330	123000	974.7	710.0	70000	2595000
33	93						17.00	330	123000	974.7	710.0	70000	2595000
34	94						17.00	330	123000	974.7	710.0	70000	2595000
35	95						17.00	330	123000	974.7	710.0	70000	2595000
36	96						17.00	330	123000	974.7	710.0	70000	2595000
37	97						17.00	330	123000	974.7	710.0	70000	2595000
38	98						17.00	330	123000	974.7	710.0	70000	2595000
39	99						17.00	330	123000	974.7	710.0	70000	2595000
40	00						17.00	330	123000	974.7	710.0	70000	2595000
41	01						17.00	330	123000	974.7	710.0	70000	2595000
42	02						17.00	330	123000	974.7	710.0	70000	2595000
43	03						17.00	330	123000	974.7	710.0	70000	2595000
44	04						17.00	330	123000	974.7	710.0	70000	2595000
45	05						17.00	330	123000	974.7	710.0	70000	2595000
46	06						17.00	330	123000	974.7	710.0	70000	2595000
47	07						17.00	330	123000	974.7	710.0	70000	2595000
48	08						17.00	330	123000	974.7	710.0	70000	2595000
49	09						17.00	330	123000	974.7	710.0	70000	2595000
50	10						17.00	330	123000	974.7	710.0	70000	2595000
51	11						17.00	330	123000	974.7	710.0	70000	2595000
52	12						17.00	330	123000	974.7	710.0	70000	2595000

PEARSON CORRELATION COEFFICIENTS / PROB > (RI UNDER 100 RHO) / H = Z1

	EMP	INV	GHP	EXP	STD	WOP	JMA	DUM	GMF	RHI	IAD	HP	FOP
EMP	1.00000 0.00000	0.78446 0.00001	0.83742 0.00001	0.84301 0.00001	0.90914 0.00001	0.68755 0.00001	0.76679 0.00001	-0.58874 0.00012	0.82645 0.00001	0.82444 0.00001	0.65070 0.00001	0.31239 0.00001	0.91523 0.00001
INV	0.78446 0.00001	1.00000 0.00000	0.87097 0.00001	0.93527 0.00001	0.82329 0.00001	0.92447 0.00001	0.95536 0.00001	-0.71575 0.00001	0.91049 0.00001	0.91714 0.00001	0.90001 0.00001	0.18160 0.00001	0.81610 0.00001
GHP	0.83742 0.00001	0.87097 0.00001	1.00000 0.00000	0.98481 0.00001	0.95722 0.00001	0.81683 0.00001	0.96754 0.00001	-0.73259 0.00001	0.98168 0.00001	0.98455 0.00001	0.84769 0.00001	0.67517 0.00001	0.90934 0.00001
EXP	0.84301 0.00001	0.93527 0.00001	0.98481 0.00001	1.00000 0.00000	0.83654 0.00001	0.79753 0.00001	0.93110 0.00001	-0.68107 0.00001	0.97403 0.00001	0.87403 0.00001	0.76681 0.00001	0.40639 0.00001	0.91856 0.00001
STD	0.90914 0.00001	0.82329 0.00001	0.81683 0.00001	0.83654 0.00001	1.00000 0.00000	0.86730 0.00001	0.97464 0.00001	-0.85474 0.00001	0.89863 0.00001	0.94157 0.00001	0.81629 0.00001	0.74521 0.00001	0.92720 0.00001
WOP	0.68755 0.00001	0.92447 0.00001	0.81683 0.00001	0.79753 0.00001	0.86730 0.00001	1.00000 0.00000	0.91129 0.00001	-0.77865 0.00001	0.84781 0.00001	0.90570 0.00001	0.93811 0.00001	0.60608 0.00001	0.74855 0.00001
JMA	0.76679 0.00001	0.95536 0.00001	0.96754 0.00001	0.93110 0.00001	0.97464 0.00001	0.91129 0.00001	1.00000 0.00000	-0.81809 0.00001	0.91809 0.00001	0.95612 0.00001	0.90751 0.00001	0.73179 0.00001	0.85839 0.00001
DUM	-0.58874 0.00012	-0.71575 0.00001	-0.73259 0.00001	-0.68107 0.00001	-0.85474 0.00001	-0.77865 0.00001	-0.81809 0.00001	1.00000 0.00000	-0.67173 0.00004	-0.74856 0.00001	-0.75374 0.00001	-0.78755 0.00001	-0.68839 0.00001
GMF	0.82645 0.00001	0.91049 0.00001	0.98455 0.00001	0.94157 0.00001	0.89863 0.00001	0.84781 0.00001	0.91809 0.00001	-0.67173 0.00004	1.00000 0.00000	0.96268 0.00001	0.78903 0.00001	0.52769 0.00001	0.83736 0.00001
RHI	0.82444 0.00001	0.96211 0.00001	0.88455 0.00001	0.94702 0.00001	0.88153 0.00001	0.90520 0.00001	0.95612 0.00001	-0.74856 0.00001	0.96268 0.00001	1.00000 0.00000	0.85716 0.00001	0.61363 0.00001	0.88362 0.00001
IAD	0.65620 0.00002	0.90901 0.00001	0.84369 0.00001	0.76681 0.00001	0.84629 0.00001	0.97011 0.00001	0.90351 0.00001	-0.75374 0.00001	0.78003 0.00001	0.83716 0.00001	0.85716 0.00001	0.61363 0.00001	0.88362 0.00001
HP	0.31239 0.00001	0.18160 0.00001	0.81600 0.00001	0.60608 0.00001	0.74521 0.00001	0.60608 0.00001	0.73329 0.00001	-0.78755 0.00001	0.52769 0.00001	0.61368 0.00001	0.80009 0.00001	1.00000 0.00000	0.50004 0.00000
FOP	0.91522 0.00001	0.81610 0.00001	0.80934 0.00001	0.91856 0.00001	0.92720 0.00001	0.74855 0.00001	0.85839 0.00001	-0.68839 0.00001	0.83736 0.00001	0.88362 0.00001	0.71136 0.00001	0.60504 0.00001	1.00000 0.00000
INDEX	-0.37203 0.05600	-0.21283 0.28655	-0.20982 0.29335	-0.19425 0.33160	-0.23856 0.27440	-0.27471 0.22385	-0.19389 0.33275	0.29744 0.13119	-0.18053 0.34437	-0.22702 0.22348	-0.21827 0.27410	-0.09583 0.78219	-0.30054 0.12773

