RESEARCH ARTICLE

MEASURING INCOME INEQUALITY BETWEEN PRIME-AGED WORKERS AND THE GROWING AGEING POPULATION IN SOUTH KOREA

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Abstract

The growing ageing population in South Korea has further widened income disparity among different working age groups. Experts believe this disparity may even increase in the future and thus a mode of prediction with regard income and inequality may have to be clearly established. This paper intends to measure the current income inequality between prime working age Koreans (working population ages 30 - 59) and the ageing population (ages 60 and above), and to predict the income inequality of these two groups in the future. This paper will also predict income disparity between the two groups in Korea with the introduction of moderate or considerable government intervention. To assess the income inequality between the working and ageing population, this paper acquired data, such as wages and population of different age groups, from multiple credible sources such as the United Nations, Korean Statistics Information Service, OECD, and from other sources. The data ranged from 2006 up until 2018. These data were then converted to gini coefficient with the use of a scoring system. The gini coefficient values from the year 2006 to 2018, obtained from the previous method, were used to measure the trend in income inequality between the working and ageing population and were also used to predict the income inequality in the future. Looking at the gini coefficient values from 2006 to 2018, the values were approaching 0, which suggest that the disparity in income was actually diminishing. And reflecting back to this trend, it suggests that the gini coefficient values in the future would also diminish over time; thus, supporting the claim that the income disparity between the working and ageing population would reduce. Moreover, with the implementation of applicable government policies, the gini coefficient values are expected to approach 0 at a much faster rate, which also suggests that government interventions would reduce the income gap between working and ageing population. Despite the beliefs of the expert that income disparity may increase in the future, the result proves that income gap between working and ageing population would diminish in the future, and may diminish more rapidly with potential government intervention.
Introduction:
One of the most prominent economic problems many countries face today has to do with income inequality. Recent trends worldwide among MEDC’s shows that the birth rate has slowed down. This would ultimately result in a more ageing population. In addition, the shortage of young workers will make companies and corporations seek scarce young workers by paying higher wages than the companies did for the previous generation of young workers. Thus, this exacerbates the income inequality between the young workers and the ageing population. South Korea faces this dire situation as well. Currently, South Korea is experiencing a rapid change in employment structure, and the income inequality between the young workers, ranging from 30 years old to 59 years old, and ageing population, who range from 60 years old and above, continues to increase. Moreover, in South Korea, it is anticipated that the number of ageing population will grow because fertility rate has been decreasing. For instance, in 1971, the fertility rate of South Korea was about 4.54 births per woman, while in 2016 the fertility rate of South Korea was about 1.17 births per woman (World Development Bank). In 2006, the ageing population was only about 6,611,512; however in 2018, the ageing population increased significantly to about 10,715,671 (World Development Bank). And by 2035, it is predicted that the ageing population would increase up to 18,840,523, comprising about 37.17% of the entire population while the working population would comprise of about 39.69% of the entire population (World Development Bank).

Methodology:
Employment and income data were predominantly taken from the government's Korean Statistical Information Service and the Ministry of Employment and Labor. Other data and sources were taken from the Department of Economic and Social Affairs of the United Nations and published OECD reports. Furthermore, we considered the fraction of income of different age groups, along with the population of different age groups and the population of certain age groups that are richer than others, in order to measure the Gini coefficient values for past years from 2006 to 2018. These Gini coefficient values are then compared to one another in order to predict income inequality between two groups in Korea in the absence of considerable government intervention. This paper calculates how the presence of maximal and considerable government intervention affects the income inequality between two groups in Korea, as well as predicts how those interventions would affect the future trends of income inequality. This paper calculated the potential income taxation that could be imposed on different populations and also calculated the increment of minimum wage to show how it affects different populations.

