Elderly Support in Oil Economies
How sustainable in the 21st Century with illustrations from Kuwait

By

Ismail Siragelden* ***Eqbal Al- Rahmani***

ملخص

تقويم نظام التأمينات الاجتماعية فى دول الخليج النفطية
فى مواجهة احتياجات كبار السن فى القرن الواحد والعشرين مع إشارة
خاصة لحالة الكويت

إن تقويم قدرة نظام التأمينات الاجتماعية على الاستمرار فى تأمين احتياجات كبار السن يتطلب نظرة طويلة المدى ومتداخلة التخصصات لأنه يتعرض للوضع المعيشى المستقبلى لأجيال مختلفة ولمتغيرات اقتصادية وديموغرافية وسياسية واجتماعية.

بعد الاستعراض النظرى والتاريخى لتطور نظام التأمينات الاجتماعية لكبار السن والتطرق باختصار لتجارب بعض الدول النامية والمتقدمة فى هذا المجال، تركز الورقة على تقويم نظام التأمينات الاجتماعية (نظام التقاعد) فى الدول النفطية الخليجية بشكل عام وعلى تجربة الكويت بشكل خاص. وتشير الورقة إلى الاختلافات الأساسية فى طبيعة العوامل المؤثرة على نظام التأمينات الاجتماعية فى الدول النفطية عنها فى الدول الأخرى، كما تحلل المحددات الأساسية لقدرة نظام التأمينات الاجتماعية فى الكويت على الاستمرار والمعوقات التى تواجه هذا النظام على المدى القصير والطويل.

---

* Professor Emeritus, The Johns Hopkins University Department of Economics, and Kuwait University, respectively. The authors would like to thank Nadia Al-Sharrah for her valuable assistance and Senior Officials at the Kuwait Public Institution for Social security for giving generously of their time and for providing background data and material. Conclusions and recommendations presented in the paper are those of the authors and do not necessarily reflect those of their respective institutions.

1- Introduction to the Issues

In this paper, we make the case that, in all societies, the integrity of the system of support for the elderly, although highly dependent for its sustainability on a solid economic foundation, is more than an economic problem. This is especially the case in the GCC oil economies, since the solidity of the economic foundation in these countries is closely tied to the determinants of public finance, thc intra-generation distribution of output, and the inter-generation distribution of that output. These determinants, while mainly conditioned by the unique resource endowments of the GCC oil economies, are determined by the social contract that prevailed in the region before the oil era. Almost all strategies and policies of the distribution branch of public finance have been guided by the social contract providing generous benefits for all citizens. The welfare system that evolved and is currently in- place, is relatively recent. Its socioeconomic foundation is yet to face the test of time (Tinbergen 1981, Sirageldin and Khorshid 1996, and Al-Ebraheem and Sirageldin 1999).

Historically, Social Security (SS) systems, elderly financial support, have been a private initiative. It was based on family and community (corporate) initiatives [(1)]. That pattern has changed. At present most of SS systems, mainly in the form of pension schemes, are publicly regulated or managed. The shift to publicly managed SS system has not occurred without concerned opposition. In many countries there is a growing concern about the viability and sustainability of public SS system. These concerns focus on three areas: Economic viability and the mode of finance, demographic forces manifested in changes in relative cohort size and their rates of growth, and social concerns with equity across generations.

These issues are also a source of major concern for the viability of public SS programs in the GCC countries. However, as discussed later in this paper a successful transformation of the GCC economies into non-oil based production is a necessary condition for a sustainable SS system.

The rehabilitation of SS in general and support for the elderly in particular, is being increasingly viewed as socially fundamental and vital to be left alone to market forces to determine its fortune, or to be reformed through a simple process of privatization, even in advanced industrial societies. The public sector seems to have an important role in assuring the fiscal integrity of this vital program and maintaining its social purpose. We argue, however, that the role of the private sector: the family and the community, is pivotal. The role of the public sector should attempt to reduce system shocks that have selective adverse effects on opportunities and abilities, and to be supportive in enhancing the abilities of individuals, families, and communities to plan for future contingencies and allocate their resources optimally over the life cycle. The search for a balanced public and private role to support the elderly in oil economies is an important goal of the present paper. In this paper we call for the view that integrates the system of intergeneration transfers with a sustained economic foundation.

The next section presents a brief review of the historical evolution of SS systems and especially their historical conversion from private to public programs. This review serves as the basis for identifying factors affecting SS Systems and the necessary conditions for a sustainable public or private programs. Next we review three SS programs from outside the GCC region, that seem to be in crisis, to illustrate the commonality of the basic factors that influence the efficacy of SS programs in general. The discussion of the historical review and current experiences serves as a basis for assessing the case of Kuwait. The Kuwait case is examined in the following section. Conclusions are provided in the last section.

2- The Historical Evolution of SS Systems

Support for the elderly is an integral part of a system of intergenerational transfer of resources. Transfer between generations has been common long before public pension and SS systems came into operation. For example, in agricultural societies transfers between generations were not only common but were necessary and inevitable when viewed from an overlapping generation survival interest. With little mobility, stable social relations, and small size rural communities, each agricultural society is cemented by an intergeneration social contract that is enforced by strong social ties, continuous interactions among groups and cohorts, and the almost permanency of social relations. The social contract that evolved in these small agricultural societies enforced the well being of the three overlapping generations: the dependent young, the working cohort, and the dependent elderly. In these relatively closed systems, with strong ties and structured roles, helping the young is essential to guarantee future support. Similarly, helping the old is a necessity since workers are getting old and will inevitably be dependent, their care for the older generation is part of socializing the younger generation by setting the example for their future behavior. Helping the unfortunate members is worthwhile because those who are fortunate today could be unfortunate tomorrow and refer to the help they provided previously. The system is basically private in nature and functions as a "Pay as you Go" PAYG-system, i.e., program current payments are financed by premium payments (taxes) deducted from current production (Verbon 1988: 8-11).

The result of these social dynamics is the evolution of intergeneration social contracts that maximize the welfare of the three overlapping generations in these communities. These contracts are honored as long as the environment and expectations are stable. However, the prevailing social contract looses legitimacy and sustainability if communities become integrated into larger economic, social and political units. These changes arise when communities experience significant changes in their demographic behavior, the pattern of family formation, the prevailing technology, resource endowment, the degree of openness to external ideas, or accelerated urbanization and as labor becomes more mobile. These changes signal the transformation of societies from traditional agricultural or nomadic mode of life into industrial and urban mode. It also signals the need for a new social contract based on a larger collective consensus to provide a new system of SS that is more able to deal with the increased life uncertainties as societies transit to the complexity and atomization of the industrial way of life. The emphasis on transit is deliberate since it does not necessarily follow that SS schemes developed to cope during the transition should continue after the transition is completed.

There are contextual similarities between these small agricultural communities and the pre-oil tribal communities in the GCC region. Although not agricultural, pre-oil communities had strong social ties close interactions among groups and cohorts, permanency of social relations cemented by an Islamic code of ethics and values. Characteristics that developed a strong SS system based on community solidarity. In both cases the state eventually took over the management of SS programs.

