

General Introduction

According to the International Social Security Association (ISSA) estimations, only about 50 percent of the world population are partially covered by some form of social security and only about 20 percent enjoy adequate social security benefits. This low coverage rate of social security indicates to the international difficulty to cope with poverty alleviation and to improve the living standards for large ratio of the global population.

The most important issue related to pension system administration has been continuous pension reforms and how to apply an efficient pension system structure in order to cope with the environment changes such as political, economic and demographic factors.

However, these reforms have been developed differently in many societies depending on the environmental factors and the available resources, resulting in various experiences and success stories in many countries. While, many others still unable to develop their systems to guarantee the minimum social security benefits that were recognized as basic human rights upon the international standards and the related conventions of International Labor Organization (ILO) and the United Nations (UN).

In this context, ILO discussion report concluded that all social security systems in all countries face some kinds of challenges related to coverage, finance, and/ or adequacy. The nature of these challenges are usually complicated and dynamic because of its interrelation with each other and its development alongside with the development of the society. As a result, each country or society has its special case in development pace and experience that may generate new challenges to its social security systems. Thus, in order to cope with the challenges of implementing social security systems, a reform process to pension systems is inevitable.

Since the establishment of Palestinian Authority (PA) in 1994, the high poverty rate among Palestinians living in West Bank and Gaza Strip (WB&G) has been one of the highest concerns on the agenda of the policy makers and the international community due to its significance to any development plan and stability in the region. Nevertheless, the reality of high poverty rate in Palestine needs an urgent action from the policy makers to protect the vulnerable groups on both short and long terms. In this regard, the average poverty rate in Palestine according to the real consumption reached about 25.8%, while the poverty rate among old aged was 22.2% as in 2011. The data show that the highest poverty rate was among children at 27.2%, and female headed families are poorer compared to those headed by males. Given that the old age population living

alone were 9% of the total old-age population in average; 14.2% for females compared to only 2.3% for males, which indicates that a large ratio of the old-age population lives alone and females are more exposed to risks.

In order to achieve a sustainable development, protection of the vulnerable groups from the potential risks, particularly the poverty, is part of the peace elements that keep security and stability in the society. However, PA inherited scattered public pension systems with limited pension coverage to the employees of public sector only. As a result, these pension systems lack the efficiency and sustainability. Furthermore, the 2005 pension reform that was a result of many efforts and attempts to reform the pension system in cooperation with some important international institutions, faced many challenges and barriers to extend coverage over the private sector.

Therefore, the government worked to establish a comprehensive social security system by forming the National Social Security Committee in February 2012. The committee included representatives of the government, employers from the private sector, employees represented by labor and some other professional unions, and some experts with academic, legal, human rights, and economic backgrounds. Further, the committee got technical support from ILO and international experts in this field.

As a result of the works of the committee, the government approved the social security law (SSL) of 2016, which faced strong protests and debates before adding some modifications to the final version. After the failure of the 2005 reform of the public pension system to extend the coverage to include the private sector and other non-governmental organizations, publishing SSL of 2016 is considered as a new turning-point in the history of the Palestinian social security system to protect the majority of the Palestinian labor force, particularly those working in private sector. However, there are many serious challenges and obstacles face the implementation of the proposed social security system to the private sector in Palestine.

Increasing poverty rate among Palestinians in WB&G and those living in Palestinian camps of refugees in some Arab countries have raised the questions about the reasons behind this trend and how to eliminate the poverty in Palestine. These questions meet with wider and more comprehensive projects, the first is the international efforts to end poverty around the world through some international institutions as the UN, ILO, OECD, and the World Bank. The second project is the national project to establish the Palestinian national institutions that enhances

declaring the independent Palestinian State, as part of the liberation project under Oslo peace agreement and other efforts to reach a final peace agreement in the region.