Gini coefficient, which is used as a statistical measure to express distribution of income or wealth in a nation, can also show economic inequality by being represented in the form of a Lorenz curve (Huang, J. T., Kuo, C. C., & Kao, A. P. 2003). Lorenz curve acts as a graphical representation that displays wealth disparity, and is accompanied by a line of equality, which has a slope of 1 (Kenton, W. 2020, January 29). Moreover, the area between the Lorenz curve and the horizontal line is the Gini coefficient (Kenton, W. 2020, January 29). The bigger the area suggests that the income is more unequal, and the smaller the area suggests the otherwise (Kenton, W. 2020, January 29). The figure below is an example representation of the Lorenz curve.

![Lorenz Curve Example](image)

Nonetheless, this paper primarily utilizes Gini coefficient calculated through the use of the scoring system. The scoring system can be expressed as the formula: \(1 - \text{sum of score}\), with score being calculated as shown below.
Score = Fraction of income × (Fraction of population + 2 × Fraction of population richer)

Results:
Referring to the Appendix...
Throughout the years, the total monthly wage of all population has increased by a significant amount. Moreover, the fraction of income each population accounted for became much more even as well. Of course, the population of South Korea has also increased, but more on the ageing population than other populations because the fertility rate of South Korea has been constantly decreasing. Looking at which population accounted for most of the country’s population, the working population accounted for about 46% of the country’s population for more than a decade. In terms of the score of different populations throughout the years, most of the time, the working population had the lowest score with about 0.2, followed by the ageing population with about 0.3 and young population with about 0.4. Lastly, for the Gini coefficient value, the value has been declining consistently, from 0.5003 in 2006 to 0.4694, but with some exceptions such as the year 2011, 2012, and 2014.

Table 1: Gini Coefficient Table in 2018 before converting values into decimals.

| AGE                        | TOTAL MONTHLY WAGE (INCLUDING MONTHLY SPECIAL PAYMENT) IN THOUSAND WON | FRACTION OF INCOME (%) | POPULATION | FRACTION OF POPULATION (%) | FRACTION OF POPULATION RICHER (%) | SCORE          |
|----------------------------|------------------------------------------------------------------------|------------------------|------------|----------------------------|-----------------------------------|----------------|
| Young population (less than 30) | 2116                                                                 | 27.49                  | 16,579,750 | 32.58                      | 67.42                             | 0.4603         |
| Workers (30-59)             | 3362.33                                                               | 43.68                  | 23,601,173 | 46.37                      | 0                                 | 0.2026         |
| Ageing population (60 and above) | 2219                                                                 | 28.83                  | 10,715,671 | 21.05                      | 46.37                             | 0.3281         |

The Gini coefficient can be found by a simple equation: 1 - sum of scores. In order to calculate the score, the first step is to turn the values of fraction of income, fraction of population, and fraction of population richer, shown above, into decimals. To turn those values into decimals, they would be divided by 100.

Sample calculation for young population:
Fraction of income (in decimals): 27.49 ÷ 100 = 0.2749
Fraction of population (in decimals): 32.58 ÷ 100 = 0.3258
Fraction of population richer (in decimals): 67.42 ÷ 100 = 0.6742
Table 2: Gini Coefficient Table in 2018 after converting values into decimals.

| AGE                      | TOTAL MONTHLY WAGE (INCLUDING MONTHLY SPECIAL PAYMENT) IN THOUSAND WON | FRACTION OF INCOME (%) | POPULATION | FRACTION OF POPULATION (% | FRACTION OF POPULATION RICHER (%) | SCORE | GINI COEFFICIENT OF WORKING POPULATION AND AGEING POPULATION |
|--------------------------|-----------------------------------------------------------------------|------------------------|------------|---------------------------|-----------------------------------|-------|----------------------------------------------------------|
| Young population (less than 30) | 2116                                                                  | 0.2749                 | 16,579,750 | 0.3258                    | 0.6742                             |       | 0.4603                                                   |
| Workers (30°59)           | 3362.33                                                               | 43.68                  | 23,601,173 | 46.37                     | 0                                 | 0.2026 | 0.4694                                                   |
| Ageing population (60 and above) | 2219                                                                 | 28.83                  | 10,715,671 | 21.05                     | 46.37                             | 0.3281 |                                                          |

After converting the values of fraction of income, fraction of population and fraction of population richer into decimals, a new formula is adapted in order to calculate the score. 
Score = Fraction of income × (Fraction of population + 2 × (Fraction of population richer))

Thus, if following this equation, the score value can easily be figured out.