Exhibit 1
Regression Model I
1961-1987

DEP VARIABLE: EMP

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	10	118028306108	11802830611	9.255	0.0001
ERROR	16	20405525744	1275345359		
C TOTAL	26	138433831852			

ROOT MSE 35711.98 R-SQUARE 0.8526
 DEP MEAN 368174.1 ADJ R-SQ 0.7605
 C.V. 9.699754

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEP	1	365315.51	59162.04705	6.175	0.0001
INV	1	3.38182753	84.77055367	0.036	0.9720
RMT	1	202.24239	223.46370	0.905	0.3789
EXP	1	1913.25257	1792.63621	1.067	0.3017
FAD	1	5.21632545	73.48187900	0.071	0.9443
MP	1	-3.17463489	1.14470548	-2.773	0.0136
WOP	1	1203.01037	3001.21016	0.401	0.6938
JWA	1	-119.11649	761.35663	-0.156	0.8776
GWJ	1	-0.46528857	1.20508789	-0.386	0.7045
STD	1	0.37127192	0.20517448	1.810	0.0892
GNP	1	-90.63846380	143.95276	-0.630	0.5378

APPENDIX B
REGRESSION MODELS FOR ASSESSING THE IMPACT OF
VARIOUS FACTORS ON THE SIZE OF THE
EMPLOYED LABOR FORCE IN JORDAN
1961-1987

