

A study for the countermeasures on Korea's low birth rate and aging society

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Abstract

This current study aims to investigate the reason for the low birth rate and increasing aging populations. It aims to offer potential countermeasures and possible solutions that might alleviate the decreasing birth rate and exponentially increasing aging populations. The present research has sought out to uncover the origin of the low birth rates and increasing aging populations by compiling various past studies and statistics in South Korea. It includes additional support from the government for working career women in easing their burden for raising a child and allocating the appropriate funds for the increasing elderly populations. The decreasing birth rate can be contributed as a side effect of the past policies passed in South Korea and in turn created an increase in the aging populations. Policies to tackle this current issue needs to be further investigated and employed for the future of the economic and sociological stability of the society. Consistent efforts need to be made to dispel the continuing decrease for birth rates and alarmingly increasing aging populations. Policies and redistribution of government funds are some of the many things that need to be revised.

Keywords: Birth rate, Aging population, South Korea

1. Introduction

By the year 2030, the aging society of South Korea will account for more than 20% of the population. Low fertility rates have contributed to the exponential growth in the number of elderly in society. From this perspective, it can be deduced that low birth rates and increase in the elderly populations are correlated with each other (Statistics Korea, 2016). But in relations to the role of the low fertility rates and high elderly populations, there needs to be an understanding and awareness for the 'why this is a problem' and 'how we can solve this problem'. There has not been enough of discussions to bring the matter forward into solving it for the future.

Choi (2003) has mentioned that preparing for the low fertility rates in society and high populations of the elderly are not issues to be dealt with in the future. The implications for this can have lasting impacts on the economy as well, as people will be less willing to save for the future and social welfare for the elderly will rise exponentially. The rise in social welfare will also have implications for the government's financial status and all of these factors will play into the contribution of an unstable economy for the country. But, the greater concern will be for the equality of the division of the assets financially across the age groups in society driven by the pension plans and the increase in its usage with the increase of the elderly and low fertility rates. Moreover, the trickle of the financial status will have deadly repercussions for the growth of the economy that will inevitably create a stunted development.

As such, the crisis of the aging society and low fertility rates go hand in hand with the issues of economic and social systems as well. Thus, a development and revision of the current situation on the low fertility rates and high elderly populations should be implemented. But, the policies for the equal division on the assessment of finances to be

divided in different age groups is to be a tricky road, as seen in the recent revision of the National Pension Act. In cases overseas, social and financial revision came after the governments had already lost a lot of money to the old policies. Thus, it has been proven again and again through various studies that delaying the revision of the policies for rising elderly populations and declining birth rates will be detrimental that will spread through to affect the future (Choi, 2004; Jeong, 2010).

In current times, the need for a reformation of the lower fertility rates and rising elderly levels should be prepared for. This will be dependent on how accurately we will be able to assess the problem at hand and seek in gaining the people's cooperation to fully prepare in advance. Specifically, our sudden increase for the rise in elderly populations are seen to be eminent and it is highly possible that it will be the cause of confusion and chaos policy-wise for South Korea. Problems of pension policies, budget cuts and bankruptcy, not to mention expansion of the public funds will all be causes for problems if appropriate measures are not taken to counteract these situations (Jeong, 2010; Sohn, 2005, Paek & Choi, 2005).

The effects of rising elderly populations and lower fertility rates are different for each country, as they have their own existing form of political, economical, and social policies in place. Each country will respond differently to various changes, and thus these problems in each country need to be observed in each country separately from the others. Thus, an analysis of the papers following the lower fertility and higher elderly rates will be assessed, the problems examined, and the potential alternatives and countermeasures to the problems we face in this issue will be raised for this study.