Sample calculation for young population:
Score of young population:
= 0.2749 × (0.3258 + 2 × (0.6742))
= 0.2749 × (0.3258 + 1.3484)
= 0.2749 × 1.6742
= 0.4603 (Values may be slightly different as the values on the table are rounded).

However, since the focus of this research is to figure out the inequality between the working population and ageing population, the Gini coefficient value is only found using the scores of working population and ageing population:

Gini coefficient = 1 - sum of scores of working population and ageing population
Gini coefficient:
= 1 - (0.2026 + 0.3281)
= 1 - (0.5307)  
= 0.4693

When looking at the Gini coefficient trend throughout year 2006 to year 2019, the general trend is that income inequality between the working population and ageing population, in South Korea, decreases as the values get closer to 0 than 1. However, as clearly shown, the values of the Gini coefficient demonstrate some inconsistency, as proven with the R² value of 0.028. The low value of R² suggests that the data points do not relate closely with the trend line. This may be due to outliers that are caused because of how the data is interpreted. Whenever the average income of the younger population is greater than that of the ageing population, it can be assumed that everyone who is younger than 30 are more than everyone who are older than 60. This is highly inaccurate as a newborn baby would obviously not earn more than a 60 year old employee.

Just by looking at the data without the outliers, the trend definitely shows that the income inequality between the working population and ageing population is diminishing, since the Gini coefficient value has been approaching zero over the course of several years. And the high value of R² clearly indicates that the data set is very closely related with the regressive trend line.

**Maximal government intervention:**
If the government of South Korea was to maximally intervene with the economy of the country, one possible intervention constitutes making a change in personal income tax. Currently, the government of South Korea taxes individuals based on the calculation shown below.

| Income of Population | Basic Tax Rate | Basic Tax Rate (Calculation) |
|----------------------|----------------|-----------------------------|
| Less than 12,000 thousand won | 6/100 of the total income | Income • 6% |
| Between 12,000 ~ 46,000 thousand won | 720 thousand won + (5/100 of how much of total income is more than 12,000 thousand won) | (Income • 15%) - 1,080 thousand won |

As shown in the table above, it can be understood that all young, working, and ageing population pay the income tax which is between 1200 ~ 4,600 thousand won. However, what if the government of South Korea was to impose a new basic tax rate with a new set of income of population? Assuming that the government is eager to reduce the income gap between different age groups, they would create a new income tax and would focus on the working population, since they earn the most. Thus, a new theoretical income tax law can be set as shown below.

| Income of Population | Basic Tax Rate | Basic Tax Rate (Calculation) |
|----------------------|----------------|-----------------------------|
| Less than 12,000 thousand won | 6% of the income | Income • 6% |
| Between 12,000 ~ 29,999 thousand won | 10% of the income | Income • 10% |
| Between 30,000 ~ 45,999 thousand won | 25% of the income | Income • 25% |

To use this measurement in the most recent data available, which is the 2018 data, there would be necessary calculations needed. Firstly, the total monthly wages need to be multiplied by 12. The reason being is because the
income tax is only applied to the individual's total income in a year. So, by multiplying the total monthly wage by 12, it would provide the population’s total income in a year. It is only then that the table shown above is used.

**Sample Calculation for New Income Tax in 2018:**

**Finding the yearly income of young population:**
Total Monthly Wage of Young Population × 12
= 2116 × 12
= 25,392 thousand won

**Finding the after-tax income of young population:**
Yearly income - Basic Tax Rate(calculations)
= 25,392 - 10%
= 25,392 - (25392×100) × 10
= 22,852.8

Repeating this step, the income of working and ageing population after income taxation, can also be found. Thus, yearly incomes of the working and ageing population would be ₩30,261 and ₩23,965.2. Now, to measure if income inequality prevails even after the income taxation, calculate the Gini coefficient value just like how it was calculated previously, of which score needs to be calculated first.

