Comparative Study of Regional Differences of the Burden of Inheritance Tax in Japan and Korea

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【Abstract】

We first contrast the status of inheritance taxes within the national taxation systems of Japan and Korea in the two fiscal years 2004 and 2009. The year 2004 is 10 years after the burst of the bubble economy, and 2009 is the one year after the Lehman crisis. We focus on the regional differences in tax burdens that exist both in Japan and in Korea. By introducing a tax burden index, we analyze the differences of the Metropolitan areas of both countries and show that regional differences in the burden of inheritance tax are comparatively less pronounced in Japan than in Korea.

JEL Classification: H23

Keywords: inheritance tax, tax burden index, regional differences,

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Introduction

After the bubble economy experience in the two countries in the 1990s, it is often argued that the state of income distribution among households has deteriorated.[1] If so, we fear that this inequality of flow term would lead to inequality of stock term, i.e., inequality of wealth distribution individually and/or regionally. The wealth inequality could be widened through inheritance over the generations.

At the same time, as the economy matures, the central and local governments cannot expect sufficient tax revenues from predominantly income and consumption. Therefore, the governments need to widen the tax bases, particularly taxation on wealth, for example, inheritance tax.

With these observations in mind, we examine the nature of inheritance tax in the two countries and suggest that both Japanese and Korean inheritance taxes should be increased in order to (1) balance the weight of the taxes on income, consumption and wealth, and (2) to encourage the redistribution of wealth among regions as well as households/individuals.

In regards to the second point above, we point out the regional differences in tax burdens that exist both in Japan and in Korea. Some regions have lighter burdens while others heavier. This, we believe, reflects the unequal regional distribution of income and wealth. By introducing a tax burden index, we attempt to analyze regional inheritance tax burden differences in comparison with other national taxes such as income and consumption taxes at two different years, 2004 and 2009. Our results show that regional differences are comparatively less pronounced in Japan than in Korea.

This paper is organized as follows: Section 1 discusses the status of inheritance tax within the entire national tax system, encompassing such taxes as income tax, corporate tax and consumption tax in both Japan and Korea and in the different years 2004 and 2009. Section 2 briefly explains the inheritance tax system in Japan and Korea. In sections 3 and 4, the focus is on the regional distribution of inheritance tax and the regional differences of its burden in both countries. In the last section we discuss some future issues concerning inheritance tax and make suggestions as to what should be done regarding inheritance tax policy.

1. The Current National Tax Systems in Japan and Korea

Before discussing inheritance tax, let us compare the national tax systems of Japan and Korea. Table 1 shows the major national taxes such as income tax, corporate tax, and consumption (value added) tax of both countries for fiscal years 2004 and 2009. We also add inheritance/gift tax.

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1 For example see Tachibanaki [1998].

Table 1 Current Major National Taxes in Japan and Korea

Japan			Korea		
Tax type	2004	2009	Tax type	2004	2009
Income tax Corporation tax **Inheritance tax**	30.5% 23.8% **3.0%**	32.1% 15.8% **3.4%**	Income tax Corporation tax **Inheritance & Gift ax**	19.9 21.0 **1.0%**	22.3 22.8 **1.6%**
Consumption tax	20.7%	24.4%	Value added tax	29.4%	30.4%
Others[1)] and Specific sources[3)]	22.0%	24.3%	Others[2)] and Earmarked taxes[4)]	28.7%	22.9%
Total (100%)	48.1 trillion Yen	40.4 trillion Yen	Total (100%)	117.8 trillion Won	154.3 trillion Won

(Notes) 1) Japan includes Liquor tax, Stamp revenue, Tobacco tax, Gasoline tax, Liquified petroleum gas tax, Aviation fuel tax, Petroleum and coal tax, Motor vehicle tonnage tax, Custom duty, and Tonnage tax.

2) 'Item of others' in Korea includes Special Consumption tax, Liquor tax, Stamp tax, Custom Duties, and Revenue from past years.