Since the establishment of the Palestinian Authority under Oslo peace agreement in 1993, there have been efforts to reduce the poverty rate and build the Palestinian national institutions; however, the development was highly related to the peace negotiations process. After the second Intifada in 2001, there was a stagnancy in the peace process, which was reflected in the security measures and deterioration in political and economic situation. There were more restriction measures from the Israeli side on the permissions to cross Israel or traveling abroad and trading. Given that the Palestinian labor force working in Israel was estimated at about 130,000 employees, which formed about 20% of the total labor force in WB&G, there was a high drop in the issued permissions at about the half, particularly from Gaza Strip. Further, the Palestinian industry has collapsed leaving many other employees to lose their jobs in the local market because many factories and enterprises were destroyed. Since the Intifada, the Palestinian factories has been targeted by Israeli army through military confronts or simply closed due to the lack of raw or needed materials for manufacturing and maintenance, or difficulty of marketing the products abroad and sometimes even in Palestinian cities. These marketing difficulties refer to the Israeli restrictions on movement of persons and goods or to higher costs compared to imported and Israeli products in the Palestinian market. Off course, the direct result was one of the highest records of unemployment rate in the world was recorded in Gaza Strip that was estimated at about 39%. Thus, this indirectly created a gap between Gaza Strip and West Bank regarding life quality, living standards, and poverty rates. Given that there is need to cross Israel to travel from Gaza Strip to West Bank or vice versa, and Israel controls all borders of West Bank and Gaza Strip with both Jordan and Egypt, respectively. The Palestinian financial situation has been weak since the second Intifada in 2001, in which the public budget has been highly depending on the foreign aids to meet the deficit of public budget, provided that the budget deficit was only 1.5% of GDP in 1997 and was balanced in 1999. Then, it recorded a peak at 24.5% of GDP in 2007 and decreased gradually to 12.1% in 2014. On the other hand, the external foreign support formed about 28.06% of the public budget that reached about 4,431 thousand US dollar in 2014. The donor states aimed to support the peace process in the region; however, these efforts were not well-organized to target long-term development objectives, rather it was highly fluctuating with the development of the peace process and the

economic situation of each donor state and its relation to the Palestinian Authority or other charity association.

Historical data from 2004 to 2008 shows that although the per-capita foreign aids almost doubled from \$323 USD to \$685.5 USD, the poverty rate was increased from 25.4% to 26.1%, which means it had low or no impact on reducing poverty.

The Palestinian Authority could not organize these assistance transfers well because of two main reasons. The first is the fluctuation of the amount of these assistance programs made them unreliable. The second is that this assistance was not integrated to the public budget, instead there were many channels to transfer these assistance programs through NGOs and associations, which made these assistance programs unorganized, abused, or with no clear target towards development. Instead, in the best cases they almost were directed to urgent relief and some training programs.

As a result, the foreign assistance and public budget were directed more and more to urgent relief programs, besides the highly increasing education and health-care demands due to high fertility rate, given that there is high young dependency ratio at 72.78% for those aged 0-14 years old. There have been caveats regarding the public expenses and inadequacy of public revenues to cover these basic needs, which mean less allocation for development expenses and less development opportunity.

In this regard, we notice that the public budget allocation of 2015 was more directed to social sector and security expenses at 43.9% and 30.7%, respectively, compared to infrastructure and economic expenses at 8.5% and 7.1%, respectively. Off course, this priority of allocation reflects the policy of the government and the impact of foreign aids as well. Given that the foreign aids target the social sector with the highest allocation at 40.8% of the total assistance programs, followed by capacity building programs for public institutions at 21%. On the other hand, the productive sectors did not receive more than 6% of the total assistance programs.

This situation of increasing expenses of the public budget for social sector and high dependency on foreign assistance leads to lack efficient usage of the available resources and a sustainable development program, which exposes the majority of the population to deep poverty in any case of shortage in foreign assistance to the public budget or having unexpected sharp increase in the public expenses. There should be a balanced budget for social sector to relief poor people with an efficient social security system; at the same time, contribute to a sustainable development program

for the national economy, taking into consideration the scarcity of resources and the variability of foreign aids.

Furthermore, the changing family structure to more nuclear one exposes the old age population to more risks and leaves them without a proper care, which means there would be new caveats for old age population with these demographic changes and more female participation to labor force. In this regard, we found that old age population has less opportunities to manage financial shortage compared to those in working-age groups, in addition to the fact that old age population have special needs and care concerns.