**Sample Calculation for Score of Young Population in 2018 after New Income Tax:**
Score:
Fraction of income × (Fraction of population+2(Fraction of population richer))
=0.2965 × (0.3258+2(0.6742))
= 0.4641

As stated in the previous part of this paper, 1 - score shows the Gini coefficient value. Since the sample calculation only shows the score for young population, which is not considered in this research, the score for working and ageing population should be found just as shown above. Following all these steps, the score for working and ageing population combined would be 0.5359, and the Gini coefficient value would be 0.4641.

Comparing the new Gini coefficient value to that of the old one before considerable government intervention, the value became closer to zero, which suggests that the income is more equal between the working population and the ageing population. Thus, if the new income tax is to be promulgated in the future, it is predicted that this government intervention would successfully reduce the income gap.
Moderate government intervention:
A moderate government intervention would be much more realistic. One of the promises the current South Korean president, Moon Jae In, has made in regards to income inequality was to increase the minimum hourly wage of South Korea to ten thousand won, and Moon Jae In and the government is continuously working on it until now. Thus, if the government is successfully able to implement the increase in minimum hourly wage, it would definitely affect the income inequality. Looking at the total monthly wage of both young and ageing population, it is apparent that they are earning far less compared to how much the working population earns. Moreover, it is also clear that the young and ageing population earns almost the same amount of total monthly wage. This phenomenon can be explained when observing the jobs of the young and ageing population. The reason why the young and ageing population earns far less than the working population is because most individuals who are represented by the aforementioned populations are low-skilled laborers, or simply workers that are limited in skills, such as farmers, part time workers, or cleaners. Thus, they are not employed by companies often because those unskilled workers lack skills, experiences, and are highly likely to be less efficient than the higher skilled workers. Meanwhile, the working population would be regarded as higher skilled workers since they earn much more than the young and ageing population, who are regarded as low skilled workers. So, if the government of South Korea were to increase the hourly minimum wage of earners, it would not affect the higher skilled laborers because they are efficient and professional. Meanwhile, only the low skilled workers would be affected since no firms are willing to pay them a higher wage when those low skilled workers are inefficient and abundant in its number. Therefore, only the young and ageing population would be affected by this minimal intervention of lowering the minimum wage.

As of 2018, the hourly minimum wage was ₩7,530, which is equivalent to $6.19 as of February 26, 2020. And if the government increases this hourly minimum wage up to 10,000 won, the government would be increasing the hourly minimum wage by about 32.8%.

Sample calculations for New Hourly Minimum Wage:

Finding the Percent Increase in Minimum Wage:

Original Hourly Minimum Wage × Percent Increment = New Hourly Minimum Wage
= 7,530 × Percent Increment = 10,000
Percent Increment = 1.3280
= 32.8%

The value of 32.8% can now be used to find the total monthly wage of the young and ageing population. Just as the government is trying to increase its hourly wage by 32.8%, this could be interpreted as the government trying to increase its monthly wage by 32.8% as well.

Sample calculations for New Total Monthly Wage:
Finding the New Total Monthly Wage of Young Population:

Original Total Monthly Wage × Increase in Minimum Wage
= 2,116 × 32.8%
= 2,116 × 1.328
= 2810.05

Repeating these steps would make it possible to calculate the new total monthly wage of both the working and ageing population, which would again be used to find the Gini coefficient using score.

Sample Calculation for Score of Young Population for New Total Monthly Wage in 2018:

Score:
Fraction of income × (Fraction of population + 2(Fraction of population richer))
= 0.3081 × (0.3258 + 20.6742)
= 0.5159

As stated in the previous part of this paper, 1 - score shows the Gini coefficient value. Since the sample calculation only shows the score for young population, which is not considered in this research, the score for working and
ageing population should be found just like shown above. Following all these steps, the score of working and ageing population would be 0.5387, with 0.4613 being the Gini coefficient value.