There is however, a fundamental difference in both the need and rational for public take over of these programs in the two settings. Oil economies have been experiencing two sets of transitions over their modern history, since the mid-1960s. The first is the shift from a traditional tribal system into an urban system financed exclusively by revenue from the non-renewable oil resource. This stage is now complete with modern regulatory institutions, infrastructures, education and health facilities, and an elaborate system of entitlements of social services including SS programs, among others are now in place. The second transformation is the shift from an oil-based into a non-oil-based economy. This latter stage is yet to be completed. Social programs, including SS schemes developed for the first transitional stage may not be appropriate for a successful transformation into the second stage. They require evaluation in that respect.

(2-1) Why public SS programs?

In the previous discussion we observed that in traditional small communities, intergeneration transfer schemes were developed as a survival necessity. It was also stable since the problem of the prisoners' dilemma game does not arise in small interacting communities.[2] A cooperative solution that eventually turns into a social custom evolves (Verbon 1988: 10-11 and Akerlof 1980). However, both social customs and the enforcement power of a small community breakdown, and accordingly the legitimacy of the social contract, when that community becomes open, its size and boundaries expand, and its way of life changes. This was the case with the dawn of the industrial revolution, especially in the Nineteen Century that drastically affected the living conditions, work opportunities, and social relations in most countries of the world. As labor saving devices replaced agricultural workers, surplus workers moved to industrial jobs in the growing cities and urban areas. As Verbon (1983:12) observed:

> "A job in the industrial sector made housing in the city near the factories necessary. The grouping together of large members of industrial workers in the cities made each worker an anonymous individual only connected to his immediate family and no longer continuously interacting with the other members of the group of workers".

Thus, the two necessary conditions for a viable community-based intergenerational transfer program, continuity of group structure and continuous interaction among community members, collapsed.

Industrialization led to labor circulation that reduced group continuity that also reduced intra-group interaction and extended family ties that were common in small communities. As a result communities ceased to be an enforcer and viable guarantor of intergeneration transfers (Wilenskey and Lebeaux 1985). The three generations, the young, the workers and the old lost the certainty of expected support at old age. The industrial revolution reduced workers security and mutual self help. An individual no longer could only rely on his own nuclear family for help in case of lost income or bad health. But more often, given the dismal condition of the average worker at that time, the nuclear family depended on the worker's income for survival. Parents, unable to provide for their children, gave them away to the wretched life of child labor that was common practice at the time. There is a vast literature describing the dismal conditions of the working population and the elderly during the early industrialization phase. Russell (1934) is illustrative. The need emerged for another mechanism for SS.

(2-2) Theoretical Perspectives:

Concerted public programs dealing with the living conditions of the old did not arise until the late 19th Century and the early 20th Century. There are many reasons for that delay reflecting varied economic and political perspectives. The working class had been without political influence until the first labor unions emerged in the 1860s. The emergence of the unions gave labor a stable forum and interaction. The development of early pension systems like the German one was mainly to reduce labor unions and political power (Verbon: 14-15). The political and social forces that shaped the development of SS programs in the early 20th Century, although complex, provide important insights in the dynamics of present programs. Williamson and Pampel (1993) reviewed five general theoretical perspectives on the evolution of old-age security policy in the 20th Century and examined these policies in seven countries, four industrial and three developing. The perspectives reviewed by the authors are:

(i) The industrial perspective: This perspective can be traced back to the 19th century and closely linked to our previous discussion of the effect of industrialization on the viability of community-based SS programs. Although the perspective takes into consideration the demographic and social changes that affect increase in the need for old-age security, it de-emphasize the independent role of the political factors such as political structure, elite ideology, degree of political democracy, or union party strength.

(ii) The Social Democratic Perspective (SDP): This perspective views government spending on public pension and on other social welfare programs as an outcome of the balance of power between capital and labor, and accordingly provide real gain for workers

(iii) The Neo-Marxist Perspective: Unlike the SDP this perspective argues that while the state has some autonomy, it is an institution that does not come under the control of labor.

While the state may from time to time make decisions that in the short-run favors labor, the long-run agenda is to foster the interest of capital. In this perspective spending on public pension and other social insurance programs is viewed as a mechanism to control labor than as a victory for labor. The Neo- Marxist perspective has been most extensively used in the analysis of developments in the industrial nations, but it has also been used in the analysis of Third World Nations. Dependency theory and world system theory can be viewed as variant of this perspective.

(iv) The Neo- Pluralist Perspective: In this perspective social policy is assumed to be the outcome of competition among various groups. A typical structure of a democratic society that involves a large number of interest groups that help reduce conflict, encourage compromise, and foster equilibrium [3].

(v) The State-Centered Perspective: This perspective is rather mixed. Some of the State-Centered arguments emphasize the impact of certain structural characteristics of states such as the degree of democracy, the tax system, or the degree of centralization. Other arguments emphasize the role of government bureaucracy and officials in the decision process, where important decisions such as a pension policy decision are influenced by the personal agenda of powerful officials.

These sociopolitical perspectives illustrate the complexity of the decision process in the development of SS policies and programs. We agree with Williamson and Pampel conclusions that these perspectives are complementary. Understanding the context is essential for policy analysis of present SS programs.

While it is common for scholars to treat these different theoretical perspectives as contradictory, we find it more useful to treat them as complementary across countries and across time within a country, the relative utility of explanations derived from different theoretical perspective does vary; national and historical context make a difference (ibid- 227).

(2-3) SS Programs in Crisis [4]

As mentioned above, most of the SS programs are publicly managed and many of them are in evolutionary stages, some are in crisis stages. In this section we seek some insight about factors affecting the efficacy and effectiveness of these programs by referring briefly to three cases in different contexts: Turkey, China, and the United States experiences. Our purpose is first, to seek generalization of principles that are independent of context or program structure, and second to account for contextual and program design effects [5].

Turkey[6]: Recently, the Turkish Pension System seems to have been in deep financial trouble. This difficulty has been mainly because of the system's generous provisions relative to its revenue and only partly a result of the process of population aging. Turkey still has a relatively young population and the aging of the Turkish population will only become visible starting about 2010 through 2050 (Sayan and Kenc 1998:19). Turkey has experienced a relatively mild demographic transition since the Second World War rather than a sharp fertility shock similar to the one experienced by European countries in the late 40s. The effect of the demographic momentum on the size of older cohorts will reach its peak early in the next century and should have serious financial consequences to the Turkish Pension Program. However, financial pressures are already mounting. Since the early 1990 losses of the publicly managed pension system has begun to grow at an alarming rate accounting for a large part of the growth in the budget deficit. These losses could be traced mainly to pension parameters e.g., a reduction of the minimum retirement age and the growth of beneficiaries relative to revenue. Sayan and Kenc (1998: 20) projected the demand for pension as the population ages in the next century. They concluded.

> "There appears to be no choice when it comes to the need to change the existing configuration of pension parameters so as to lower the burden of pension system on public balances as soon as possible".

