Discrepancy Between Earned Income and Household Expenditures: Experience of Korean Capitalism

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1. Introduction

Wages are earned by individuals who provide labor, but it is the household that spends the earnings. In other words, the wage unit is represented by the individual but the consumption unit is the household. Therefore, whether or not wage levels are adequate should be based on household spending.

2. Relationship between Wages and Household Expenditures

2.1 Average Wage and Household Expenditures

Capitalism in Korea developed at a rapid pace. GDP Per capita grew at an average rate of 7.5% per annum in the 1970s and 80s and continued to rise thereafter (see Table 1). Real per capita income grew 5.5 times in the 40 years between 1975 and 2005, while average real earnings by employed individuals grew 4.4 times. Still, household expenditures grew faster than average earnings, increasing 6 times in the same period. In particular, the average individual earnings growth rate fell behind household expenditures in the 1990s, further increasing the gap between earned income and household expenditures (see Figure 1).

Average earned income divided by household expenditures was at 118.6% in 1975 for a household of three and 97.2% for a household of four. Back then, one employed individual's earnings were enough to cover the expenditures of a household of four. For a household of five, it was 87.1%, which indicates that the earnings were enough even to cover such a household when an additional amount of income was added to normal household income. Nonetheless, the trend line shows a continuous decline in the earnings/household expenditures ratio (see Figure 2). In 2010, the average earned income covered 75.5% of the expenditures of a household of three and only 61.9% of a household of four. For a household of five, it was 56.1%. Thus, one employed individual's earnings are no longer enough to cover the spending even of a household of three.

The trough of business cycles occurred in 1981, 1986, 1993, 1998, 2005 and 2009 (see Figure 3) in Korea, and at these points in time, the earnings/household expenditure ratio actually improved. In economic downturns, earnings drop or increase only slightly, while households sharply cut their expenses. In 1998, the worst of those downturns, the ratio went up significantly. In sum, the trend from that time on shows that the earnings/household expenditure ratio continues to fall with economic development, and in relation to business cycles, a higher earnings/household expenditure ratio indicates a downturn rather than a boom.

2.2. Statistics by Income Decile

Figure 4 represents the head of household's earnings/household expenditure ratio by income decile. The decile is divided by household income. The head of household's income and the total household income are so highly correlated that the decile divided by household income is almost consistent with the decile divided by the head of household's earnings. The first decile indicates households with the lowest income and the tenth decile the highest.

First, the higher the income, the higher the earnings/household expenditure ratio. But the ratio's incremental extent slightly falls as income goes higher, showing a concave correlation between the two. At the third/fourth decile and higher, the head of household's income/household expenditure ratio is almost consistent. The ratio remained largely unchanged until 1985 but started to fall in all deciles after 1985. Since the 2000s, the ratio has fallen considerably for low-income households.

3. Addressing the Relative Stagnation in Earnings

When the earned income is not enough to cover household spending, there are several ways of coping with the deficiency. First, a member other than the household head becomes employed to supplement income. Second, the number of household members is reduced. Third, savings are reduced. Fourth, household consumption is reduced. In this section, how each option has been implemented in Korea is described.

3.1. Increase in Employment by Those Other than the Household Head

The fall in the earnings/expenditures ratio is due to earnings increases not keeping up with household expenditure growth. If earnings by the household head are not enough to cover household expenditures, another member of the household has to become gainfully employed. In the past 30 years in Korea, the number of employed members per household has slightly increased, but only by a very small margin, going from 1.3 in 1975 to 1.6 in 2005, an increase of only 0.3. The other earner is usually the female spouse. The very slight increase in earners per household is attributable to a minimal increase in female employment in Korea. Nevertheless, the increase in earners other than the

family head has translated into reducing the share of the head of household's earnings out of total household income. Although the share was 85% in 1975, it stood at 68% in 2005. (See Figure 5)

Figure 6 shows the changes in the number of earners per household by income decile. First, the households that saw an increase in earners belong to the high-income group. Until 1985, the correlation between household income and number of earners was quite flat, with only a difference of 0.2 between the ninth and second decile. Yet, in the 2000s the average number of earners was around 1.8 in the ninth decile and 1.2 in the second, a difference of approximately 0.6. The relationship between household income and number of earners becoming steeper is a common phenomenon in developed capitalist countries. However, one difference is that in Korea, even when the household income is very low, there is at least one member who is employed. At the same time, in many developed countries, the number of earners in low-income households is extremely low, which is due to the shortfall in the social safety net in Korea such as old age pensions and unemployment insurance. Often this status makes employment the only source of income.