2. Theoretical Background

2.1. Current status and characteristics of South Korea's low fertility rate and high elderly population

During the period of 1955 to 1963, the average birth rate of South Korea was high, with 6.1 children per family. However, from the beginning of the 1960's the average birth rate declined from 5.2 children in 1964 to 1967, and 4.7 children from 1968 to 1971. After, from the 1970's the government issued strong policies restricting the number of children per family, resulting in the average of 2.08 birth rates per family in 1983. The restriction of children per family was lifted in 1996 to ones that allowed liberations within families for children, but the rate of child births continued declining at an alarming pace. Thus, in 2001 the average child per family was 1.30, the lowest rate. Even after efforts to reverse the policies on the number of children allowed, the rate still declined with only 1.23 children per family, making South Korea one of the countries with the lowest birthrates (Statistics Korea, 2012). Among the OECD countries, this decline is steep and with further progression in this pattern, it will have vastly devastating consequences in the foreseeable future.

According to the Ministry of Health and Welfare (2006) Basic Plan for the Low fertility and Aging Society, it is predicted that the number of active working populations from the ages of 25-49 years would drop to 20,820,000 in 2007. Additionally, the populations of those that are still capable of productivity, from the ranges of 15-64, are expected to drop from 71.8% of the total population, to 53.7% in 2050. At the same time, the percentage of the elderly would increase. The scenario of the increase of the elderly populations are not a phenomenon that is restricted to South Korea. Advanced countries have already experienced this situation and developing countries will experience this in the future. But, unlike the other countries that have already experienced this phenomenon, it was over a period of several decades. In the case of South Korea, the increase in the population of the elderly is occurring at a much speedier rate, with the country entering the aging society zone in 2000 and coming into the aged society at 2019. After seven years from that, it is expected that South Korea will lapse into a super-aged society (Jeong, 2010).

As a result of the declining fertility rate and the declining birth rate of the elderly population and the increase in the population of the elderly population due to the development of science and technology, the rapid aging society has been mass-produced. The economic growth is slowed due to the decrease of the active working population and the increase of the rapidly aging society will cause social problems such as conflict between the generations and the alienation of the elderly (Kwak & Kim, 2007; Yoo & Im, 2012). In addition, the low birth rate and the aging society will cause raises in living cost and decline of profits of enterprises due to the decrease of labor force, resulting in the decline of the competitiveness of the nation (Kim, 2003; Park & Hong, 2010).

2.2. Causes of low fertility rates and increasing aging societies in South Korea

The reason that South Korea, which has entered the era of population stagnation, is slowly shifting to the age of population decline lies in the low birth rates and the resulting increase of the aging population.

It is because of the abrupt decrease in birth rate that the population of the elderly in South Korea is progressing at such a rapid pace. This year, South Korea's fertility rate was 1.16 children per family, the lowest in the world. In the case of foreign countries, Japan was an average of 1.32 children per family, USA was 2.01, New Zealand was 1.90, and the OECD average for all was 1.6 children per family. The reason for this low fertility rate is that the average age marriage has risen, the value of the need for children has changed, the number of infertile families has increased, and the burden of child-rearing has increased as well (OECD, 2004; Korea Institute for International Economic Policy, Kim, 2010; Korea Insurance Research Institute, 2011).

The beginning of the problem for the low fertility rates and increasing elderly populations is due to the relatively low child births. Therefore, the origin of the problem for the increasing aging population can be attributed to low fertility. The fertility rate of South Korea is 1.19 as of 2003, which is 0.89 lower than the population maintenance level of 2.08, which is the lowest among the major countries. The reason for the low fertility rate is the result of the aftereffects of the population restraint policy which has been going on since the 1980s, but it can also be said that the encompassing factors such as the changes in the social values and the economic difficulties of the young people have played a major role as well (Choi, 2005).

2.3. Changes in perception of marriage and the developing trends in increased average age of first marriage.

The decline in the birth rate since the 1990s has been analyzed which showed that the extension of the marriage age rather than the decline in the birth rate of married households was the major factor for the phenomenon. The unmarried population is increasing, and the rate of unmarried women increased from 10% to 40% in the 25-29 age group in 1970-2000 and from 1% to 11% in the 30-34 age group.