In their analysis, although based on an overlapping generation model, Sayan and Kenc did not examine the role of private pensions or how families allocate their resources over the life cycle. Studies indicate that a sizable proportion of people in the working age expect support from their children in old age. In a study by Bulatao and Arnold (1977) it was reported that in Turkey, 94% of the people surveyed expected Support in-kind from their daughters and 71% expected that their sons provide part of their salaries to support them in their old age

It is of interest to find out how these expectations have changed, if at all, as the Turkish Pension Program took hold, over a time-span close to a generation? Equally important is to note that the program itself has an effect on people expectations and behavior. Families seem to adjust their resource allocation in response to demographic, institutional, or resource endowment changes. These adjustments are not instantaneous and may not be optimal on the individual or social level. SS policies while attempting to ease the transition and provide a minimum floor of support should also anticipate the behavioral response to their intervention. Some of these behaviors could affect present or future productivity. Parents may change their lifetime labor force participation or the size of their commitment to invest in their children education. The change will depend on how the program is structured and how it relates to other public policies and programs. We will return to this issue when we discuss the case of Kuwait

China: During the past two decades, the SS Program in China, the most populous country in the World, experienced major transformations. Chinese families and communities are known for their close network Systems and support for their members. Old age support, especially for rural women has been traditionally based on expected support from children, especially sons. Large family norms were based on that premise. During the socialist era, China instituted a universal SS system to be financed at the local Commune level that covered maintenance and health needs for the elderly. The economic productivity of the Commune was declining however, and the financial burden of the SS system increased relative to production surplus. By late

1970s China started an extensive market reform, that had mixed social consequences especially for elderly rural women (Zhao 1989).

In the meanwhile, china was experiencing a major demographic transformation in which the population experienced a fast decline in fertility and mortality levels. The population of China started to age at a fast pace. The elderly, over 64 years of age were about 80 million in 1990 and expected to reach 200 million by 2020. Family size declined close to replacement level while labor mobility accelerated, thus shaking the stability of local communities, of established expectations about sources of old age support, and the legitimacy of the traditional social contract. The cost of a public SS program in this demographic and economic environment could be large with uncertain efficacy.

In the early 1980s, the government decided to shift back a large part of the fiscal burden of elderly support to the family. Wang (1997) reviewed the impact of these demographic, economic and institutional changes on the welfare of the elderly, especially that of Chinese rural older women, he found unexpected resilience and a high degree of voluntary adjustments by both generations, the old and the working age populations. The adjustments were facilitated by the presence of a strong economy especially in the agricultural sector. Wang (1997:118-120) highlighted other factors that tended to ease the conflict between the process of population aging and the viability and efficacy of the SS and family support Systems. The factors include, improving women employment opportunities and their health status; establishing better access to capital markets reinforcing the traditional values of old age support; and improving the services and coverage of the public and private social support systems.

USA: Turning to an advanced industrial setting, Keyfitz (1988) finds that the USA population is not in a steady state as most theoretical models assume, cohorts swell and contract, in no consistent time pattern. Thus, introducing uncertainty to the supply and demand for SS finds. The result is inequality among generations. That inequality, Keyfitz observes depends on the method of financing the SS system. Keyfitz illustrated that the present finance method of Pay as You Go (PAYG), that is being used in the USA results in generation inequalities. Private saving schemes on the other hand, as discussed below have been shown to lead to both serious inequalities and income insecurity.

At the present time, there is a growing debate in the USA about how to address the financing challenges for SS system posed by the onset into retirement the first wave of the baby boom, without undermining the basic promise of the SS Act. The basic promise of the US SS Program that started in the mid-1930s has been to provide every American worker with insurance against the adverse effects on retirement income of unforeseen developments like disappointing earnings, disability, or death of spouse. It must be emphasized that as originally conceived, the SS system was meant to provide a floor of protection through wage-related benefits on which the worker can build additional security through savings, private pensions, home ownership, and other assets. It was not designed to pay post-retirement benefits to lift out of poverty those workers whose former earnings kept them in poverty during their job careers (Fauri 1973: xiv). Furthermore, the promise was well guarded against fiscal irresponsibility. In his SS message of 1934, President Roosevelt stated the following principles to guide the evolution of the program (Fauri, ibid):

> "First, that the SS system be self- sustaining and not supported by general taxation; second, that it be a national system with maximum state and federal cooperation; and third, that the credit structure of the nation be assured by retaining federal control over the investment and safeguarding of reserves".

By the mid 1970s, most of the aged in the USA relied entirely on SS benefits after their earnings stop and only one in seven had a private pension of any substance. As Fauri put it aptly (ibid: xiv):

"SS is designed for and capable of helping people cope with slippage, rather than failure in the economy, which has an adverse effect on their personal lives".

In January 1999, President Clinton offered a long-term plan to safeguard the fiscal integrity of the SS system in the United States of America. The proposed plan opened an active public debate. It has three features (Tyson 1999: 22):

"First, benefits paid to individual workers are linked to average lifetime earnings. Second, risk is pooled by the provision of extra benefits to low -income earners and families with children. Third, SS retirement income is protected from the danger of unanticipated inflation for the duration of retirement, however long".

The Clinton plan is based on dedicating a large portion of current and projected budget surplus in the USA to SS reserves. The proposal is expected to increase national savings and assure the fiscal integrity of the SS system through the middle of the next Century. Furthermore, the plan calls for investing a share of SS's reserve in the stock market. All assets and the returns earned on the invested portion would be available to cover the program's benefits. Tyson (ibid) contrasts the Clinton plan with privatization proposals that replace SS with mandatory individual retirement accounts:

"Under such proposals, some or all of an individual's payroll tax payments would be deposited in individually owned defined-contribution accounts whose funds would be managed by private financial institutions. These funds would be removed from the social insurance system, thus no longer available to pool risk and transfer income between families with and without children, between the able and the disabled during retirement. Instead of a guaranteed government benefit, SS payments to individual workers would depend on asset values, interest rates, and investment strategies as well as lifetime earnings. Finally, privatization would mean that individuals would pay sometimes hefty management fees to financial institutions".

The brief review of SS programs in the three settings indicates the presence of common fundamental issues: economic, demographic and social. The Turkish program illustrates a design problem, unrealistic levels of program coverage and benefits. Also, the consequences of population aging should be considered early otherwise it will confound the policy problem. The China experience indicates that bold decisions could be made. However, success of the strategy to shift part of program finance towards families and the private sector depended to a large extent on the presence of favorable economic environment. The case of the USA indicates that, aside from economic and demographic considerations, social and political factors play important roles in the design of SS programs.

3- Basic Factors Affecting Sustainability of SS Programs

The previous review and discussion illustrates the multiplicity of factors affecting the efficacy and sustainability of intergeneration transfer programs. However, we may organize these factors under four headings: Demographic, Economics, Sociopolitical, and Program Design. It is our view that these factors could be linked within an intergeneration framework. A simplified framework is outlined below.

(3-1) The Source of SS Payments [7]: Simply stated, it is the population in the working age that is responsible for providing support to both the dependent elderly and the dependent young. That provision is based on a utility maximization process that balances their own needs with those of the dependent young and the dependent old. It is based on mutual benefit among generations and subject to expected lifetime income constraint, and the prevailing system of values, e.g., how much they value the welfare of other cohorts. Provisions from the working cohort for old age support must come out of current production. It is independent of the type of system of support whether a Pay-As - You-Go (PAYG) or a Pension System (PS) scheme. In PAYG-system of transfer whether based on a traditional family- based transfer, community-based transfer, or a tax-based transfer, the truth of the statement is obvious. Taxes are levied on current production, and so is the case for premiums paid in traditional community-based transfers. The case of Pension Schemes (PS) based on returns from previous savings by beneficiaries may not be as obvious. However, the returns, whether interest or dividend payments, are a result of current production activities, regardless of who has claims on the assets.