3.2. Reducing Household Size

Another way for households to address the problem regarding earnings not keeping up with spending is to reduce the number of household members, which can be done in several ways. An increase in marriage age, drops in marriage rates, and falling fertility rates are some examples, all of which are occurring in Korea. Both the crude fertility rate and total fertility rate has been falling since 1975 (see ¡Figure 7¿). In 1975, there were 25 newborns per 1000 population, but the number has dropped to below 10 in 2005. The birthrate fell in all generations, steadily bringing down the total fertility rate. Crude fertility rates and total fertility rates began to plummet in the period between 1975 and

1985, which was also when the earnings/expenditure ratio fell sharply. Since 1985, the earnings/expenditure ratio began to fall more moderately as did fertility rates. This change exhibits a close correlation between falling fertility rates and the earnings/ household expenditure ratio. The awareness that earnings were no longer enough to cover household spending led to fewer births. Generally, the prevailing trend is that as capitalism develops, there is less "demand" for children. Other economic reasons for lessening "demand" for children are as follows: (a) the more capitalism develops, the higher the cost of raising children. The period of education lengthens, prolonging the period of child-raising and increasing costs. Education and raising children become capitalized (marketized), increasing the overall cost of raising offspring. Such costs were very low in pre-capitalist societies. Often, children brought net benefits to their parents, and the young family members' work could even offset the cost of child rearing. Even if costs were considered high at the time, it was still very low compared to those in a capitalist society. (b) In a precapitalist society, children were not only the objects of parents' love but also the economic foundation of their postretirement life. In a study on Indonesia, Korea, Thailand, Turkey, and the Philippines (World Bank, 1984), 80% of the parents interviewed expected financial support from their children in old age. Not only for retirement, but also in times of great difficulties they expected their children to be of help (like insurance).

The average number of household members steadily declined as fertility rates fell, the initial marriage age rose, and the marriage rate dropped. The number went from 5.15 in 1975 to 3.3 in 2005 (see Figure 8). Figure 9 shows a falling number of household members across all income deciles over time. Another interesting facet is the strong correlation between the household size and income and the stability of such positive correlations over time. Because household income in Korea is strongly correlated to the head of household's earnings, it can be generally said that the higher the head of household's income, the bigger the household size.

While the head of household's income and household size have a positive correlation at a given point in time, in a time-series, as the average household head income grows, the average household size shrinks. This situation has always been puzzling, and it can now be explained by the falling earnings/household expenditure ratio. Despite the rise in earned income, the ratio fell, and households responded by reducing their size. Yet at a given point in time, the positive correlation between income and household size is maintained. The answer to this phenomenon that appears to be paradoxical is addressed in this paper.

3.3. Reduced Savings, Growing Debts

A third way of addressing the mismatch in earnings and household expenditure is to reduce savings. Savings rates did not go down before the 2000s. It was after the 2000s that these rates started to decline. The household net savings rate was 24.2% in 1991, but it was a mere 2.7% in 2011, which indicates that the option of reducing savings as a way to respond to the mismatch between earnings and expenditures did not work before 2000 but has worked since the 2000s. Such conditions are closely related to the changes in bank loan practices in Korea. Having savings is a way to buy a house in Korea. Before the 2000s, banks were reluctant to give credit loans; they were given on collateral. Thus, before the 2000s, working households had to save until they could buy a house, which is why individual savings rates were very high. However, since the 2000s, the conditions for setting up a bank and giving out loans related to real estate have been considerably eased. Real estate prices soared, while loan criteria were lowered. At that point, ordinary people began to rely on loans rather than savings to buy a house. As a result, the loan-to-income ratio rose to around 150% in 2010.