The tendency of married men and women to decrease was analyzed to be one of the causes of rising unmarried people and low birth rates. The marriage age has increased because it takes much more time to build an economic stability base due to the advancement of women in society. This trend of marriage avoidance has changed the value of married young people. In addition, the burden of employment is also a cause of the increase in the tendency to enjoy life while living with the parents (Jeong, 2010; Sohn, 2005; Paek & Choi, 2005).

According to a survey of marriage by unmarried men and women, 29.1% of unmarried men and women reported that marriage was not a necessity but a "choice", and 41.5% of women, in particular, had negative views on marriages, which is more than twice as the 19.9% of men. This suggests that women's desire to advance into society has multiplied the tendency to avoid giving birth.

< Table 1> Changes in the percentage of single people.

(In percentages, %)

	Age	1970	1980	1990	2000
Women	20~24	57	66	81	89
	20~24	10	14	22	40
	20~24	1	3	5	11
Men	20~24	93	93	96	98
	20~24	43	45	57	71
	20~24	6	7	14	28
	20~24	1	2	4	11

Extracted: National Statistical Office (2012), Population and Housing Census Report, each year

2.4. Increasing burden on childcare

The low birth rate is being reinforced by private education expenses and child support expenses. Especially, the advancement of women into society is becoming a social problem for child rearing. Therefore, the trend of low birth rate due to the changes of social environment is increasing at a rapid pace

<Table 2> Average number of children per wife with spouse

	Age: 15~24	Age: 25~29	Age: 30~34	Age: 35~39	Age: 40~44
1991	0.7	1.3	1.9	2.4	2.8
1994	0.7	1.2	1.8	2.1	2.5
1997	0.7	1.2	1.8	2	2.2
2000	0.8	1.1	1.7	2	2.1
2003	0.6	1.1	1.7	2	2.1

Extracted: The Korea Institute for Health and Social Affairs (2013), the 2013 National survey on Fatality, Family Health & Welfare in Korea, quoted by the National Statistical Office KOSIS

The reason for avoiding childbirth is that the perception of young people about childbirth has changed and the advancement of women into society has increased. In 1991, 91 percent of married women thought they should have children, but the numbers dropped sharply to 54.5 percent last year. The delay in marriage and childbirth and the increase in divorce are also the cause of the drop in the fertility rate.

But the most important reason is the burden of education and child support. The proportion of education expenses is too high compared to our economy level. There is an analysis that the average monthly child support cost was 1,232,000 won per household last year. This corresponds to 56.6% of monthly income. There are many difficulties in raising. There are very few childcare and childcare facilities for the couple to leave their children. In one survey, one out of four unmarried men and women responded that "they do not have children"

<Table 3> Expected number of children and more children

	1997		2000		2003	
	Expected children	More children	Expected children	More children	Expected children	More children
All	2.0	2.2	2.0	2.2	2.0	2.2
15~24	1.9	2.1	1.8	2.1	1.9	2.2
25~29	1.9	2.1	1.9	2.1	1.9	2.2
30~34	2.0	2.2	2.0	2.2	2.0	2.3
35~39	2.1	2.3	2.1	2.3	2.0	2.3
40~44	2.2	2.3	2.1	2.3	2.1	2.3

Extracted: The Korea Institute for Health and Social Affairs (2013), the 2013 National survey on Fatality, Family Health & Welfare in Korea, quoted by the National Statistical Office KOSIS.

3. Research design

3.1. Research subjects and period of study

The questionnaire survey was conducted for men and women aged 20-30 for over 3 months from April 2, 2017 to July 30, 2017 in Seoul, Gyeonggi, Gyeongsang, and Busan area. For the objectivity and accuracy of the questionnaire, the researchers directly conducted outreach surveys using structured questionnaires. The questionnaire was held in the open square. The general characteristics of the subjects of this questionnaire were classified into sex, age, marital status, recognition of low birth problems, and causes of low birth. Gender items were classified into male, female, 20s, 30s, and others. Out of a total of 327 people who answered the questionnaires, male in their 20's was the most prevalent, with a number of 125 people.