Although the mechanism of transfer does not change the fact that all claims are based on current output, there is however, a fundamental difference between a system that does differentiate between premiums and benefits and one that does not. The difference is one of ownership and distribution rather than the source of revenue. Redistribution is present if there is no direct relation between premium contributions paid and the benefit payments to be received, e.g., benefit payments are tied to needs and not to premium contributions (see fn. 4). Equity objectives do not change the fact that benefit payments are based on current output. Even in the case of deficit finance, there is a change in the temporal distribution of claims but not in the fundamental relation between current benefit and output. This is an important technical issue that relates directly to the sustainability of the social promise of any SS program.

Some basic conclusions follow once it is established that any system of support for the elderly is provided far from current production. And that the share of the elderly depends on the relative size of the working population (demographic factors), on the workers economic productivity and how premiums are invested (economic factors), and on the distribution of claims on current production among the three claimant cohorts (sociopolitical factors). To facilitate the presentation we label the three population cohorts: P_1, P_2, and P_3, where P_1 is the dependent young cohort, P_2 is the population in the working age, and P_3 is the dependent old cohort. The intergeneration problem, in the context of a SS system, is that of the older non-working cohort P_3. That cohort has consumption needs but cannot trade its labor, since that cohort is retired. P_3 can only has claims on the output produced by P_2. Those claims could be a result of some enforced laws such as those developed for SS schemes, returns on own savings or paid premiums in Pension schemes. There is no guarantee however, as discussed earlier that any of these schemes will provide optimality or continuity, especially in the presence of market failure and in situations where the relative size of cohorts vary significantly over time.

A fundamental problem of intergeneration transfer schemes is whether the non-working cohort (P_3) is able to match its claims on current output, produced by the workers cohort (P_2) and capital, with its consumption needs.. In his classic statement of the intergeneration model, Samuelson (1958) indicated that this matching problem depends on the determinants of the whole socioeconomic system and in particular the growth of output relative to that of population (Arthur: pp. 89-91). The factors affecting how productive endowments and consumption needs might be matched over the life cycle include both macro and micro factors. These factors include, among other things, family behavior, the supply of capital, monetary policy and the banking system, other social institutions, change in the distribution of income and wealth, and the role of economic expectations. Willis (1988) developed an elaborate framework for the overlapping generation model although highly abstract, is both flexible and general and able to account for cohort transfers, demographic behavior and capital formation. Our purpose in the present paper is limited to highlight some of the key factors affecting the sustainability of the SS schemes in oil economies.

(3-2) An Intergeneration Framework in oil Economies: There are some basic qualifications in applying an intergeneration frame as outlined above, to the case of oil economies, Figure 1 provides a schematic presentation of the influence of demographic, resource endowment, public finance and sociopolitical factors, specific to the GCC countries, on the design and sustainability of their SS systems.

First, an important promise of the SS schemes in the GCC countries is to maintain a minimum of social equity based on Islamic values and societal traditions (cf., Hasan 1984). However, the implementing of some of these social objectives seem to have had unexpected effects on the efficacy and sustainability of the SS schemes in the region.(8) For example, the emphasis on traditional gender roles and the maintenance of high fertility led to the introduction of laws that enforce early retirement age for women, especially those with children that resulted in early and longer duration of SS benefits for retired women (Al-Rahmani 1996).

Second, the growth rates of the GCC populations are high and their age structure is young. The population under age 15 exceeds 40 percent in the GCC countries. It is 44 percent in the case of Kuwait. The built-in growth momentum of the labor force and the elderly population is very high, much higher than the expected growth of real output. Significant changes in the size of cohorts could strain both the SS budget and the prevailing social contract even in advanced economies.

Third, the economic structure of oil economies raises a challenge when viewed from an intergeneration perspective. The earnings of the working cohort (P_2) are highly dependent on state employment. More than 90 percent of the Kuwaiti citizens, for example, are employed by the public sector. The finance of that sector depends on a single non-renewable resource, oil for its revenue. Oil revenue has been unstable and declining in real value for the past two decades. The conceptual challenge is how to design and sustain over time a social intergeneration transfer mechanism in a context where the income of the vast majority of the working cohort (P_2) is based on a nonrenewable resource that is highly capital intensive. However, all the GCC economies are yet to develop a competitive and sustainable non-oil production base (Sirageldin and Khorshid 1996, and Sirageldin and Al-Ebraheem 1999). In such circumstances, SS Systems that are apparently balanced in the short- term could be unsustainable in the longer-term.

Finally, with the exception of Kuwait, public debate on vital economic and social programs is highly restricted. Such debate is essential, especially in the design of social programs such as SS schemes that are certain to influence the transfer mechanism among cohorts and accordingly impact the intergeneration social contract.[9] In the case of oil economies, the search for a sustainable intergeneration social contract is an evolving and dynamic process. The design of SS schemes that attempt to balance economic and non-economic objectives requires the participation and consensus of the various groups and cohorts of society.

4- Kuwait SS Program

In this part of the paper we review the Kuwait SS program. Our purpose is to elucidate the effects of demographic, economic and social factors on future sustainability of the program. The Kuwait SS program is one of the oldest state- managed programs in the GCC region. It is also well designed and subject to solid actuarial analysis. First, we present a brief review of the historical evolution of the program, and a profile of its current status. This is followed by an assessment of the sensitivity of the program to demographic forces, and to selected socioeconomic factors.

(4-1) History and Objectives: Kuwait has been one of the early GCC countries to introduce a SS scheme. The present SS system evolved over time in its legal status, coverage, and administrative setting. The first law concerning SS was introduced in 1955 as part of the country's employment law. Initially, the administrative responsibility for the retirement fund was housed in the ministry of finance. It was not until 1960, that the SS law was established as an independent law. It took another fifteen years to establish, in 1976, an independent entity for SS affairs with independent investment fund, The Public Institution for Social Security (PISS). In general, the Kuwaiti SS program is generous in its provisions.

Aid for citizens in old age, in case of sickness or inability to work is guaranteed by the Kuwaiti constitution. Article 11 of the Kuwaiti Constitution also commits the state to provide services of social security, social aid and medical care to all citizens. The Law number 61/1976 that established the P1SS states that: "The Fund is established to ensure against old age, disability, sickness and death for all employees working in the government, private, oil sectors; and members of the parliament" (Kuwait Government, PISS 1997:9).

When the program started, only government employees were eligible for SS benefits. Additional Laws and Ministerial Decrees were introduced in the 1980s to cover military employees, Kuwaitis working in the private sector, self-employed (those with established business), and finally Kuwaitis working outside the country were covered by the program. In the present setup, employees in the government sector and private sector are listed in the PISS budget in one group, military employees in a separate category, and those self-employed in a third category. The P1SS maintains separate funds for these three groups. The government sector is by far the largest employer and accounts for the bulk of the coverage of the SS System.

At present, the retirement age is 65, however public employees can retire earlier after completing 2O years of service conditional on reaching a certain age. For non-married women or married women with no children the minimum retirement age is 45. A new amendment (Law # 56/1995) allows married women with children to retire after 15 years of service with no age limitation. Upon early retirement the retiree gets 65 percent of the last salary, with 2% increase for each additional year of work beyond the 15 years.