Comparing this new Ginicoefficient value to that of the old one before the increase in the minimum wage, the value changed from 0.4694 to 0.4613, which clearly suggests that income between the working and ageing population became much more equal. Thus, if the government of South Korea and the president are able to increase the minimum wage by about 32.8%, they would successfully reduce the income gap between the working population and ageing population.

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**Appendix:-**

| Year | Young Population (less than 30) | Working Population (30–59) | Ageing Population (60 and above) | Total Monthly Wage (Including Special Payment in Thousand Won) | Fraction of Income (%) | Population | Fraction of Population (%) | Fraction of Population Richer (%) | Score | Gini Coefficient of Working and Ageing Population |
|------|--------------------------------|---------------------------|---------------------------------|---------------------------------------------------------------|------------------------|-----------|----------------------------|----------------------------------|-------|--------------------------------------------------|
| 2006 | 1441                           | 2369                      | 1523                            | 0.2702                                                       | 0.4442                 | 0.2856    | 40.87                      | 59.13                            | 0.430 | 0.5003                                           |
|      |                                |                           |                                 | 19,577,326                                                   | 21,712,805            | 6,611,512 | 45.33                      | 0                               | 0.201 | 0.298                                            |
| 2007 | 1551                           | 2473                      |                                 | 0.2760                                                       | 0.4401                | 19,286,412| 40.01                      | 59.99                            | 0.441 | 0.4983                                           |
|      |                                |                           |                                 | 19,286,412                                                   | 22,065,728            | 45.77     | 0                          | 0                               | 0.201 | 0.298                                            |
| Age | Age Group Description | 2008 | 2009 | 2010 | 2011 |
|-----|------------------------|------|------|------|------|
|    | Ageing Population (60 and above) | 1595 | 0.2839 | 1612 | 0.2754 | 1611 | 0.2788 | 1636 | 0.2790 | 1727 | 0.2827 |
|    | | 6,852,922 | 14.22 | 18,987,797 | 39.14 | 18,678,617 | 38.28 | 18,359,564 | 37.40 | 18,125,874 | 36.72 |
|    | | | | 45.77 | 60.86 | 61.72 | 62.60 | 47.20 | 47.20 | 47.20 |
|    | | | | | | | | | | | 0.300 2 |
|    | Working Population (30–59) | 2565.33 | 0.4383 | 2544.67 | 0.4404 | 2588.33 | 0.4414 | 2686.33 | 0.4398 | 0.370 7 |
|    | | 22,414,855 | 46.21 | 22,743,005 | 46.61 | 23,081,144 | 47.02 | 23,297,449 | 47.20 | 0.370 7 |
|    | | | | 0 | 0 | 0 | 0 | 0 | 0.207 6 |
|    | Ageing Population (60 and above) | 1675 | 0.2862 | 1622 | 0.2807 | 1640 | 0.2797 | 1727 | 0.2827 | | 0.306 4 |
|    | | 7,107,190 | 14.65 | 7,375,414 | 15.11 | 7,649,333 | 15.58 | | | 0.306 4 |
|    | | | | 46.21 | 46.61 | 47.02 | 47.20 | | | 0.306 4 |
|    | Young Population (less than 30) | 1612 | 0.2754 | 1611 | 0.2788 | 1636 | 0.2790 | | | | 0.4910 |
|    | | 18,987,797 | 39.14 | 18,678,617 | 38.28 | 18,359,564 | 37.40 | | | | 0.4906 |
|    | | | | 60.86 | 61.72 | 62.60 | 47.20 | | | | 0.4906 |
|    | Working Population (30–59) | 2544.67 | 0.4404 | 2588.33 | 0.4414 | | | | | | 0.4859 |
|    | | 22,743,005 | 46.61 | 23,081,144 | 47.02 | | | | | | 0.4859 |
|    | | | | 0 | 0 | | | | | | 0.4859 |
|    | Ageing Population (60 and above) | 1622 | 0.2807 | 1640 | 0.2797 | | | | | | 0.4906 |
|    | | 7,375,414 | 15.11 | 7,649,333 | 15.58 | | | | | | 0.4906 |
|    | | | | 46.61 | 47.02 | | | | | | 0.4906 |
|    | Young Population (less than 30) | 1636 | 0.2790 | | | | | | | | 0.4910 |
|    | | 18,359,564 | 37.40 | | | | | | | | 0.4906 |
|    | | | | 62.60 | | | | | | | 0.4906 |