3.4. Maintaining Household Expenditures

Reducing household spending is another way to cope when earnings do not meet expenditures, which did not happen because consumption is social. The desire and need for consumption are formed by social conventions, culture, and history. It is no longer enough to simply avoid starving or freezing, or to spend just the minimum to cover basic needs. The social aspect of consumption has been observed extensively. Adam Smith wrote in *The Wealth of Nations,*

> Consumable commodities are either necessaries or luxuries. By necessaries I understand, not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without. A linen shirt, for example, is, strictly speaking, not a necessary of life. The Greeks and Romans lived, I suppose, very comfortably, though they had no linen. But in the present times, through the greater part of Europe, a creditable day-laborer would be ashamed to appear in public without a linen shirt, the want of which would be supposed to denote that disgraceful degree of poverty, which, it is presumed, nobody can well fall into without extreme bad conduct........Under necessaries, therefore, I comprehend, not only those things which nature, but those things which the established rules of decency have rendered necessary to the lowest rank of people. (p. 519)

A house, as a durable good, is much more expensive that nondurables. In Korea, a house is either owned or used at a considerably high down payment or deposit. A rational individual, as assumed in neoclassic economics, would pay the most attention to the choice of housing service (the most expensive good) when earnings do not cover expenditures. But despite the steady fall in wage/expenditure ratio, the floor area per household and per capita continued to increase. Even though there was a relative stagnation in wages, people were living in bigger houses with more rooms, whereas in the 1980s, there was one car per 20 households. Now, in the 2000s, it is almost one car for each

household.

Despite the relatively flat lining wage level, spending on even the most expensive durables, house and automobile, is increasing, let alone on nondurables. Incidentally, home ownership shows little change. Although the housing supply rate has passed 100% as of 2010, the share of home ownership has not exceeded 60%, even after a long time. At a fundamental level, it would be necessary to focus on the impact of capitalist production methods on public consumption. In a capitalist society, production delineates consumption. Even if one wishes for a smaller home, there are few small houses available for purchase. Furthermore, even if one wishes for an inexpensive, low-performance computer, only faster and high-performance computers are made available. With better technology today, the same computer can be supplied at a much lower price but such cheap, old versions are no longer being produced. Consumers still need to pay a high price, just like they did in the past for the highest-performance computers. Rapid advancement in technology makes it possible to produce much better computers at much cheaper prices, but what is available are only expensive computers.

The goal of capitalist production is to sell more by popularizing a product (turning it into a trend). What is more important is to quickly substitute an existing trend with a new one:

> Capitalist production is mass production, which, needless to say, can be maintained only by mass consumption. In mechanized production, only the products appealing to the public taste can be profitable to the factory owner. Thus the products must continuously be popularized in all trends, all materials, all colors and all combinations to be desired by the public. ... Meanwhile, the biggest purpose of expanding a factory is to grow the profit margin. This is why this rule necessitates changes in the mode. Machines keep demanding new orders. But as it continues, the market is always full of the product. If is full, a new type of product must be quickly produced. It is the obligation of the public to buy the new product and quickly discard the old. ... The neverending changes in trend have become intertwined with the modern capitalist production

method both for the bourgeois and the public. This is the first order of the capitalist production method, and thus applicable to not only garments but also other innumerable everyday necessities. (Eduard Fuchs, *Illustrierte Sittengeschichte vom Mittelalter bis zur Gegenwart4* , p.51)

Workers believe they bought a pair of shoes out of their own choice. They believe that the desire to purchase a pair of Nikes is inborn. But the desire to buy this particular pair of shoes has been created by corporations. If such shoes were not produced, neither would have been the desire to buy those shoes, which is not about commercial messages, which only fan the desire, not create it.

Shoe-making technology has developed remarkably. A pair of high-performance shoes should last a long time. A little scratch would not be a problem in the shoes' function of protecting the feet. But a new model with a new design is about to be produced. The new pair is a little different in design and function. Or it is believed to be different. The one-year-old shoes might still have the same protective function, but their social lifetime has expired. Today's workers throw away the expired shoes without hesitation and desire the new model.

Why do people wish to live in a bigger house despite the income shortfall? Why do they desire a car despite insufficient earnings? A smaller house would cause no problems in avoiding the cold. If individuals were to "rationally" think about low wages, there would be a bigger need to live in a smaller house. But living in a house smaller than average, or noticeably smaller than average, is a cause of embarrassment, a display of one's lack of wealth. Bank loans were hard to come by in the past, but since they are readily available now, people believe they should live in bigger houses even if it means taking out loans. And small houses are hardly ever built anymore.