Aside from pension entitlements that are given in normal retirement, the program provides other benefits. These benefits are given in cases of forced retirement as a result of serious illness or handicapped acquired during working period. Also in case of death, financial benefits are given to members of the deceased family. Beneficiaries include the wife (or husband if incapable of work) and children (up to the age of 26 years old for sons and up to marriage for daughters). These other benefits are also provided to parents (if dependent), to brothers and sisters (if dependent i.e. not working), and to grandchildren (if dependent e.g., orphans) up to the age of 26 for boys and up to marriage for girls).

(4-2) Demographic forces: In the present analysis, we focus on civilian citizen labor force employed in the public or private sectors. We exclude from the discussion the self-employed and those in the military or police establishments (Defense, Police or National Guard).(10) As Table 1 indicates, of the total Kuwaiti civilian employees, who were covered by SS, ninety five percent are employed in the public sector: 88 percent in the government sector and 7 percent in the oil sector. Only 4.5 percent of insured Kuwaiti citizens were employed in the private sector in that year. That estimate for the private sector is probably an over estimate of present status and future trends. First, the average annual growth rate of Kuwaitis working in the public sector covered by the PISS for the period 1993-1997 is 5.1% and 4.6% in the private sector. Second, the government owns part of the private sector, e.g., holding shares in the banking system.(11) Hence, a percentage of those working in the private sector get the pension contribution from the public budget. Table (1) also indicates that the insured population is relatively young, less than 2 percent are more than 49 years of age. This young age structure of the labor force should have a positive effect on the financial standing of the SS system. This is not necessarily the case in the present set-up of the system in Kuwait, partly because of early retirement especially for women.

- The role of women in the SS scheme requires elaboration because of the provision for their early- retirement. As Table (1) indicates, Kuwaiti women are well represented among the insured civilian labor force, 41 percent of all insured employees are women. This relatively high proportion of insured women underestimates the current trend. Table (2) indicates that among all civilian workers who registered for the first time in PISS more than 50 percent were women and almost 90 percent of them were between 20-30 years old. Most female workers retire early. Latest data available for 1998 indicates that the number of retired women has exceeded that of men for the first time in the history of the SS system in Kuwait.

Table (3) indicates that early retirement is the norm for the Kuwaiti labor force especially for females. Among all pensioners, 38 percent were less than 50 years of age (77 percent for female workers and 24 percent for men). Women aged 30- 49 who get pension are 16 percent of the insured employed females in that age group. That ratio increases to 77 percent for the cohort 40-49. While their relative participation in the labor force is growing fast, female workers enter the labor force relatively later than men and retire much earlier, the duration of their employment and accordingly their SS contribution is relatively short. This phenomenon should not be taken as an indication of improved women status since it is tied to an incentive for large family size (Al- Rahmani 1996a). As a proportion of all insured civilian employees the number of children and widows has been increasing reaching 19 percent in 1997. Such coverage although increasing over time is essential as a social objective.

The early retirement of the Kuwaiti labor force, when combined with increased life expectancy and a high rate of population growth should strain the financial capacity of the program. Demographic change may provide some relief to the system, however. Athough the number of widows, children and other dependants receiving benefit have increased by 17 percent between 1993 and 1997, the number of children covered per widow declined by 13 percent, in the same period, indicating a declining fertility trend.

Demography alone indicates that the young age structure combined with a decline in fertility and an increased labor force participation rates, especially for women, should ease the financial burden of elderly support in the medium term. However, there are critical issues of concern. These issues are economic (sustainability of program revenue) and institutional (retirement age).

(4-3) The Economics of the SS program: From its inception, the operation of PISS was designed such that contributions are shared among employees, employers and the government The main financial sources of P1SS are as follows:

(i) Subscriptions:

a- Five percent deduction from the employees salary.

b-Ten percent of the salary paid by the employer (government or private).

(ii) Government:

Ten percent of the salary contribution is paid by the public budget (government).

Hence the government contributes a total equivalent to 20 percent of its employees' salary towards SS premiums.

(iii) Investment returns of P1SS funds:

The financial structure of the P1SS is based on solid actuarial accounting principles. It is also well diversified. It is a combination of a PAYG and a Capital Reserve (CR) system. Income of the PAYG is derived from employees' wages, contributions by employers, and government budgetary contribution, while that from CR is based on returns from a Capital Reserve fund (CR) that is based on accumulated investment by the P1SS. The diversity of sources of revenue provides strength to the system. It also has some weaknesses.

Data presented in Table (4) indicate that the financial status of the SS system has been sound. The P1SS total revenue exceeded expenditure, every year during the recent past (1992/3 –1996/7), and is expected to do the same in 1997/8. This apparent budget surplus could be misleading however. In all years since 1992/1993, the sum of premium contributions and returns from P1SS investments seem to fall short of spending requirements. It was the government contribution that made the difference. This shortfall is expected in the initial stages of the program. As the program matures however, returns from investment are expected to increase and cover expenditure while premiums add to P1SS investment fund. However, the increase in investment returns has not been necessarily certain. Table (4) indicates that although investment returns have shown an upward trend it fluctuated over time, while expenditure requirements of PISS have been increasing systematically at a faster rate, partly a result of the early retirement phenomenon.

There are two serious concerns regarding the financial viability of the PI SS program. The first is how solid is the government contribution to the system over time. Although the government commitment to the welfare of society is solid, it cannot sustain all its financial obligations without a successful diversification of the economy away from oil especially with the persistent decline in the real price of oil. An indication of such difficulty is the current (1999) sociopolitical debate that is taking place in the Parliament and the Council of Ministers regarding a proposal for the elimination of the government 10 percent contribution to the SS pension program, while increasing employers' contributions to 15 percent, thus reducing the level of retirees pensions.

The second concern is related to the first. In the final analysis, as discussed earlier in the paper all intergeneration programs depend on current output, present needs of the elderly and other dependents are financed by premiums and taxes levied on present income: wages, salaries, interest, and other business income. However, in the case of Kuwait and other GCC economies, almost all the wage bill is derived from public finance that is financed mainly by oil revenue, and not by a sustainable non-oil production base. The government sector, faced by a widening resource gap.(12) will not be able to continue as an employer of last resort for long. The present economic structure of Kuwait and the GCC countries cannot be sustained in the longer term without closing the present resource gap (Al-Ebraheem and Sirageldin, 1999). It is our view that the development of a sustainable non-oil sector with sufficient absorptive capacity to employ the growing labor force is a necessary condition for a viable SS system in Kuwait and the GCC.

(4-4) Social Consequence: The continuation of the present economic structure, that guarantees benefit for the elderly as well as the young, while wages are dependent on public employment and a large part of business income depends on public support, could have serious social and societal consequences. The social logic of intergeneration transfer systems is to develop mutual need and benefit among the three overlapping generations: P_1, P_2, and P_3. The incentive for parents (P_2), aside from parental natural love and care, to develop the young generation (P_1) is partly to maintain own survival when getting old or sick, and partly to maintain the survival of society at large. Children are expected to grow, work and contribute either directly through personal care and transfers, or indirectly through SS and welfare schemes, to parents' wellbeing at old age. It is possible, and there might be signs of negative development, that oil-dependent system of intergeneration transfer may be weakening that important link among the three overlapping generations and accordingly reduce societal cohesiveness.

5- Conclusion and Recommendations

An assessment of SS programs requires a long view and an interdisciplinary perspective. This is the case since these programs deal with the welfare of different generations and the socioeconomic and political forces that enforce the social contract among these overlapping generations. There are two long-term transformations that influence the sustainability of the SS system in Kuwait and in the GCC countries in general. The first is the demographic transition from young to old age structure. The second is the transformation of the economy away from oil.