3) Specific sources are Local road tax (transferred) (SA), Aviation fuel tax (transferred) (SA), Motor vehicle tonnage tax (transferred) (SA), Special tonnage tax (SA), Crude oil customs duty (SA), Promotion of power resources development tax (SA), Gasoline tax (SA), Special tobacco tax、 and Income tax (transferred). Revenues from specific sources are directed back to the individual special purposes.

4) Earmarked taxes include Traffic tax, Education tax, and Special tax for rural development. Traffic tax is imposed on gasoline and gas oil for improvement of infrastructure such as roads and urban transit systems. Education tax is imposed on gross receipts from the banking, and on the revenue from the following taxes: liquor tax, special excise tax, resident tax, registration tax, horse race tax, property tax, aggregate land tax, automobile tax, tobacco consumption tax, and transportation tax. The objective of the special tax for rural development is to support the rural community and the agricultural industry.

(Sources) National Tax Agency［each year］ *National Tax Agency Annual Statistics Report*.
National Tax Service［each year］ *Statistical Yearbook of National Tax*.

Table 1 indicates that the difference between the two countries is that taxation on income such as income tax and corporate tax is relatively high in Japan, and consumption taxation is relatively high in Korea. The key cause of high consumption taxation in Korea is the introduction of a 10% value added tax following the major tax reform in 1977. The reasons for lower revenues from corporate tax than from income tax in Japan are (1) that the business sector has been slow under a series of recessions, and (2) that the corporate tax rate was lowered recently. Consumption tax, stable since its introduction in 1989, is now an important component of the tax system.

On the other hand, the national tax system in Korea differs not only in the composition of consumption taxation, but in the composition of special purpose taxes (specific sources). The special purpose tax in Korea (earmarked taxes) is composed of three taxes: traffic tax, education tax, and a special tax for rural improvement. The share of these three taxes in the entire national tax revenues was 22.9% in 2009, much higher than their Japanese counterparts. However the share has decreased over five years from 28.7% to 22.9%.

Comparing the figures of both countries in this five year period, it is interesting to point out that Korea's total tax revenues have increased by 31% and Japan's total revenues have decreased by 7.7%.

The ratio of inheritance tax to the entire national tax revenues is 3.4% (3.0%) in Japan and 1.6% (1.0%) in Korea, that is, inheritance tax in Japan shows a higher ratio. This may be explained by the development of stock accumulation over the years in Japan. However, the inheritance tax of both countries is much lower than the other major national taxes. As the Japanese and Korean economies are heading toward a stock economy, the role of inheritance tax will become more significant.

Inheritance tax rates in the highest and lowest brackets in Japan and Korea are similar. International comparison of minimum rate, maximum rate, and number of brackets is shown in Table 2. The flat rate of the U.K. is different from other countries. Although the maximum rate looks very high, the majority of people are actually free from inheritance tax, as we will see later. Therefore, we can safely conclude that the burden of inheritance tax is not so heavy except for a special group of people.[2]

As is shown in Table 1, national tax revenue was 40.4 trillion yen in the General Account Budget for the fiscal year 2009. Among the breakdown of national tax revenue, inheritance tax was 1.161 trillion yen (3.4% share). The share of other countries was as follows: United States (Bequest and gift tax) 2.0%, UK (Inheritance tax) 0.7%, Germany (Inheritance/gift tax) 1.0%, and France (Inheritance/gift tax) 2.3%.[3] The lower share of inheritance tax in Japan is not just an exceptional case. Inheritance tax in other countries as we observe above, tends to comprise only a small percentage of the entire tax revenues.

Table 2 Inheritance Tax Rates of Major Countries (January 2011)

Tax Bracket	Japan	Korea	U.S.	U.K.	Germany	France
Minimum rate	10%	10%	18%	40%	7%	5%
Maximum rate	50%	50%	47%		50%	40%
Number of brackets	6	5	15	1	7	7

(Sources) Hanebuka［2005］(295), Suwazono [2011] (297) and Ministry of Finance and Economy［2010］. National Tax Agency［each year］ *National Tax Agency Annual Statistics Report*.