|    | Working Population (30–59) | 2588.33 | 0.4414 | | | | | | | | 0.4859 |
|    | | 23,081,144 | 47.02 | | | | | | | | 0.4859 |
|    | | | | 0 | | | | | | | 0.4859 |
|    | Ageing Population (60 and above) | 1640 | 0.2797 | | | | | | | | 0.4906 |
|    | | 7,649,333 | 15.58 | | | | | | | | 0.4906 |
|    | | | | 47.02 | | | | | | | 0.4906 |
|    | Young Population (less than 30) | 1727 | 0.2827 | | | | | | | | 0.4910 |
|    | | 18,125,874 | 36.72 | | | | | | | | 0.4906 |
|    | | | | 47.20 | | | | | | | 0.4906 |
|    | Working Population (30–59) | 2686.33 | 0.4398 | | | | | | | | 0.4859 |
|    | | 23,297,449 | 47.20 | | | | | | | | 0.4859 |
|    | | | | 0 | | | | | | | 0.4859 |
|    | Ageing Population (60 and above) | 1727 | 0.2827 | | | | | | | | 0.4910 |
|    | | 18,125,874 | 36.72 | | | | | | | | 0.4906 |
|    | | | | 47.20 | | | | | | | 0.4906 |
|    | Young Population (less than 30) | 1727 | 0.2827 | | | | | | | | 0.4910 |
|    | | 18,125,874 | 36.72 | | | | | | | | 0.4906 |
|    | | | | 47.20 | | | | | | | 0.4906 |
|    | Working Population (30–59) | 2686.33 | 0.4398 | | | | | | | | 0.4859 |
|    | | 23,297,449 | 47.20 | | | | | | | | 0.4859 |
|    | | | | 0 | | | | | | | 0.4859 |
|    | Ageing Population (60 and above) | 1727 | 0.2827 | | | | | | | | 0.4910 |
|    | | 18,125,874 | 36.72 | | | | | | | | 0.4906 |
|    | | | | 47.20 | | | | | | | 0.4906 |
| Year | Age Group | Population | Ageing Factor | Percentage | 2012 Age Group | Population | Ageing Factor | Percentage | 2013 Age Group | Population | Ageing Factor | Percentage | 2014 Age Group | Population | Ageing Factor | Percentage | 2015 Age Group | Population | Ageing Factor | Percentage |
|------|-----------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|
| 2012 | Young     | 1779       | 0.2803         | 17,853,079 | Ageing         | 1695       | 0.2775         | 7,933,369  | Working        | 2790.67   | 0.4397         | 23,519,528 | 47.41          | 0.366       | Working        | 2790.67   | 0.4397         | 23,519,528 | 47.41          |
|      | Population| (less than 30) |                |            | Population     | (30–59)    |                |            | Population     | (30–59)    |                |            | Population     | (60 and above)|                |            |                |            | Population     | (60 and above)|                |
|      |           |            |                |            | (60 and above) |            |                |            | (60 and above) |            |                |            | (60 and above) |            |                |            | (60 and above) |            |                |
| 2013 | Young     | 1815       | 0.2756         | 17,572,231 | Ageing         | 1834       | 0.2729         | 8,922,507  | Working        | 2899      | 0.4402         | 23,712,519 | 47.57          | 0.209       | Working        | 2899      | 0.4402         | 23,712,519 | 47.57          |
|      | Population| (less than 30) |                |            | Population     | (60 and above) |                |            | Population     | (30–59)    |                |            | Population     | (60 and above) |                |            |                |            | Population     | (60 and above) |                |
|      |           |            |                |            | (60 and above) |            |                |            | (30–59)        |            |                |            | (60 and above) |            |                |            | (60 and above) |            |                |
| 2014 | Young     | 1901       | 0.2828         | 17,315,167 | Ageing         | 1834       | 0.2729         | 8,922,507  | Working        | 2986      | 0.4443         | 23,836,727 | 47.60          | 0.211       | Working        | 2986      | 0.4443         | 23,836,727 | 47.60          |
|      | Population| (less than 30) |                |            | Population     | (60 and above) |                |            | Population     | (30–59)    |                |            | Population     | (60 and above) |                |            |                |            | Population     | (60 and above) |                |
|      |           |            |                |            | (60 and above) |            |                |            | (30–59)        |            |                |            | (60 and above) |            |                |            | (30–59)        |            |                |