The young age structure of the Kuwaiti population combined with the onset of fertility decline (13) provide a window of development opportunities. This is the case, since the labor force (P_2) is growing at a fast rate (3.8 percent in 1994 -8), the growth rate of the dependent young (P_1) is declining (3 percent in 1994-8) while, although the older cohorts started to grow fast (5.5 percent), their relative size is small.(14) In this setting, the dependency ratio is relatively low, potential aggregate saving is high, and the potential for improved labor quality through better education is favorable (cf. Sirageldin 1996, and Yousef and Williamson 1998).

However, that window of opportunity is only a potential. The pure positive demographic effect of favorable dependency ratio, enforced by increase in female labor-force participation rates, is indeed present. However, the positive demographic effect on the viability of the SS system is partly cancelled by the high tendency for retirement at young age. As implied in Table 3, in the age group 40 to 49 for every hundred employed females, there are 77 pensioners, and for every 100 employed males there are 39 pensioners. These are high ratios and should strain the financial standing of the system. At that age, females are expected to live additional 20-30 years with full SS benefits. Those who retired at younger ages, mainly women will have years of benefit that is more than double their years of employment. Although more workers are entering the labor force, the early retirement pattern should cause a serious drag on the system.

The demographic window of opportunities for development implies that the labor force will have better quality education and become more productive. In that scenario of favorable dependency ratio and higher saving, workers will have higher wages and business expands with higher revenue and profit. Accordingly, the economy generates higher revenue for the PISS. There are two premises underlying that scenario. The first is that education quality in Kuwait is competitive internationally. Recent studies however, indicate that this is not the case. The second is that the Kuwaiti labor force is productively employed.

Our review indicates that the transformation from an employment pattern that is predominantly public-based towards a sustainable non-oil based economic structure is yet to materialize. This is serious since the built-in growth momentum of the labor force, will guarantee a high rate of growth of labor for many decades to come. The result is a fast rate of labor replacement, i.e., a lower basic education quality transmits into a lower productive workforce at a fast rate. The momentum also implies that the persistence of a high growth rate of the labor force is beyond the present potential capacity of the non-oil sector to create jobs. Furthermore, the inevitable aging of the population implies an increased demand for income transfer from the worker cohort to the older one.

Some of the concerns we raised in this paper, regarding the SS system in Kuwait and the GCC economies are internal to the system, e.g., early retirement laws. These concerns and difficulties could be adjusted in the short term, while taking into consideration the system of societal values. However, more serious structural and longer-term concerns relate to factors beyond the control of the SS system. These include, among others, improving the quality dimension of education, especially at the basic level, resource mobilization for the future aging of the population, and the success of the economic transition towards non-oil based economy.

Our analysis indicates that problems of SS schemes, if any are not only economics. The system of SS is at the heart of the socioeconomic and political system of society. Our review, early in the paper of the three case studies from outside the region, provides some clues for policy directions. Socioeconomic programs including SS schemes could influence individual, family and community expectations not only about sources and patterns of elderly support, but equally about returns to education and work ethics. It could, for example, reduce the tendency for self-help and productivity as the discussion of the case of Turkey illustrates. Any reform should take into consideration these effects. However, governments can take bold decisions to avoid fixture crises to the SS system and could succeed, especially in favorable economic environments (China). In all cases, an open debate and a careful balance among social, political and economic considerations seem necessary, as illustrated by the Unites States extensive debate to reform its SS program.

Tables

Table (1) Insured Civilian Employees by Sector, Age, Gender, and Salary (Mid 1997)

Sector	Age	Gender					
		Males		Females		Total	
		Number	%	Number	%	Number	%
Government	< 30	25,452	40.8	21,050	42.0	46,502	41.3
	30-49	34,531	55.5	28,402	56.6	62,933	56.0
	50 +	2,280	3.7	725	1.4	3,005	1.7
	All	**62,263**	**100.0**	**50,177**	**100.0**	**112,440**	**100.0**
	Salary	**KD656**	--	**KD482**	--	**KD578**	--
Oil	< 30	3,058	35.2	309	66.0	3,367	36.8
	30-49	5,503	63.4	158	33.8	5,661	61.8
	50 +	124	1.4	1	0.2	0,125	1.4
	All	**8,685**	**100.0**	**468**	**100.0**	**9,153**	**100.0**
	Salary	**KD879**	--	**KD628**	--	**KD866**	--
Private	< 30	1,102	28.7	844	42.9	1,948	33.5
	30-49	2,523	65.7	1,077	54.7	3,590	62.0
	50 +	215	5.6	47	2.4	262	4.5
	All	**3,840**	**100.0**	**1,968**	**100.0**	**5,800**	**100.0**
	Salary	**KD776**	--	**KD582**	--	**KD710**	--
Total*	< 30	29,612		22,203		51,815	40.7
	30-49	42,557		29,637		72,194	56.7
	50 +	2,619		773		3,392	2.6
	All	**74,788**	**100.0**	**52.613**	**100.0**	**127,401**	**100.0**
	Salary	**KD688**	--	**KD487**	--	**KD605**	--

Source: Statistical Collection for Social Insurance, Number 25, June 1997. The Public Institution for SS (PISS), in Arabic, various tables.

Note: Salary is basic salary plus social and child allowances in Kuwaiti Dinar (KD = $US 3.4).

* Total does not include about 11.189 (4.942 females) who were insured but not located at the time of publication and do not receive pension payments.

Table (2) First Time Civilians Registered in the PISS by Age and Gender (1-7-1996 to 30-6- 1997)

Age As of 7/96	Gender					
	Males		Females		Total	
	Number	%	Number	%	Number	%
< 20	1,525	33.1	199	4.3	1,724	18.7
20-24	2,297	49.8	3,044	65.8	5,341	57.9
25-29	535	11.6	1,094	23.7	1,629	17.7
30 +	252	5.5	286	6.2	538	5.7
Total	**4,609**	**100.0**	**4,623**	**100.0**	**9,232**	**100.0**

Source: Based on Total 4 in PISS, ibid.

Table (3) Early Retirement for Civilian by Age and Gender (1960-1997)

Age As of July 1, 1996	Number in June 6, 1997					
	Males		Females		Total	
	Insured	Get Pension	Insured	Get Pension	Insured	Get Pension
	(1)	(2)	(1)	(2)	(1)	(2)
< 30	32,560	,048	23,667	,015	56,227	,063
30-39	30,973	,540	25,401	1,612	56,347	2,152
40-49	13,917	5,418	7,416	5,695	21,333	11,113
50-59	2,760	8,554	,940	1,666	3,700	10,220
60 +	735	10,617	,131	,578	856	11,195
Total	**80,945**	**25,177**	**57,555**	**9,566**	**138,463**	**34,743**