OBS	YR	EMP	INV	GMP	EXP	STD	MOP	JWA	GWF	RMT	FAU	MP	POP
1	61	210000	57	327	8.4	300877	1.80	60	0	15.6	60.9	35000	1691000
2	62	339000	66	330	8.7	326829	1.80	70	0	16.9	56.7	35000	1763000
3	63	351000	60	359	10.2	353803	1.80	77	0	16.9	52.2	32000	1860000
4	64	361000	57	402	10.9	368737	1.80	84	0	27.7	69.9	42000	1925000
5	65	370000	72	432	11.7	448344	1.80	81	0	27.7	75.5	42000	2025000
6	66	390000	84	472	12.5	489793	1.80	85	0	31.9	75.5	55000	2100000
7	67	390000	84	470	10.5	322700	1.80	105	0	19.8	154.5	50000	1790000
8	68	2516000	152	498	16.5	350791	1.80	112	0	12.3	159.0	80000	1436000
9	69	2553000	201	581	16.2	350791	1.73	113	0	20.7	137.1	50000	1483000
10	70	2598000	105	581	16.2	397496	1.73	120	0	16.3	117.0	60000	1521000
11	71	2578000	159	581	20.4	416413	2.14	127	0	22.2	117.0	60000	1521000
12	72	2769000	183	683	21.3	460083	2.45	134	0	22.2	119.7	65000	1688000

VARIABLE	N	MEAN	STD DEV	SUM	MINIMUM	MAXIMUM
EMP	12	321041.6866667	55569.19451268	3852500.000000	251600.000000	393000.000000
INV	12	106.8166667	51.01536370	1282.000000	57.000000	201.000000
GNP	12	488.7500000	112.51898227	5631.000000	321.000000	683.000000
STD	12	11.6750000	114.40250445	164.000000	32.000000	221.000000
WOP	12	371859.3166667	57022.51737390	4462319.000000	289793.000000	466082.000000
JWA	12	8.3500000	2.072447326-01	100.000000	1.7500000	14.000000
RMT	12	20.4750000	23.3418277	225.000000	60.0000000	134.0000000
FAD	12	100.7250000	51.82388840	1282.000000	12.0000000	31.8000000
MP	12	50833.3333333	32029.00534844	610600.000000	48.0000000	70000.0000000

PEARSON CORRELATION COEFFICIENTS / PROB > IRI UNDER HO, MHO=0 / N = 12

	EMP	INV	GNP	STD	WOP	JWA	RMT	FAD	MP
EMP	1.00000	-0.78975	-0.68959	-0.73518	-0.08619	-0.33505	-0.58517	0.64779	-0.58339
INV	0.00000	1.00000	0.89240	0.87282	0.28759	0.81932	-0.27516	0.77165	0.78416
GNP	-0.78075	0.00000	1.00000	0.96197	0.55659	0.81704	-0.10314	0.77087	0.90523
STD	0.00277	0.00000	0.00001	1.00000	0.0602	0.0259	0.0001	0.7380	0.0089
WOP	-0.73518	0.87282	0.96197	0.0602	1.00000	0.58316	-0.20443	0.69257	0.93428
JWA	-0.08619	0.28758	0.55659	0.0259	0.58316	1.00000	0.57482	-0.04261	0.57965
RMT	0.64779	0.77165	0.73087	0.7380	-0.20443	0.57482	1.00000	-0.11708	0.77539
FAD	-0.58339	0.78416	0.90523	0.90523	0.69257	-0.04261	-0.11708	1.00000	0.85650
MP	-0.59015	0.78416	0.90523	0.90523	0.69257	-0.04261	-0.11708	0.85650	1.00000

Exhibit 2
Regression Model 2
1961-1972

DEP VARIABLE: EMP

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F
MODEL	9	33255983409	3695109268	10.390	0.0908
ERROR	2	711305758	355652879		
C TOTAL	11	33967289167			
ROOT MSE		1898.76	R-SQUARE	0.9791	
DEP MEAN		321041.7	ADJ R-SQ	0.8848	
C.V.		5.874241			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	14159.38	150649.89	0.940	0.4465
INV	1	-186.46103	621.55901	-0.316	0.7819
RMT	1	5868.19941	6064.47381	0.968	0.4353
EXP	1	-9795.32704	25766.59380	-0.380	0.7404
FAD	1	-519.32662	433.60295	-1.198	0.3537
MP	1	-0.27523357	3.32916797	-0.083	0.9416
WOP	1	156348.34	63055.58329	2.480	0.1314
JWA	1	3457.69155	1505.94639	2.296	0.1486
STD	1	-0.46368940	0.98845692	-0.469	0.6852
GNP	1	-391.71186	310.14215	-1.263	0.3339