4. Summary

4.1. Analysis of the Severity and Cause of Low Fertility Problems

In the questionnaire asking, "I will not have children because of my job" as shown in the table below, 126 (38.5%) answered 'no, and 93 (28.4%) answered 'extremely no'. 117 (35.8%) and 75 (22.9%) were in the order of "not necessarily needing to have children". 98 (30.0%) and not (76) (23.2%) were in the order of "I think that the current support for childcare and childbirth women is well done in our country". 133 people (40.7%) and 77 people (25.5%) answered "Yes, I will have children when the education cost reduction and the education system are improved"

<Table 4> Satisfaction of Support Policy in South Korea

Division	Very much	Yes	Average	Not really	No
I will not have children because of work	9(2.8%)	47(13.4%)	52(15.9%)	126(38.5%)	93(28.4%)
I do not necessarily have to have children	17(5.2%)	58(17.7%)	75(22.9%)	117(35.8%)	60(18.3%)
The support for child rearing is good in this country	60(18.3)	25(7.6%)	68(20.8%)	76(23.2%)	98(30.0%)
I will have children when the policy is reformed and improved.	77(25.5%)	133(40.7%)	64(19.6%)	43(13.1%)	10(3.1%)

As shown in the table below, 165 people (50.5%) and 69 people (21.1%) have idealized one or two children for their plans in the question "How many children do you plan?". In the question "How many children do you have?" The leading answer was two children, with 44 (34.4%) and the second most was one child, with a number of 37 people (28.9%)

<Table 5> Questionnaire about your child's plan

	1 child	2 children	3 children	4 children	5 children
Childbirth plans	69(21.1%)	165(50.5%)	58(17.7%)	28(8.6%)	7(2.1%)
How many children do you have? (If married)	37(28.9%)	44(34.4%)	25(19.5%)	12(9.4%)	10(7.8%)

As shown in the table below, the question "What is the biggest problem caused by lowered entry rate?" Includes ① a decrease in economic growth of 129 persons (39.4%), and ③ an impact on employment relations due to changes in industrial structure (22.9%). Respectively.

As women have started entering society, the world has changed significantly. It does not have any negative connotations, but it can be assumed that one of the factors for the low fertility rates and high elderly populations could be from the increase of women in the workforce. The sky high rising prices for living expenses are one of the main reasons for women to come out in society and become a careerwoman. The value of money is so great and in order to nurture their children and to live well, a double income is needed for many families. Many of the limitations of modern society are the reasons for the low fertility rates.

<Table 6> Questionnaire on the decline in fertility rate

What are the problems with the decline of birth rates?	Number of people (percent)
Atrophy of economic growth	129(39.4%)
Increased intergenerational conflict	48(14.7%)
Influence on the employment relationship of industrial structures	75(22.9%)
Influence on the financial and industrial structures	41(12.5%)
Influence on the welfare sectors	34(10.4%)

4.2. Analysis of Social Risk Factors

Population plays an important role in fostering a country's power in the worldwide platform. In China, where the population is high, the per capita income might be low, but the whole nation is regarded as one of the superpowers in the world. If the population is reduced, the growth engine will substantially weaken, and economic growth will slow down. If we keep up this decrease in population, after 100 years, our population will be reduced to 16.2 million people. If the population is reduced, domestic demand will inevitably be reduced, and the sales base of the companies will disappear. Along with the quantitative reduction of the labor force, the rapid progress of aging is expected to lead to a decline in the quality of the labor force, and the economic growth rate will fall to 1 ~ 2% after 2030. The number of young people enlisted in the army is expected to decrease from the current 320,000 to 160,000 men by 2015 (Eun, 2007; Chang, 2005). This will have a serious impact on all aspects of politics, economy, society, and culture, including the shrinking national production capacity and increasing social burdens.