The current public pension systems are limited to benefits of old-age, total disability, and survivors for public servants only in addition to very small rate of NGOs that were allowed to join the system recently. While, the labor law may guarantee compensation at the end of service for employees in the formal private sector paid by the employers. In this regard, some large enterprises may create and administer provident funds or saving accounts to be able to pay these compensations and may offer other benefits as lending; however, the majority of employees lack these benefits in the Palestinian labor market.

Indeed, other benefits as maternity, work injuries, disability, unemployment, and health-care are needed for the employees in Palestine according to the international standards. Legally, the existing labor and social security laws introduce some of them for certain groups that are working in formal sector. However, the compliance is low because of the high informal sector rate; besides, the employers cannot pay the extra costs due to political and economic instability, or they simply refuse to pay for social security expenses as there is no measures to enforce them. Further, the Palestinian employees have different regulations depending on the employment status, work place or size, which means unequal opportunities and injustice among different categories. In addition, there is a real challenge in the quality of the provided services, particularly in the health-care and social assistance programs. Although coverage rate of the existing health-care insurance is comparatively high, but the quality of services is not accepted. Thus, part of critical cases are transferred abroad for medical treatment with full coverage of expenses and the rest face the sickness with a hope to have the opportunity of transfer or take a risk of the available medical treatment. Therefore, the health-care insurance system suffers from a financial imbalance due to high expenses on medical treatment abroad as patients do not trust the local health-care services

or simply the service is not available. Moreover, other employees from informal labor or poor people are not insured and remain without health-care services.

On the other hand, the social assistance programs are administered by several institutions, which lack of efficient exchange of data and some of them are limited to certain local population. This situation results in inefficient and unfair distribution of the resources and more expenses on administrative issues. Meanwhile, the social security programs are almost unsustainable and some of them have unreliable financing resources. Thus, there is a need for a sustainable and comprehensive social security system that can provide protection for the Palestinian residents from poverty and enhance living standards according to the international standards of social security.

Given that the current majority of demographic structure is a young population as about half of the Palestinian population are under the age of 20 years old, a sharp increase in labor force is expected in the near future. This advantage of young population would not last long as the fertility rate has been decreasing. Therefore, there should be a strategic plan to employ these generations and reform the social security system to be financially balanced before losing this advantage of high demographic dividend, after which the pension reform would be harder and more costly.

However, there are two main challenges:

The first challenge is to create job opportunities for these young generations through attracting foreign investments and encourage local savings and investments, whereas the political stability is important to realize these targets. At the same time, on the short-term there is a need to help labor force finding job opportunities abroad, which is preferred to be regulated to guarantee a pension at old age. Otherwise, some kinds of unemployment or relief programs are the inevitable choice for the government to prevent a disaster.

The second challenge is to reform the current social security system to guarantee the sustainability of the system and adequacy of income on the long-term. In the Palestinian case, high unemployment rate with low-income majority of labor force would create old-age generations with inadequate income as the career period would be shorter and the saving opportunity would be lower. Thus, the majority of labor force would not have adequate income at their old age and their dependents would not be able to meet their basic expenses on education and health-care. As a result, the poverty cycle would be the dominant feature on the majority of the society for longer time and any social security reform would be much more costly. Nonetheless, creating job

opportunities for the current labor force, and encouraging savings would reduce the poverty rate in the short and long terms. The current high demographic dividends in Palestine is considered as advantage that should be employed for a development opportunity through more investments to create job opportunities and increase the real production and income, which would better support any proposed comprehensive social security system as it would definitely produce a good opportunity to create surplus in the funds of social security.