While production limits consumption, the social conventions and culture around consumption are shaped in a number of different paths. One such path is conspicuous consumption by the upper class and imitation by the lower class:

Modes (or trends) are endlessly destroyed, indicating a constraint of having to be endlessly reproduced. It is by this constraint that the upper class try to differentiate themselves from the middle class. It is a play tag of class vanity. In this play tag the same phenomenon is endlessly repeated. On one hand is the attempt to differentiate one from other competitors by running just a little bit ahead, and on the other hand is the attempt to put on the mode on one's self as quickly as possible to not fall behind others. (Eduard Fuchs, *Illustrierte Sittengeschichte vom Mittelalter bis zur Gegenwart 4,* p.47)

4. Conclusion

Figure 10 is an illustration of the household earnings/expenditure ratio. The number has changed within the range of 120-125% in the past 40 years. The ratio has remained largely stable despite the rise in household expenditures and stagnation in earned income as a result of more household members getting employed, downsizing the household by having fewer births, and reducing savings. Of these options, having fewer children has worked as the most dominant option in Korea.

There is a debate on "immiseration," in which it is said that the development of capitalism will impoverish workers. One camp argues that there will be an absolute immiseration and the other, relative immiseration. Whether absolute or relative, immiseration does not fit with the history of capitalist development in Korea. In this country, capitalist development pushed up workers' real income and did not decrease the share of wages out of profit. Quality of life did not deteriorate. Workers are consuming more calories, living in bigger houses, and consuming more goods than ever before. But workers' wages do not fulfill the level of consumption demanded by society, and the gap is only growing. Perhaps, in this sense, it *is* immiseration.
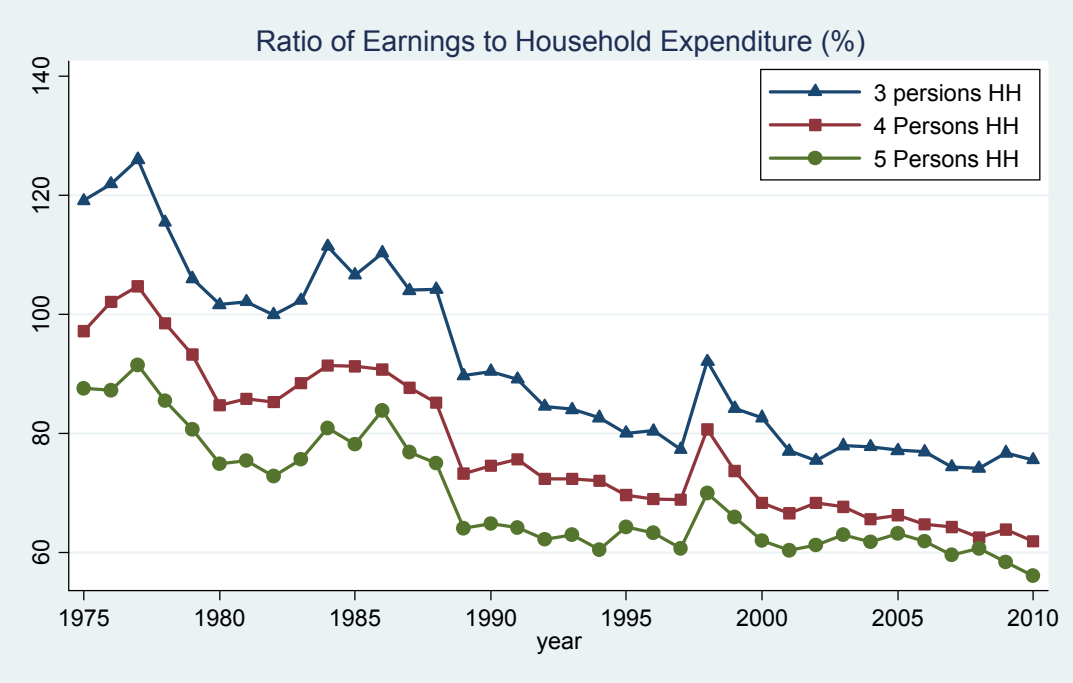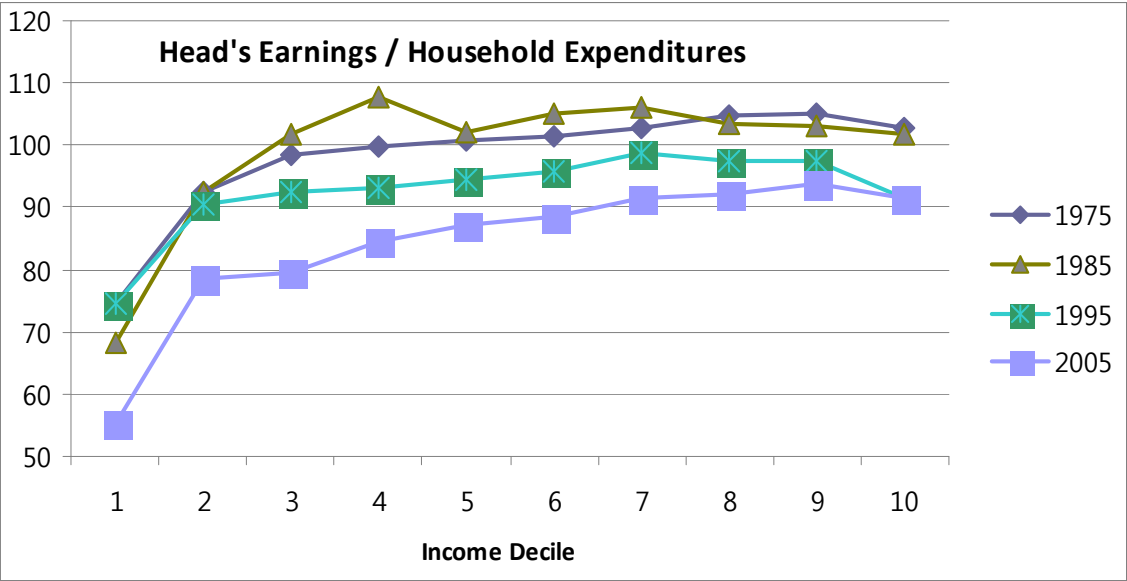
<Table 1> Annual growth rate of GDP per capita (%)