4.2.1. Changes in the Employment System

Low fertility and the increasing aging population are expected to affect not only the quantitative and qualitative changes in the labor force but also the overall employment practices such as wage and retirement age in line with environmental changes such as changes in the industrial structure. Rapid increases in the aging population will lead to a reduction in the size of the Korean economy from around 2020 through a decline in the labor force in the long term. Additionally, a decline in the youth population due to the decline in the fertility rate will occur, which may reduce the adaptability to environmental changes and the vitality of the economy (Yoo & Im, 2012). Therefore, in order to preserve the labor force due to the increasing aging society, the necessity of expanding the employment of women and the elderly will become more important for the future of this society. In order to increase the adaptability of the labor force to changes in the external environment requiring new knowledge and skills, it is important to improve labor productivity through higher education of the employed populations.

4.2.2. Changes in financial and industrial structure

There is concern that the fiscal and industrial structure will face a serious pension financial crisis, as the funds are expected to be completely exhausted in 2047 due to the imbalance of the salary and rapid increase in the national pension entitlement rates because of the increased elderly populations (Ministry of Health and Welfare, 2011; Ahn, 2005; Chang, 2005). Therefore, structural restructuring such as the adjustment of insurance premiums and salary levels should be urgently carried out to ensure a fair burden among generations and an overall balance in the government funds.

The decrease in the working population due to the low birth rate will increase the number of the elderly population and increase the pension recipients. The elderly medical care and welfare expenses will cause the fiscal spending to soar and the financial balance will deteriorate in the long run. The welfare expenditure of South Korea will increase rapidly from 7.5% in 1999 to 14.5% in 2020 and 20.6% in 2030. As a result of OECD's budget estimation, South Korea has a surplus of 2.5% as of 2000, but it is estimated that it will record a deficit of 7.7% by 2050. (Ministry of Health and Welfare, 2011).

As the aging society changes its industrial structure, the older generation will be equipped with purchasing power through high education and public income guarantee policy, so the service industry and industries related to the elderly will increase.

4.2.3. Decreasing economic growth

Low birthrates and increase in the aging society are expected to slow economic growth due to a decline in labor supply, a decline in labor productivity, a drop in savings due to an increase in the elderly population, and a contraction in consumption. According to the OECD, the elderly population brings about an effect of decreasing per capita GDP growth by 0.25 ~ 0.75% annually over the next several decades, and South Korea also expects GDP growth to remain at 2.9% during the 2000 ~ 2050 period. However, rather than slowing down economic growth, the low birth rate and elderly generation itself are expected to more likely to occur because existing systems such as pensions and health systems, welfare services, and labor market structures are not appropriate by the era of "low fertility and increasing aging society" (Ahn, 2005). Therefore, the effect of 'low fertility / aging populations on economic growth depends on the effort and will to improve the system.

4.2.4. Intensified conflicts between generations

At present, the structure of the population is such that working class populations are decreasing and the elderly are increasing, resulting in a significant increase in the expenses for the elderly in society. In 2002, ten people will support one elderly person, but in 2020, five people will support one elderly person. By 2040, two people will be supporting one elderly person, which will lead to a rapid increase in burden. The decrease in the number of workers and the increase in the population of the elderly population in South Korea are among the fastest among the OECD countries, so competition and conflicts over distribution and redistribution of funds are expected to deepen as the funds decrease due to low growth in the future (Ministry of Health and Welfare, 2011; Korea Institute for International Economic Policy, Kim, 2010; Korea Insurance Research Institute, 2011).

In 2000, the share of pension expenditures of the elderly in South Korea was 2.1% of the total GDP, which is much lower than the OECD average of 7.4%. But by 2050, it will rise to 10.1% of the total GDP, which is similar to the OECD average of 10.8% which is more than double the OECD average. Unless the equality of burden and the appropriateness of salary are secured in the old-age income guarantee system such as the pension system, it will cause a heavy burden on the generation of the next generation, and there is a fear that the long-term financial instability will cause many crises (Ministry of Health and Welfare, 2011; Ahn, 2005; Chang, 2005).