In fact, introducing a comprehensive social security system would provide various insurance for the above mentioned benefits for affordable contributions, and it would also reduce the burden on the employers and the employees from extra costs of treatment and guarantee an adequate income in case of ending service because of disability or death. Further, it would protect vulnerable groups of the population from poverty and unreliable relief programs that highly depend on the foreign assistance to the public budget and some NGOs. In other words, without sustainable and efficient social security system, the relief programs would need a continuously increasing costs a long side the increase in poor population, while the public budget would not be able to cover these costs and the foreign assistance would not last forever and one day it would stop or be reduced to the minimum for any reason. Then, the vulnerable groups would be in deep poverty and hard to avoid catastrophic disaster. Therefore, the development of modern societies should go side by side in all fields, including education, health-care, housing and infrastructure, productive fields of agriculture and manufacturing, and social security programs. In modern societies, the state should have an essential role in organizing and finding the means to realize these issues.

Supporting health-care, education, and urgent relief programs are important as they are essential for any society; however, supporting them alone is not enough. Having reliable, efficient and sustainable social security program with a sustainable development plan have the same priority and importance for the development of all sectors and equity and equality of life standards. The development is a comprehensive process that any society should integrate in and at all stages of development. Otherwise, the poverty would increase and more expenses on relief programs would be needed. The lack of development and production would create a gap in income in the society and shortage in the public budget that would leave some sectors of the public budget without enough resources to cover the expenses as the current case of Palestine. The other way around,

more development would increase the opportunity of production that would support other sectors in the economy and reduce poverty in the future.

Upon an analysis of the data of the poverty survey of 2003, we concluded that the absence of modern and dynamic social security systems in Palestine has forced the Palestinian families to seek alternative solutions for their housing, educational level, healthcare, and retirement future needs. We also found that Palestinians have depended mainly on personal savings and family resources to keep their financial stability and meet their needs; however, these kinds of mechanisms make little contribution to capital accumulation for investment and economic growth in Palestine.

A social security system reform was an inevitable choice in any proposed pension system to extend coverage by including more groups of the society and introduce more benefits. Further, following the international standards of social security as a framework for any proposed pension system would have the reliability and compliance rewards to the system, which would with no doubt lead to successful experience. However, the privacy of the Palestinian case may impose to add or suspend some benefits to fit the most optimal choice of an applicable pension system.

This research aims firstly, to analyze the current pension systems including; development, trends and challenges with focus on exploring the most proper applicable pension system for Palestinians. Secondly, to discuss pension reform options in order to protect people from poverty and enhance the economic growth, taking into consideration the Palestinian privacy in terms of political, economic, demographic and social factors.

Our research is organized in five interrelated chapters that focuses the discussion on various topics, in order to answer the research questions and achieve the objectives. Chapter one explains the objectives and methodology of the research, introduces and reviews the demographic, economic, and political factors in the Palestinian society compared to other figures of selected countries from the region and the world.

Chapter two reviews the literature of the social security and pension systems including a review to the concepts and definitions, main principles, objectives, development, and the typology. Moreover, it discusses the main common challenges on the international and regional levels of the pension systems and the latest trends that determine the options of the pension reform as a response to the needs for that reform. It ends up with an analytical comparative review for the social security systems of three regional countries that believed to have common features, conditions, or

interrelation with the Palestinian case. The chosen cases are Jordan, Iraq, and Israel, in which the comparative analysis included the structure and financing mechanism, adequacy of pensions and income redistribution policies, family support and females concerns, and unemployment insurance.

Chapter three spots the light on the Palestinian social security benefits and coverage with focus on pension system. Thus, it starts with a review of the legal framework of social security in Palestine, in which we prove that a social security is a right according to the Palestinian basic law and its compliance to the international law in this regard. Further, Palestine has signed a number of international agreements of UN and ILO that define and guarantee the rights of labor in accordance with the international standards. It shows also the complexity of the legal structure in Palestine as there are many applied inherited laws from different governing entities that have been developed alongside the recent historical and political development of Palestine. Then, it reviews the details of the public compared to private pension schemes that explain and compare the applied pension systems in Palestine and highlight the particular challenges. That is followed by review of both social assistance programs and health-care system. Then, an analysis was performed on the coverage rate of each system according to socio-economic characteristics of households. The chapter tried to cover the social security systems in Palestine in details to be as reference for this period regarding pension systems, social assistance programs, as well as the health-care system. In each section of social security, the reviewed data covered their types, financial resources, coverage, and challenges. The chapter ends up with an analysis of the households' behavior to manage the shortage in financial resources. The analysis in this chapter depended mainly on the data of two surveys, the "The Poverty Survey of 2003" and "The Palestinian Expenditure and Consumption Survey for 2011".