2. Inheritance Tax System in Japan and Korea

2-1. Japanese Inheritance Tax System

The Japanese inheritance tax is imposed on the privilege of transferring property from the decedent. This tax is based on the size of each statutory heir's share of the estate. The share of each heir is stipulated by Civil Law. It is a hybrid system of an estate tax and an inheritance tax. According to Ishi [1993], the main aim of combining the two taxes was to balance the tax burden on estates of the same size with the same number and types of heirs, even if the estate was distributed differently among heirs. It is important to note here that special allowances are made for a spouse of the decedent, the handicapped, and minors as we see in the Table 3. Ishi also mentions that the Japanese system is very unique in comparison with the estate tax in the U.S.A

2 Hanebuka［2005］(142). Ishi［1994］(155-158) states about the burden of inheritance tax as "we Japanese generally feel opposition to passing the parents'estate to children free of charge." Also Ishi mentions "people have unreal image about extremely high inheritance tax. However, only a few people bear it."

3 Suwazono［2011］(349-350).

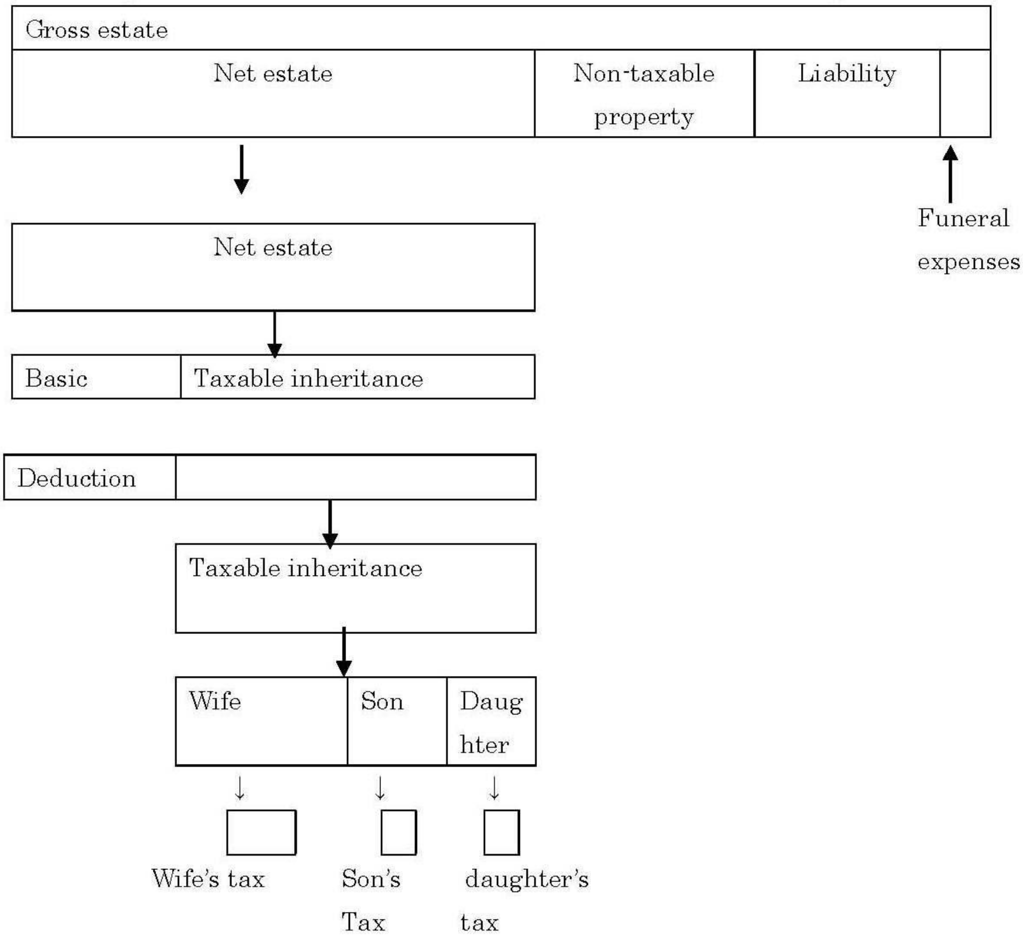
and UK, or the inheritance tax in Germany and France.[4] [5]