| 2015 | Young     | 1869       | 0.2740         | 16,872,682 | Ageing         | 1834       | 0.2729         | 8,922,507  | Working        | 3045      | 0.4464         | 23,876,973 | 47.68          | 0.212       | Working        | 3045      | 0.4464         | 23,876,973 | 47.68          |
| AGE          | Population (30–59) | 2016 Population (less than 30) | 2017 Population (30–59) | 2018 Population (30–59) |
|--------------|---------------------|---------------------------------|------------------------|------------------------|
| Age Group    |                     |                                 |                        |                        |
| Working      | 3148                | 23,856,084                      | 47.24                  | 0.210                  |
| Population   | 0.4449              |                                 |                        |                        |
| Age Group    | 1908                | 9,324,746                       | 18.62                  | 0.318                  |
| Working      | 3230                | 23,755,479                      | 46.85                  | 0.207                  |
| Population   | 0.4438              |                                 |                        |                        |
| Age Group    | 1985                | 9,750,074                       | 19.31                  | 0.319                  |
| Working      | 2069                | 10,217,670                      | 20.15                  | 0.323                  |
| Population   | 0.2843              |                                 |                        |                        |
| Age Group    | 1979                | 16,731,822                      | 33.00                  | 0.454                  |
| Working      | 3362.33             | 23,601,173                      | 46.37                  | 0.202                  |
| Population   | 0.4368              |                                 |                        |                        |
| Age Group    | 2116                | 16,579,750                      | 32.58                  | 0.460                  |
| Working      |                     |                                 |                        |                        |
| Population   | 0.2749              |                                 |                        |                        |
| Age Group    | 2016                | 16,897,775                      | 33.46                  | 0.457                  |
| Working      | 3148                | 23,856,084                      | 47.24                  | 0.210                  |
| Population   | 0.4449              |                                 |                        |                        |
| Age Group    | 1908                | 9,324,746                       | 18.62                  | 0.318                  |
| Working      | 3230                | 23,755,479                      | 46.85                  | 0.207                  |
| Population   | 0.4438              |                                 |                        |                        |
| Age Group    | 1985                | 9,750,074                       | 19.31                  | 0.319                  |
| Working      | 2069                | 10,217,670                      | 20.15                  | 0.323                  |
| Population   | 0.2843              |                                 |                        |                        |
| Age Group    | 1979                | 16,731,822                      | 33.00                  | 0.454                  |
| Working      | 3362.33             | 23,601,173                      | 46.37                  | 0.202                  |
| Population   | 0.4368              |                                 |                        |                        |
| Age Group    | 2116                | 16,579,750                      | 32.58                  | 0.460                  |
| Working      |                     |                                 |                        |                        |
| Population   | 0.2749              |                                 |                        |                        |