DEPENDENT VARIABLE • EMP

ORDINARY LEAST SQUARES ESTIMATES

SSE	789570323	DFE	3
MSE	263190108	ROOT MSE	16223.13
SBC	272.4438	AIC	268.0796
REG RSQ	0.9768	TOTAL RSQ	0.9768
DURBIN-WATSON	2.9464		

VARIABLE	DF	B VALUE	STD ERROR	T RATIO	APPROX PROB
INTERCPT	1	90599.914	89713.4627	1.010	0.3869
INV	1	54.39996	272.5236	0.200	0.8545
RMT	1	3116.335	1323.0509	2.355	0.0998
EXP	1	-20857.689	8932.1440	-2.335	0.1017
FAD	1	-372.667	258.4589	-1.442	0.2450
MP	1	0.8777878	1.931623	0.454	0.6804
WOP	1	144910.706	50023.8905	2.897	0.0627
JWA	1	3386.203	1288.8312	2.627	0.0785
MP	0	-1.25649E-20			
GNP	1	-360.675	260.6564	-1.384	0.2604

ESTIMATES OF AUTOCORRELATIONS

LAG	COVARIANCE	CORRELATION
0	85797527	1.000000
1		-1.08765432101234567891

Exhibit H
 Regression Model H
 1961-1987

DEP VARIABLE: EMP

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	4	3120882854	7802220663	19.800	0.0006
ERROR	7	2758406513	394058073		
C TOTAL	11	33867289167			
ROOT MSE		19850.9	R-SQUARE	0.9188	
DEP MEAN		321041.7	ADJ R-SQ	0.8724	
C.V.		6.183277			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	266829.41	61360.61907	4.349	0.0034
GNP	1	-804.96930	178.52396	-4.509	0.0028
JWA	1	2170.59562	811.87396	2.674	0.0318
WOP	1	54741.79939	37747.45649	1.450	0.1903
RMT	1	5537.38198	1023.93965	5.408	0.0010

DEPENDENT VARIABLE = EMP

ORDINARY LEAST SQUARES ESTIMATES

SSE	2758406513	DFE	7
MSE	394058073	ROOT MSE	19850.9
SBC	277.5152	AIC	275.0907
REG RSQ	0.9188	TOTAL RSQ	0.9188
DURBIN-WATSON	3.5607		

VARIABLE	DF	B VALUE	STD ERROR	T RATIO	APPROX PROB
INTERCPT	1	266829.405	61360.6191	4.349	0.0034
GNP	1	-804.969	178.5240	-4.509	0.0028
JWA	1	2170.588	811.8740	2.674	0.0318
WOP	1	54741.798	37747.4565	1.450	0.1903
RMI	1	5537.382	1023.9387	5.408	0.0010

ESTIMATES OF AUTOCORRELATIONS

LAG	COVARIANCE	CORRELATION
0	229867209	1.000000
1		-1.9876543210
2		1.234567891
3		0.1234567891
4		0.1234567891
5		0.1234567891
6		0.1234567891
7		0.1234567891
8		0.1234567891
9		0.1234567891
10		0.1234567891

Exhibit 5
Regression Model 5
1961-1972

DEP VARIABLE: EMP

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	28392180972	9464060324	13.580	0.0017
ERROR	8	5575108195	696888524		
C TOTAL	11	33967289167			
ROOT MSE		26398.65	R-SQUARE	0.8359	
DEP MEAN		321041.7	ADJ R-SQ	0.7743	
C.V.		8.22281			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	300618.50	79850.62328	3.765	0.0055
GNP	1	-365.21074	92.28576288	-3.957	0.0042
RMT	1	5421.83053	1360.46909	3.985	0.0040
WOP	1	42950.46997	49854.51598	0.862	0.4140

APPENDIX C
REGRESSION MODELS FOR ASSESSING THE IMPACT OF
VARIOUS FACTORS ON THE SIZE OF THE
EMPLOYED LABOR FORCE IN JORDAN
1973-1987