Residency status is crucial to determining tax payment obligations. That is, if the recipient is a resident of Japan, then he or she is responsible for overseas property as well as domestic property. If the recipient is a non-resident, then he or she is obliged to pay inheritance tax on domestic property only.

The inheritance tax in Japan is calculated in the following way, as Figure 1 below shows:

1. First, add up the value of each property acquired by inheritance or bequest.
2. Subtract the amount of liabilities, non-taxable assets etc. from the above. [Net estate]
3. Subtract basic deduction. [Taxable inheritance]
4. Divide the result above by legal shares among the statutory heirs.
5. Apply the appropriate tax rate to each share (the provisional tax amount of each heir).
6. Add up these provisional taxes, and allocate the taxes to each heir according to their actual share.

Figure 1 Flow Chart of the Calculation of Inheritance Tax in Japan



4 Ishi [1993] (217). Ishi means the tax base of estate tax is based on the size of the entire estate from the deceased before splitting the estate among the heirs. On the other hand the tax base of inheritance tax is the privilege of receiving property from the decedent. For basic idea behind the Japanese inheritance tax, see Kaneko [2002], Miki [2000], and Miki [2002].

5 Hanebuka［2005］(142).

Adding up these three taxes gives rise to the total inheritance tax.

The total amount of inheritance tax is paid by those who actually inherit properties. The share of the payment depends on the amount of property each heir has obtained.

Table 3 Deduction System of Inheritance Tax in Japan

	Deductions
Basic	50 million yen + 10 million yen x the number of statutory heirs
for spouse	(Total inheritance tax liability) x [the lesser of: ①the statutory share of the surviving spouse of the total taxable values of the property (minimum ¥160 million) or ②the taxable value of the properties actually received by the surviving spouse]/ (the total value of the properties held by all heirs, etc.
for minors under the age of 20	the product of ¥60,000 multiplied by the difference of his or her age and 20
for the disabled	the product of ¥60,000 (¥120,000 in the case of a person with a special handicap) multiplied by the difference of his or her age and 85

(Notes) 1) If the decedent received the properties by inheritance within ten years prior to his or her death, a certain percentage of inheritance tax imposed on the decedent is deductible.
2) With respect to certain sites for business (less than 400㎡), certain sites for residence (less than 240㎡), the taxable base is obtained by decreasing 80% or 50% of the respective value.
3) Payment of the inheritance tax on farmland acquired byan heir may be postponed until the date of the death of the heir.
4) For mountains and forests acquired by individuals through inheritance, 5% of the taxable value for inheritance tax purposes is reduced.
5) Special tax treatment is also applied to unlisted stocks, etc.

(Source) Ministry of Finance (Japan), *Comprehensive Handbook of Japanese Taxes 2010*, http://www.mof.go.jp/english/tax_policy/publication/taxes2010e/taxes2010e.pdf