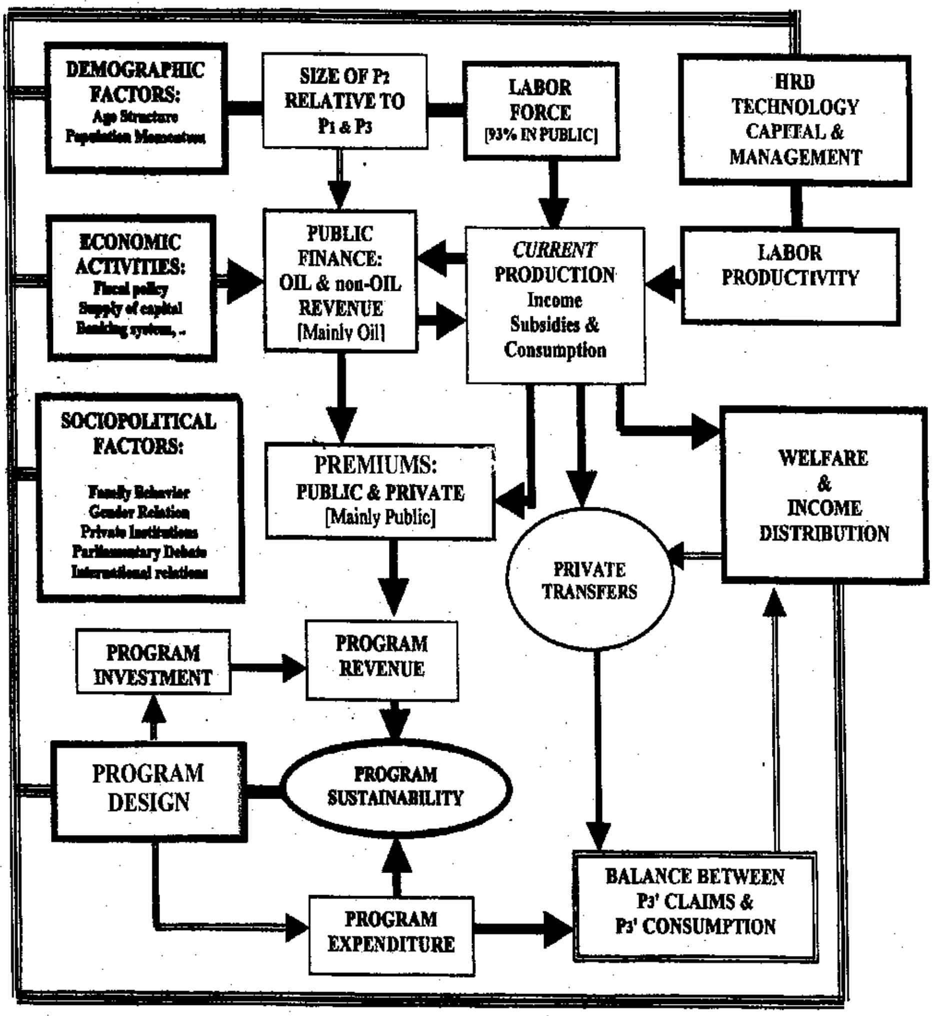
Source: PISS, ibid. Does not include self- employed or non- civilians.

Table (4) Trends in Finance 1992-1997 (Millions KD)

Sources of Revenue & Expenditures	Years				
	1992/3	1993/4	1994/5	1995/6	1996/7
Contributions	187.6	•201.6	213.7	223.8	236.8
Government	192.2	203.5	181.7	181.0	214.9
Inves'nt Returns	105.1	104.9	110.4	153.3	70.8
Other	8.2	14.2	17.9	21.4	21.7
Total Revenue	493.1	524.2	523.7	579.5	544.2
Expenditure	292.1	318.6	342.1	366.2	387.7

Source: PISS, Total 6, ibid.

Figure 1
Schematic Presentation of the SS System in Countries



Notes:

1- The term private has changed meaning over time. Initially, it referred to individual and community initiatives. At present it also includes large corporations that are not community based. This double meaning use of the term "private" confuses the social meaning of the term "privatization". In the discussion of traditional settings, private refers to families and communities, while includes all non-government corporations and organizations in the modern era. The impact of the privatization process, in the common use of the term, on SS will not be examined in this paper.

2- The context of intergeneration transfers, the prisoners' dilemma could be described as follows: If a young person contributed his/ her share of transfer to the old, but did not receive. transfer when old, then he/ she would have been better off without giving the early contribution. On the other hand, if the person were assured of old age transfers, then again he/she would be financially better off without making the early contribution (see Luce and Raiffa (1957: 94] for an early statement). In a small community however, people who do not contribute could be easily punished by the next generation. The system grows as long as it continues to be operationally feasible and provides advantages to all generations.

3- The literature is not clear whether democracy enhanced the introduction of pension schemes. Heclo (quoted in Verbon: 15) for example, observed that in the elections held in Great Britain at the turn of the century social insurance was not part of the programs of the political parties. While in Germany, an authoritarian government at the time, a public pension system was established. However, the late introduction of such schemes in Great Britain can be ascribed to the existence of extensive private insurance schemes some similar to social insurance schemes (Creedy and Disney 1985).

4- At this stage of the discussion, we use the term SS Schemes (SS) and Pension Schemes (PS) interchangeably. The two although similar in their attempt to shift income streams over the life cycle and pool risk are not necessarily identical in their social objectives. SS schemes are usually associated with public social programs that attempt to provide a minimum of income security independent of earning capacity. The PS on the other hand are usually linked to individual earning history. This issue is discussed later in the paper.

5- To facilitate the discussion we define the two main methods of financing public pension schemes, namely finance by a capital reserve (abbreviated as CR) and finance by a Pay- As-You- Go (abbreviated as PAYG) as follows: The CR scheme is a system where individuals (or generations) save for their own retirement. The (average) rate of return on the premium paid in this system equals the real rate of interest. Most public pension schemes however, are financed by PAYG system. In this system current pension payments are financed by current premium payments. In contrast to CR system intergeneration transfers occur in this system.

6- For more details on the Turkish Pension program the reader may refer to Gillion and Cichon (1996), ILO (1996) or Sayan, Kiraci and Ozgur (1998), and references cited there in our reference to Sayan and Kenc (1998) in the present brief review is representative, however.

7- The brief discussion in the test of intergeneration transfers although verbal is based on a complex overlapping generation model. It is a model of a lifetime utility maximization of the planner. It includes the lifetime-based consumption utility of the planner, in this case those in the working age (P_2), and those of dependents, the young (P_1) and the old (P_3). C refers to consumption needs of generation i, and refers to a generation preference weight. The Planner Utility function is as follows:

$$MAX = U_2 [\ \alpha 1u(C1), \alpha 2u(C2), \alpha 3u(C3)],$$

Subject to a preference and a lifetime budget constraint. The latter includes expectations about income from children among all other sources. For details of the model and application to the case of China, see Wang (1997). Willis (1988), although highly abstract, is one of the most comprehensive statements of the overlapping generation model.

8- How to sustain a viable economic base for the demands of traditions is a more universal question. For example, in a recent study by Eli Berman of Boston University (quoted in Business Week, March 22, 1999: 30), ultra-Orthodox (Fundamental) Jewish sects, although less than 5 percent of the Israeli population were able to secure benefits and social rights that cannot be sustained for long. The sects are given generous child allowances that increase by number of children, lower taxes, lower health insurance premiums, and public subsidies for religious studies that are independent of age. The result is that the sects' fertility surged to 7.5 children per woman, the proportion attending full-time religious studies, between the ages 25-54 increased from 41 to 60 percent between 1980 and 1997, and a mere 18 percent of their income is earned. The situation is unsustainable. It may bankrupt Israel welfare system in a generation, argues Berman.