Our results confirm the importance of the social assistance programs to improve the living standards for very poor population, but they still inadequate, limited, and unsustainable. These problems are depending on the degree of stability, the data transfer and cooperation level among many working institutions in this field, financing sources that are almost from foreign countries, and the kind of assistance. Regarding the health-care, the review shows that there is a high burden on this sector as there is instability. It highly depends on foreign assistance to cover its expenses and medicine. The development of this sector needs a lot, and the expenses are highly increasing as the population is highly increasing alongside the available conflict. The coverage of health-care

is very high among the Palestinian population in all income levels. However, the quality of health-care is unaccepted, given that there is a shortage in some kinds of medicine, tools, and expertise, besides the overload on the health-care system due to the available semi-daily conflict and clashes as a result of occupation. Thus, a reform to the health-care is on the agenda of the government, but we agree with the recommendation of the related national committee to remain separated from other social security systems. At the end, the analysis revealed the behavior of labor for financial stability, which was different at most according to income level and stability, in addition to some personal and social characteristics.

While, chapter four aims to highlight the problem of low coverage of pension systems in Palestine and to review the internal and external barriers from extending coverage of the public pension system over the private sector in order to take them in consideration in any pension system reform. Thus, the chapter started with a review to the current public pension systems determining the access rate of the population and the financial sustainability, followed by a review to the 2005 pension reform and its unrealized objectives.

This would give an explanation to the current low access rate to the pension system and determine the remaining objectives that were not realized. As we also discussed through the chapter the internal and external barriers to apply the 2005 pension reform over the private sector, we found that the public budget deficit is one of the most important external barriers as only part of the contributions is transferred from the Ministry of Finance (MoF) as the main employer. While, the majority of due contributions are recorded as arrears with no clear promise to pay them.

Given that the high rate of informal sector is one of the most important challenges of extending coverage, instable economic performance and the weak financial and insurance sector are among the most important external barriers to apply the 2005 pension reform over private sector and improving an efficient social security system. Further, the need for capacity building of the pension institution to administer new multi-pillar schemes was also important barrier, given that more IT programming and reporting systems were essential as enhancing accuracy of data and increasing storage capacity are also needed to store and recall the detailed data of individuals.

On the other hand, one of the most important internal barriers of the pension reform is unsustainability of the system. There were raising caveats towards the sustainability of the system that could be corrupted from the expensive slow transition to the new rules, early retirement policy of the government towards public servants, large-scale survivors, and government incapacity

towards compliance regarding contributions. Further, among the most important internal barriers that were discussed are the high contributions rate and incompliance, in addition to the inconsistency of the current pension system with the private sector and some of the international standards.

In this regard, being under occupation for more than 60 years with very high restrictions that impact daily life of the majority of the Palestinians and the Israeli control over more than 65% of the Palestinian land of the 1976 borders that is supposed to be the State of Palestine upon the resolutions of the United Nations, definitely occupation would be the main reason for the deteriorating economic situation and the lack of sustainable development plan, which was confirmed in reports of international institutions as the United Nations, the World Bank, and ILO. As a result, the affordability of the employers to pay more expenses for contributions of a social security system is very low and the saving ability of the employees is limited to very small groups of the population. Further, the deficit of the public budget and its high reliance on the foreign assistance make the public budget allocation directed almost to relief and basic services programs, neglecting the development sectors, which are important for improving production and income.

Then, we reviewed the most important proposed pension systems over about the last three decades since the establishment of the Palestinian Authority over the period from 1994 to 2015, in which we concluded that the pension reform has a national priority concern. However, all proposed systems depended on having improvement in the political and economic situations, and almost directed to introduce a fully funded defined contributions system in multi-pillar systems. The proposed systems were unrealistic or overoptimistic in a fast changing environment, weak and highly volatile economic situation, and a complicated political structure, which reflected in the public policy to concentrate on the relief programs in order to deal with consequence crises instead of development programs. Therefore, all proposed pension systems failed in introducing a proper one that could be accepted by the policy makers as they ignored the most important problems of high poverty rate, large informal sector, and high unemployment with low labor participation of females.