PEARSON CORRELATION COEFFICIENTS / PROB > 1% UNDER HO:RHO=0 / N = 15

	EMP	INV	GNP	ENP	SID	WOP	JMA	DUM	GMF	RMT	FAD	MP	POP
EMP	1.00000 0.0000 0.0000	0.87016 0.0001	0.96321 0.0001	0.97808 0.0001	0.99248 0.0001	0.57887 0.0245	0.92978 0.0001	0.00000 1.0000	0.91704 0.0001	0.88885 0.0001	0.57008 0.0265	0.22784 0.3074	0.99208 0.0001
INV	0.87016 0.0001	1.00000 0.0000	0.94045 0.0001	0.87821 0.0001	0.90351 0.0001	0.84061 0.0001	0.93928 0.0001	0.00000 1.0000	0.92398 0.0001	0.82480 0.0001	0.80861 0.0003	0.18788 0.5488	0.85907 0.0001
GNP	0.96321 0.0001	0.94045 0.0001	1.00000 0.0000	0.97507 0.0001	0.98082 0.0001	0.88078 0.0001	0.86218 0.0001	0.00000 1.0000	0.88504 0.0001	0.98772 0.0001	0.85277 0.0083	0.21551 0.8405	0.95955 0.0001
ENP	0.97808 0.0001	0.87821 0.0001	0.97507 0.0001	1.00000 0.0000	0.97628 0.0001	0.87628 0.0001	0.90883 0.0001	0.00000 1.0000	0.95928 0.0001	0.90198 0.0001	0.52743 0.6433	0.31539 0.2522	0.88929 0.0001
SID	0.99248 0.0001	0.90351 0.0001	0.98082 0.0001	0.97628 0.0001	1.00000 0.0000	0.85110 0.0000	0.86420 0.0001	0.00000 1.0000	0.94453 0.0001	0.82371 0.0001	0.83081 0.0117	0.22858 0.4128	0.98289 0.0001
WOP	0.57887 0.0245	0.84061 0.0001	0.88078 0.0001	0.87628 0.0001	0.85110 0.0000	1.00000 0.0000	0.78558 0.0000	0.00000 1.0000	0.73185 0.0018	0.77488 0.0007	0.83850 0.0001	-0.05382 0.8488	0.53972 0.8378
JMA	0.92978 0.0001	0.93928 0.0001	0.86218 0.0001	0.90883 0.0001	0.86420 0.0001	0.78558 0.0000	1.00000 0.0000	0.00000 1.0000	0.93350 0.0001	0.83542 0.0001	0.86837 0.0009	0.08701 0.8124	0.80707 0.0001
DUM	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000	1.00000 0.0000	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000	0.00000 1.0000
GMF	0.91794 0.0001	0.92398 0.0001	0.88504 0.0001	0.98772 0.0001	0.94453 0.0001	0.82371 0.0001	0.83350 0.0001	0.00000 1.0000	1.00000 0.0000	0.95289 0.0001	0.81949 0.0138	0.18817 0.5085	0.92869 0.0001
RMT	0.88885 0.0001	0.82480 0.0001	0.96772 0.0001	0.90198 0.0001	0.82371 0.0001	0.77488 0.0001	0.83542 0.0001	0.00000 1.0000	0.85289 0.0001	1.00000 0.0000	0.87803 0.0054	0.18483 0.8348	0.87740 0.9437
FAD	0.57008 0.0265	0.80861 0.0001	0.85277 0.0083	0.85277 0.0083	0.83081 0.0117	0.83850 0.0001	0.78558 0.0000	0.00000 1.0000	0.81949 0.0054	0.95289 0.0001	0.81949 0.0054	0.18817 0.5085	0.92869 0.0001
MP	0.28264 0.3074	0.18788 0.5498	0.21551 0.4405	0.31539 0.2522	0.22858 0.4128	-0.05382 0.8488	0.08701 0.8124	0.00000 1.0000	0.61949 0.18617	1.00000 0.0000	0.00000 1.0000	0.13378 0.8348	0.52657 0.9437
POP	0.98208 0.0001	0.85907 0.0001	0.95955 0.0001	0.98929 0.0001	0.98289 0.0001	0.88929 0.0001	0.88929 0.0001	0.00000 1.0000	0.92480 0.0001	0.88929 0.0001	0.88929 0.0001	1.00000 0.0000	0.29437 1.00000
INDEX	-0.49477 0.0608	-0.46459 0.0810	-0.41111 0.1278	-0.39284 0.1477	-0.47287 0.0751	-0.33414 0.2235	-0.45017 0.0922	0.00000 1.0000	-0.30269 0.2728	-0.36777 0.1775	-0.47272 0.0752	-0.08227 0.7707	-0.43714 0.1032