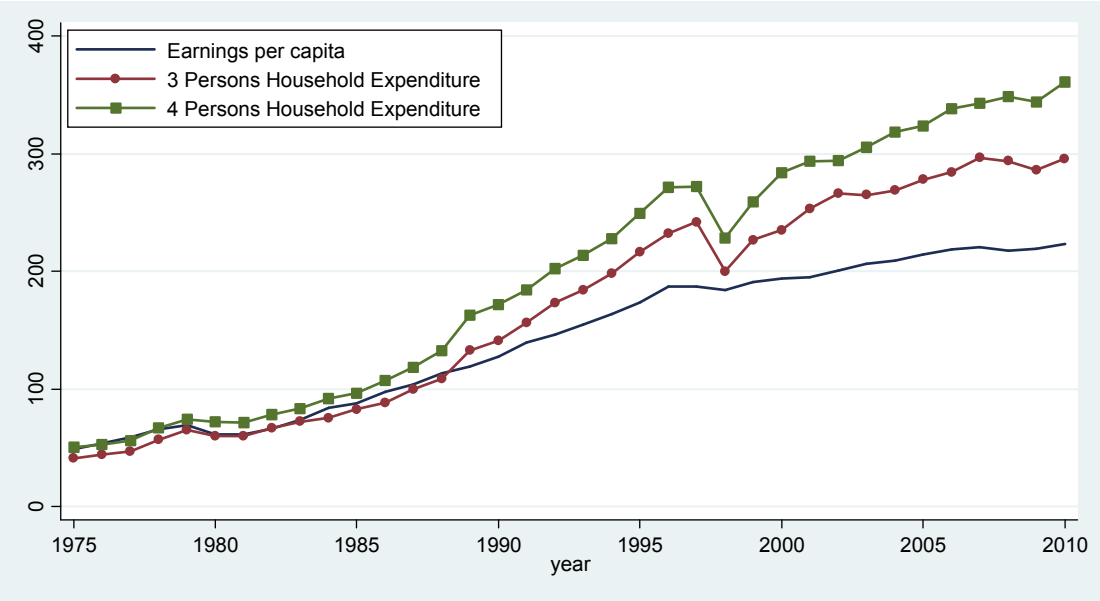|	1970's	1980's	1990's	2000's
OECD	2.4	2.1	1.6	0.7
Korea	7.5	7.6	4.7	3.0