4.2.5. Changes in the welfare system

The social phenomenon of low fertility and increases in the elderly populations will bring many changes to the welfare sector. The issue of childbirth, nurturing, and support for the elderly will be transformed into joint responsibility of the state and society. These demographic and sociological changes will increase the diverse needs of the welfare for each life cycle, which will add to the national and social burdens in new forms (Paek & Choi, 2005; Sohn, 2005).

The high prevalence rate of the elderly and the increase of the chronic diseases are 2.4 times higher than that of the general public. The elderly who require care for dementia are 1.1 million and will be 1.59 million in 2020, respectively. Therefore, various health care measures such as the introduction of long-term care insurance system, are required (Ministry of Health and Welfare, 2011; Yoo & Im, 2012; Korea Institute for International Economic Policy, Kim, 2010; Korea Insurance Research Institute, 2011). Therefore, the increase in the elderly population will greatly increase the social costs to provide care services for the elderly

5. Summary

As the rates of low fertility and high elderly populations are rising, it is imperative to start the changes in the social welfare structures and the industrial sectors for the future. This preparation will prove to be crucial as costs in expenses for the elderly and the state of the government funds will continue to deteriorate. For this purpose, it is necessary to reform the system related to the elderly such as the health and medical care, pension, labor, social welfare service, family welfare, and promote a balanced development and quality improvement of the system. This should be focused on minimizing the socio-economic costs and impacts of aging without sacrificing the quality of life for the general population, as well as alleviating the economic problems and struggles in the society due to low fertility and increasing elderly populations (Yoo & Im, 2012).

In particular, we should look to the other countries that have already experienced this social phenomenon and aim to learn from their policies on this matter and build our own efficient systems. In some aspects of the family welfare policy in terms of the field of medical expenses and pensions, it is necessary to drastically reform the system as in other developed countries. However, in terms of social welfare services and family welfare, changes in the system to complement the family protection and nurturing functions based on the family will be an important task (Paek & Choi, 2005; Sohn, 2005; Korea Institute for International Economic Policy, Kim, 2010; Korea Insurance Research Institute, 2011). Preparing for the economic changes that will occur as a result of the low fertility rates and high elderly populations will not only be a matter of welfare, but a necessity that will have great impacts through the rest of society.

First, there is a need to strengthen the support for young people's independent living systems. There is a lot of difficulty in restoring the fertility rate to the normal population maintenance level. However, if the fertility rate is raised by promoting the marriage of couples in their twenties at the present time due to the demographic structure, it will have a drastically positive effect on the overall economy. To achieve this, we must increase the economic power of young people that will promote marriages.

Second, the low fertility phenomenon is basically concerned with the value of the individual, and it is necessary to alleviate the excessive individualism prevalent in the younger generation. Third, it will be important to actively support the maintenance of a healthy family in societies. The reduction of excessive child-rearing burdens will need to be addressed so that the middle-class people do not avoid childbirth due to excessive educational expenses.

Fourth, to share social responsibility for childbirth, an active promotion of government policies such as tax reduction, reinforcement of housing support, expansion of educational expense support will need to be implemented.

The implications of this study are that it is difficult to see the results in a short period of time because the policy of encouraging birth through the establishment of healthy housewives and marriages today is a passive policy. The phenomenon of urgently urging immediate international marriage in response to the quantitative decrease of population can have a risk of paying social costs rather than positive factors due to South Korea's population growth. Looking at the increase in the number of married immigrant women in South Korea, we can see how the government has implemented a passive policy on population growth that might be not the best solution for the long term of this society and will only aim at alleviating the problem, but not fixing it (Jeong, 2016; Sohn, 2005).

Therefore, in order to strengthen national competitiveness, it is necessary for not only the government's strong support policy for the whole aspect of the pregnancy and childbirth process, but also the protection of sex education and social growth of youths. Additionally, the stable settlement of multicultural families and the healthy growth management of children of multicultural families will be important as well to improve the quality of the population and minimize the social risk factors caused by the phenomenon of low fertility and aging in South Korea.

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