Exhibit 3
Regression Model 3
1973-1987
ANALYSIS OF VARIANCE

DEP VARIABLE: EMP

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	10	56365156492	5636515649	191.446	0.0001
ERROR	4	117767508	29441877.07		
C TOTAL	14	56482924000			
ROOT MSE		5426.037	R-SQUARE	0.9979	
DEP MEAN		405880	ADJ R-SQ	0.9927	
C.V.		1.336857			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	42114.37117	74207.94769	0.568	0.6007
INV	1	13.64122021	17.20186819	0.793	0.4722
RMT	1	13.19109565	37.89724144	0.347	0.7460
EXP	1	-108.20498	11.38710044	-0.280	0.7937
FAD	1	-2.94357297	11.41707098	-0.258	0.8093
MP	1	-0.16795958	0.62270573	-0.270	0.8007
GNP	1	1.13563389	25.23669127	0.045	0.9663
JWA	1	-347.42864	183.17786	-1.897	0.1307
GMF	1	-0.13572257	0.32104811	-0.423	0.6942
WOP	1	-411.92380	609.02489	-0.676	0.5359
STD	1	0.63623737	0.15521659	4.099	0.0149

Exhibit 6
Regression Model 6
1973-1987
ANALYSIS OF VARIANCE

DEP VARIABLE: EMP

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F
MODEL	4	55231368994	13807842248	110.325	0.0001
ERROR	10	1251555006	125155501		
C TOTAL	14	56482924000			
ROOT MSE		11187.29	R-SQUARE	0.9778	
DEP MEAN		405880	ADJ R-SQ	0.9690	
C.V.		2.756305			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	257214.16	21442.86610	11.995	0.0001
GNP	1	55.37939177	14.46790848	3.828	0.0033
JWA	1	151.74489	197.93671	0.767	0.4610
WOP	1	-1447.82058	550.67335	-2.629	0.0252
GW	1	-0.79550155	0.34348109	-2.316	0.0431

DEPENDENT VARIABLE - EMP

ORDINARY LEAST SQUARES ESTIMATES

SSE	1251555006	DFE	10
MSE	125155501	ROOT MSE	11187.29
SBC	329.7024	AIC	326.1622
REG RSQ	0.9778	TOTAL RSQ	0.9778
DURBIN-WATSON	1.7119		

VARIABLE	DF	B VALUE	STD ERROR	T RATIO	APPROX PROB
INTERCPT	1	257214.164	21442.8661	11.995	0.0001
GNP	1	55.37939	14.4679	3.828	0.0033
JWA	1	151.745	197.9367	0.767	0.4610
WOP	1	-1447.821	550.6734	-2.629	0.0252
GMF	1	-0.795502	0.3434811	-2.316	0.0431

ESTIMATES OF AUTOCORRELATIONS

LAG	COVARIANCE	CORRELATION
0	83437000	1.000000
1		-0.19876543210
2		0.1234567891
3		0.1234567891
4		0.1234567891
5		0.1234567891
6		0.1234567891
7		0.1234567891
8		0.1234567891
9		0.1234567891
10		0.1234567891

Exhibit 7
 Regression Model 7
 1973-1987
 ANALYSIS OF VARIANCE

DEP VARIABLE: EMP

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F
MODEL	4	55534614728	13883653682	146.404	0.0001
ERROR	10	948309274	94830927.35		
C TOTAL	14	56482924000			
ROOT MSE		9738.117	R-SQUARE	0.9832	
DEP MEAN		405880	ADJ R-SQ	0.9765	
C.V.		2.39926			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR HO: PARAMETER=0	PROB > T
INTERCEP	1	263864.35	11892.94714	22.187	0.0001
GMP	1	76.08779715	9.82076442	7.748	0.0001
WOP	1	-784.10086	427.16026	-1.836	0.0963
GMF	1	-0.99053774	0.25946248	-3.818	0.0034
RMT	1	-64.66650736	32.44122090	-1.993	0.0742

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