<Table 2> Average earnings for employees and household expenditure (ten thousand Won per month)

Year	Average Earnings for employee (1)	HH expenditure		Ratio of earnings to household expenditure (%)	
		3 persons household (2)	5 persons household (3)	3 persons household (1)/(2)	5 persons household (1)/(3)
1975	49.0	41.2	56.1	118.6	87.1
1980	61.2	60.2	81.6	101.4	74.8
1985	88.1	82.6	112.8	106.1	77.7
1990	127.8	141.4	197.2	90.2	64.7
1995	173.4	216.7	269.8	79.9	64.2
2000	194.1	235.0	313.2	82.5	61.9
2005	214.4	278.0	339.4	77.1	63.1
2010	223.4	296.0	398.4	75.5	56.1

<Table 3> Changes in standard of housing and cars

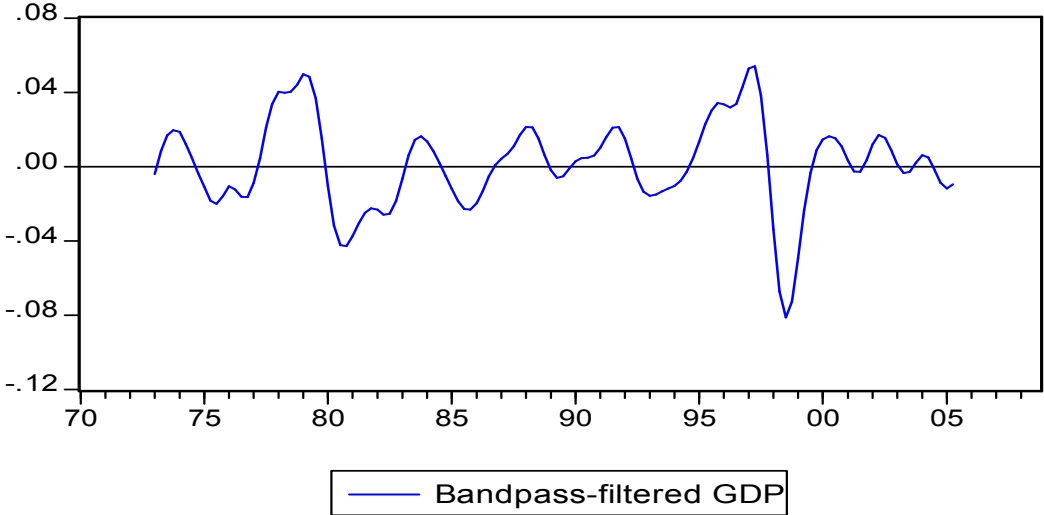|	Size of house (Sqaure meter)			Number of rooms per household	Car per household
	per house	per household	per HH members		
1980	68.4	45.8	10.1	2.2	
1985	72.6	46.4	11.3	2.2	0.05
1990	80.8	51.0	13.8	2.5	0.17
1995	80.7	58.6	17.2	3.1	0.45
2000	81.7	63.1	20.2	3.4	0.54
2005	83.7	66.0	22.9	3.6	0.67
2010				3.7	