Up to date, the most accepted laws were the Public Pension Law in 2005 that was developed in cooperation with the World Bank, and later the Social Security Law of 2016 that was developed mainly in cooperation with the ILO. The first has introduced a multi-pillar system that guarantees a universal basic pension at the first tier for all old aged poor population; however, it was applied

only on public servant retirees that are illegible for a pension, excluding other old age categories. Further, there were many obstacles in applying the other two tiers of the system as they are improper for private sector and lack to many benefits as unemployment. The second law has introduced a comprehensive social security system as mandatory with many benefits for more categories and more proper conditions for the private sector; however, it still ignores the universal basic pension for poor old aged population and postpones many benefits as unemployment insurance and leaves its application up to the conditions. The law has many critics regarding the contributions rates and some benefits conditions, and still have administrative barriers as a new institution would be established for that purpose. Furthermore, there are concerns regarding the ability to apply the law in Gaza Strip as there is still a political division that led to Hamas control over Gaza Strip.

Further, we reviewed the taken measures to protect old age population from poverty. In the chapter, we also conducted an empirical study that performs an econometric analysis to the data of “Labor Force Survey” (LFS) of 2014 to find the personal characteristics of the households in relation to their probability to participate to a pension system in Palestine, which is important to provide a strategy of choice to extend coverage. The used model is a binary model in order to explain the determinants of participation to a pension system in Palestine. We used the database of the annual results of (LFS) of 2014 that was developed by Palestinian Central Bureau of Statistics (PCBS) to collect specified data of the individuals from a representative sample of the population in WB&G. The analysis aims to determine the independent variables as explanatory ones to the status of participating to a pension system or not as a dependent variable. The independent variables include demographic, socio-economic, and regional characteristics of the members of the households of the population. The reached model that best describes this relationship, can predict the probability of the behavior to participate to a pension system of each cohort according to the individual characteristics. We reviewed data and prepared the needed discrete variables to a binary format. Before performing probit regression on STATA, we dropped the observations of public sector employees as their pension coverage has been mandatory. In this study, the model is estimated for maximum likelihood as a series of probit models for individuals to analyze the binominal response variables. Explaining the results depends on the coefficients of the variables that represent the change in the probability of participation to a pension system.

In order to identify the significance of each variable to understand the decision of participation to a pension system, the explanatory variables were grouped in three categories; social and personals, labor market, and regional variables, where each group was added to the model in cumulative manner, ending up with the complete model of all related and statistically significant variables.

The data indicates that the majority of the Palestinians working in private sector lack the coverage of any kind of pension benefits, given that only 47.95% enjoy with some kind of benefits. Although most of socio-economic characteristics show some relation to the pension coverage, only some of them have strong relation. The characteristics that have more probability to participate to a pension system are having a pensioner at the same household, being over the poverty line, income level, work days, working in enterprise registered in tax administration, working in enterprise with over 20 employees, the paid employees are more than six employees in the enterprise, affiliated to unions, having a contract, worked months at the same job, working in commerce-hotels and services industries, working in UNRWA or in non-profit organization, working in Israel, and living in West Bank. While, the characteristics that have less probability to contribute a pension system are living in rural areas, being a son or daughter in the household, working at occupation of proficient clerks, and irregular employees in private sector.

Thus, there are some recommendations depending on the results of the analysis that may contribute to extending pension coverage. The study recommends to extend coverage upon the decision strategy choice of enrollment in pension systems considering the individual characteristics that would facilitate targeting new groups. As the ratio of informal sector is high in Palestine, it is recommended to enable voluntary contribution to any proposed social security system, which would enable vulnerable groups in the informal sector and other categories of the employees including those working in Israel, abroad, and self-employed. In addition, there should be a social protection scheme that provides a basic salary for old age population. Depending on the given data and the detailed discussions in the first four chapters, other points were proposed in a pension system that is believed to be a proper for the private sector in the Palestinian case.