9- The political dynamics of SS and Pension schemes have been discussed earlier in the paper. See the contributions cited by Verbon (1988) and Williamson and Pampel (1993).

10- In 1997, there were 11,103(8,981 females) insured citizens who were self employed. The data presented in this part is based on PISS (1977) except otherwise indicated.

11- At present, Kuwait is considering an extensive privatization program. It is not evident how a privatization program may benefit the SS system in the absence of a viable non-oil production sector. That issue is not examined in the present paper. For a discussion, see Al-Ebraheem and Sirageldin (1999).

12- The resource gap is defined as the difference between government revenue from taxes and dues levied on non-oil production and its revenue from oil. For details, see Al-Ebraheem and Sirageldin (forthcoming 1999).

13- Our discussion and analysis in the present paper refer only to Kuwait citizen. It excludes expatriates.

14- Growth rates are estimated based on data from Public Authority for Civil Information (1998 : 17 and 1994 17).

References:

Akerlof G., 1980. A Theory of Social Custom, of which Unemployment may be one Consequence, Quarterly Journal of Economics, 44: 749- 775.

Al-Ebraheem, Y and L Sirageldin, 1999. "Budget Deficit, Resource Gap and Development in Oil Economics," in Population and Development in the Middle East and North Africa: Challenges for the 21st Century, Forthcoming: ERE publication.

Al-Rahmani, E., 1996. "The Impact of Traditional Domestic Sexual Division of Labor on Women's Status: The Case of Kuwait," in Sirageldin and Al-Rahmani (Eds. 1996: 79-102).

----------, 1996a "Population Policy, Fertility, and Women's Status: The Case of Kuwait, Arab Economic Journal, no. 6, 1966: 52-89.

Arthur, W. B., 1988. "Introduction to Part II," in Lee, Arthur and Rodgers (Eds. 1988: 89-91).

Booth, P., 1973. Social Security in America Policy Paper in Human Resources and Industrial Relations 19, Ann Arbor: The University of Michigan - Wayne State University.

Bulatao, R. and F. Arnold, 1077. Relationships between the Value and Cost of Children and Fertility: Cross-Cultural Evidence, Honolulu: East-West Population Institute.

Creedy, J. and R. S. and Disney, 1985. Social Insurance in Transition, Oxford: Clarendon Press.

Denton, F. and B. Spencer, 1988. "Endogenous versus Exogenous Fertility: What Difference for the Macroeconomy," in Lee, Arthur and Rodgers (Eds. 1988), 183-215.

ERF, 1998. Economic Trends in the MENA Region. Cairo, Egypt: The Economic research Forum for the Arab countries, Iran and Turkey.

Fauri, F., 1973. Forward, in," Boot (1973).

Gillion, C., and M, Cichon, 1996. "Pension reform in Turkey" Hazine Dergisi, Special Issue on SS and Health Insurance Reform: 40-56.

Hasan, N., 1984. Social Security of Islam with Special Reference to Zakah, Jeddah, and Saudi Arabia: International Center for Research in Islamic Economics, King Ahdulaziz University.

Heclo, H, 1974. Modern Social Policies in Britain and Sweden, New Haven: Yale University Press.

ILO. 1996. SS and Health Insurance Reform Project: Final Report. Geneva: ILO.

Keyfitz, N., 1988. Some Demographic Properties of Transfer Schemes: How to Achieve Equity between the Generations, in Lee, Arthur and Rodgers (Eds. 1988), 92-105.

Kuwait Public Institution for Social Security, 1997. Statistical Data for Social Insurance (In Arabic), Kuwait: Public Social Insurance Corporation..

Kuwait Government, 1997. Social Security Laws in Kuwait; in Arabic, Kuwait PISS.

Lee, R. D., W. B. Arthur and G. Rodgers (Eds.), 1988. Economics of Changing Age Distribution in Developed Countries, New York - London: Oxford University Press.

Luce, R. and H. Raiffa, 1957. Games and Decisions, New York: Wiley.

Munnell, A. H., 1977. The Future of Social Security, Washington D.C.: The Brookings Institution.

Russell, B., 1934. Freedom versus Organization 1814-1914, New York: W.W. Norton.

Public Authority For Civil Information, 1994. Population and Labor Force, no.5, July. Kuwait: Government of Kuwait.

----------,1998. Population and labor Force, no.4, July. Kuwait: Government of Kuwait.

Samuelson, P., 1958. "An Exact Consumption Loan Model with Interest with or without the Social Contrivance of Money," Journal of Political Economy, 66,467-82.

Sayan, S. and T. Kenc, 1998. "Long- term Consequences of Rehabilitating a Financially Troubled Pension System: An Overlapping Generations, General Equilibrium Analysis for Turkey," paper presented at the 5th Annual Conference of the ERF held in Gammath, Tunisia, August 31 through September 2, 1998.

Sayan S., A. Kiraci and S. Ozgur, 1998. "Identification of Policy Options for Rehabilitating a Policy managed Pay – As- You- Go Based Pension System: An Optimization Analysis for Turkey," Unpublished Research Report Ankara: Bilkent University.

Sirageldin, I. with the assistance of R. Al- Khalid, 1996. The Challenges of Globalization and Human Resource Development in the Arab World: Myth and Reality, Plenary Paper presented at the Cairo Arab Regional Conference on "Population and Development in the Arab Countries" Liege, Belgium: IUSSP.

Sirrgeldin, I. and E. Al-Rahmani, (Eds.), 1996. Population and Development Transformations in the Arab World, Greenwich, Connecticut: JAI Press Inc.

Sirageldin, I. and M. Khorshid, 1996. "Human Resource Development and the Structure of Oil Economies: Critical Issues with Illustration from Kuwait," in Sirageldin and Al-Rahmani (Eds 1996:49-78).

Tinbergen, J., 1981. 'The Issues," in N. Sherbiny, (Ed.) Manpower Planning in the Oil Countries, Supplement, Research in Human Capital and Development, Greenwich, Connecticut:
JAI Press: 3-20.

Tyson, L, 1999. "SS: Clinton Plan is Right on the Money," in Economic Viewpoint, Business Week, February 15: 22.

Verbon, H, 1988. The Evolution of Public Pension Schemes, Berlin Heidelberg - New York: Springer-Verlag.
Wang, P.,. 1997. Women Expectations of Elderly Support from Children in Rural China, unpublished Ph.D. Thesis, Baltimore: The Johns Hopkins University.

Wilenskey, H. and C. Lebeaux, 1985. Industrial Society and Social Welfare, New York: The Free Press (1st ed., 1965).

Williamson, J.B. and F. C. Pampel, 1993. Old-Age Security in Comparative Perspective, NY: Oxford University Press.

Willis, R., 1988. "Life Cycles, Institutions, and Population Growth: A Theory of the Equilibrium Rate of Interest in an Overlapping Generations Model," in Lee, Arthur and Rodgers (Eds. 1988),
106-138.

Yousef, T. and J. Williamson, 1998. Demographic Transition and Economic Performance in the Middle East .and North Africa," paper presented in the ERF Conference on Population: Challenges in the Middle East and North Africa: Towards the 21st Century, Cairo, November '98.

Zhao, X., 1989. "Basic Social and Economic Foundation of Supporting System for Old Women in Rural China: Case study in two villages," paper presented at the Population Association of America, Toronto, Canada.