[Figure 1] Employee mean earnings and household expenditure

[Figure 2] Ratio of individual earnings to household expenditure
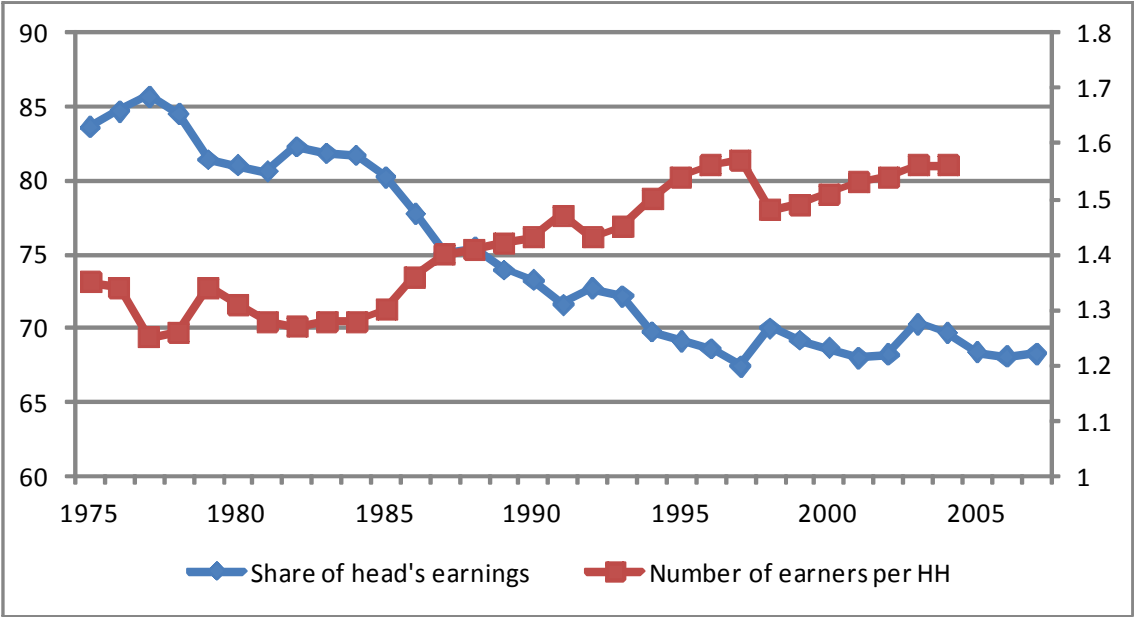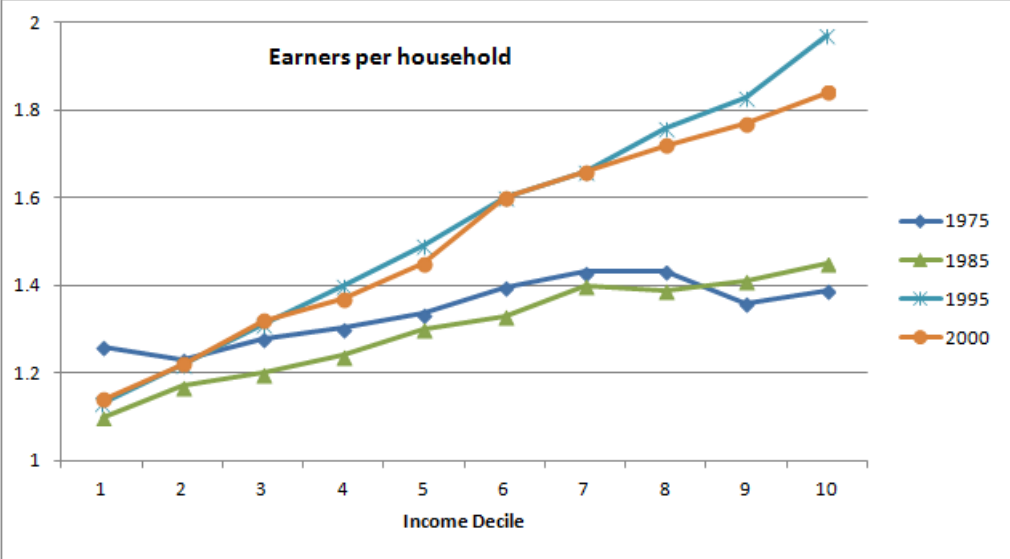
[Figure 3] Business cycle phases in Korea