Finally, chapter five aims is to test an alternative proposed pension system. We analyze in this chapter the impact of different policies of contribution rate cases in different unemployment scenarios.

It starts with discussing the guidelines for an optimal alternative proposed pension system in Palestine in the light of the previous studies, literature review, available risks, and the sustainability of the current public pension system. According to the literature review, a comprehensive social security system should cover the risks that lead to poverty, which were determined upon the availability of benefits of social security compared to the international standards and living conditions.

The model used to perform an analysis for the sustainability of a pension system is the PROST model that is developed and used by the World Bank. The main source of the used data for the model was the raw data of Labor Force Survey (LFS) of 2015 that was acquired from the Palestinian Central Bureau of Statistics (PCBS) as it represents the total population with many details of labor force and household socio-economic characteristics that would help in determining more accurate results. Further, other Demographic and macro-economic data were acquired from United Nations data and PCBS as well. The data was classified and analyzed by gender, age, sector of employment and other labor and socio-economic characteristics.

Upon the concluded results, the proposed pension system should provide a flexible safety net for the most vulnerable groups, particularly, women, old age population, informal labor, and unemployed labor force. The flexible pension system in Palestine is essential to deal with the variety of objectives, vulnerability of conditions, and respond to the heterogeneity of individuals. Thus, the alternative proposed pension system is a mandatory multi-pillar system that can deal with several problems and offer flexibility. Further, it is supposed to open the participation opportunity voluntarily for informal employees and other uncovered categories. Each pillar was discussed separately to determine the needs for the scheme and clarify the challenges and problems. The proposed parametric determinants of contributions and benefits take into consideration the currently applied pension systems, particularly those in the last SSL of 2016 as they were a result of long negotiations with the related parties. At the same time, different contribution rates were tested in several scenarios of unemployment to explore the impact of each of them, which would help to reach an optimal choice regarding the financial sustainability of the system and income adequacy in each unemployment scenario. Other parametric determinants were defined according to the demographic and economic projections.

The study concludes that urgent actions are needed for pension reform with a priority to protect the old-age and vulnerable groups, taking into consideration the demographic, economic and political factors. The demographic projections reveals that there are changing trends to decrease the fertility rate and increasing life expectancy, which would change the demographic structure. Thus, the current advantage of high demographic dividends in the demographic structure would be lost according to the projected change in the demographic structure. The early valuation of this advantage is important to accumulate reserve of pension fund for the future projected increase in expenses on social security. Otherwise, the expenses on social security would increase sharply for only relief programs for old age and young population as well, which expose the majority of the population to poverty. Other projected demographic changes are related to the family structure, which would expose the old-age population to poverty as the majority would lose family care. On the other hand, there are other problems of the society that leave some groups vulnerable as the high informal sector and low labor participation rate of females, increasing gap in income between some groups of the population upon region and sector of employment, the long-term high unemployment rate among the current labor force, and the lack of social security benefits to the majority of the working labor force. All these problems would expose the majority of the population to poverty.

Finally, we conclude by some policy recommendations. Urgent actions are needed for pension reform, with a priority to protect the old-age and vulnerable groups and enhance the economic growth with the available resources, taking into consideration the demographic, economic and political factors. Further, to extend coverage, the decision strategy choice of enrollment in pension systems considering the individual characteristics is highly recommended for policy makers. The study draws guidelines for an optimal pension system in Palestine, which are highly recommended to be in consideration. Moreover, improving and integrating data is key issue to develop and enhance fair social security. More research on the other parameters and fields of social security and labor market are highly recommended to integrate policies.

We also recommend more research on using the socio-economic personal characteristics of labor force to extend pension coverage, enhance compliance to pay contributions, and determine the investment choices in DC scheme. Also, there is a need to study immigration to project the impact of the expected return of refugees and overseas labor to Palestine on the benefits of pension

systems and the economy as well. Further, more research on the impact of issuing the Palestinian currency on inflation and pension systems. Moreover, performing more analysis using PROST model to learn the impact of other parameters on the sustainability of the system and other issues, which are highly recommended to integrate policies.