Bandpass-filtered GDP

[Figure 4] Ratio of head's earnings to household expenditure by income decile

Head's Earnings / Household Expenditures

Income Decile

1975
1985
1995
2005

[Figure 5] Share of head's earnings (left axis) and number of earners per household (right axis)
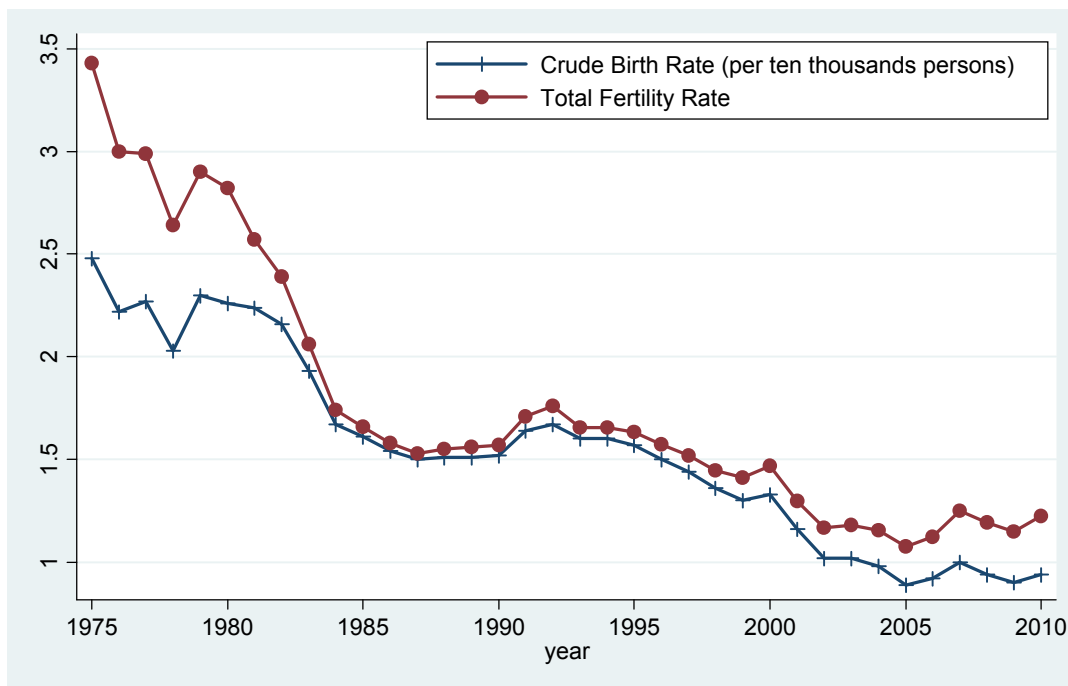

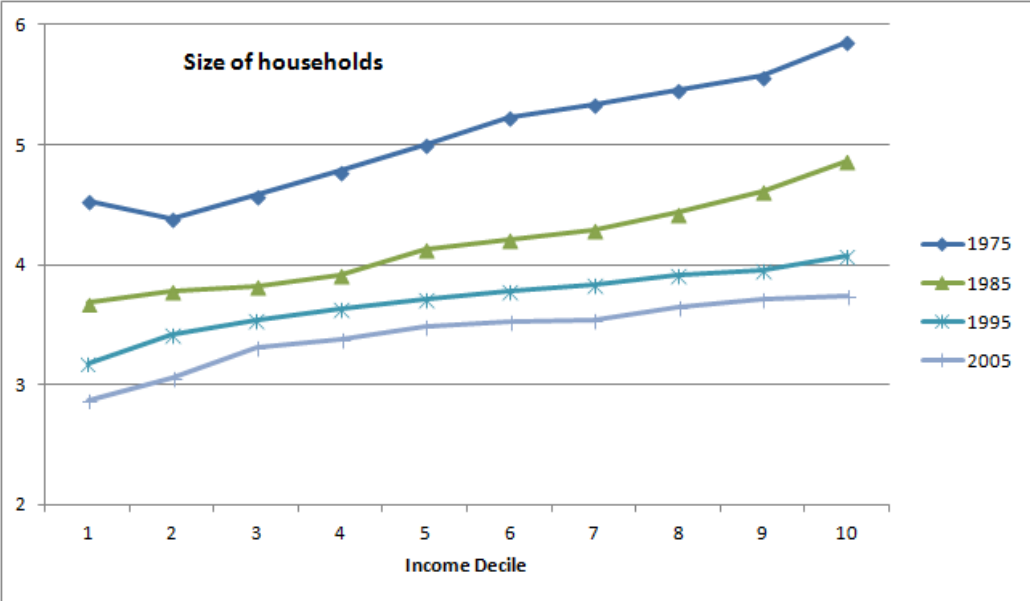**[Figure 6] Number of earners per household by income decile**

[Figure 7] Average size of household and earnings ratio

[Figure 8] Crude birth rate and total fertility rate

[Figure 9] Size of households by income decile

[Figure 10] Ratio of total household earnings to household expenditure