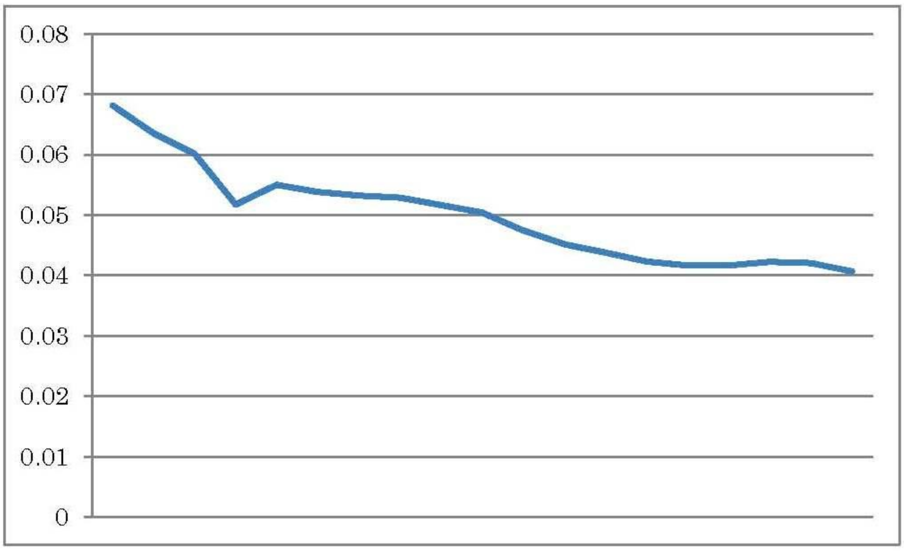
Table 4 shows the number of heirs with taxable property, their descendants, etc. For 2009, the number of cases subject to inheritance tax was 46,438 among 1,141,865 deceased. The ratio of ancestors is therefore 4.1 for 100 deceased. As Figure 2 shows, the ratio has been decreasing slightly since 1991 as the land prices, the most important value of properties acquired in calculating the inheritance tax base, continue to fall.

Table 4 Heirs, Decedents, and Inheritance Tax in 2004 and 2009

Inheritance Tax	2004	2009
Heirs with taxable property	(persons) 131,279	(person) 134,493
Their descendants	43,488	46,439
Taxable amount of property	(trillion yen) 9.861773	(trillion yen) 10.123038
Amount of inheritance tax	1.607472	1.666079

(Sources) National Tax Agency (Japan) ed.) *The 135th National Tax Agency Annual Statistics Report*, 2011. *The 129th National Tax Agency Annual Statistics*, 2005.

Figure 2 The Ratio of the Inheritance Tax Cases to the Entire Deceased for the year 1991-2009



(Sources) National Tax Agency (Japan) and Ministry of Health, Labor and Welfare (Japan)

The progressive inheritance tax rates are listed in Table 5. The highest rate is 50% which is applied to 300 million yen and over compared to 75% for 2 billion yen and over before 1988.

Table 5 Inheritance Tax Rates (as of October, 2012)

Amount Obtained by Each Heir according to his/her Statutory Share	Tax Liability
not over ¥ 10,000,000	10% of taxable amount
¥ 30,000,000	15% of taxable amount minus ¥500,000
¥ 50,000,000	20% of taxable amount minus ¥2,000,000
¥100,000,000	30% of taxable amount minus ¥7,000,000
¥300,000,000	40% of taxable amount minus ¥17,000,000
over ¥300,000,000	50% of taxable amount minus ¥47,000,000

According to statistics of the National Tax Agency, a breakdown of the values shows that land value is 7,100 billion yen and its ratio in inherited property was 58.7% in 2002, followed by cash, securities and buildings. Table 6 shows the changes in the land ratio to the inherited property since 1989, and Table 9a below shows more detailed data.

Table 6 The Ratio of Land Value in Inherited Property (%)

year	1989	1990	1991	1992	1993	1994	1995	1996	1998	2000	2002	2005
ratio	67.3	71.1	73.3	75.9	72.8	70.9	69.4	68.3	67.2	62.4	58.7	53.2

(Source) National Tax Agency (Japan).

The amount of inheritance tax payment per deceased individual peaked at 70 million yen in 1991 and then decreased to 35 million yen in 2009 as is calculated using Table 4.

On the other hand, the ratio of the amount of tax payment in the total of taxable value (average burden rate of inheritance tax) was 16.3% in 2002, and 16.5% in 2009. Compare these numbers to 22.2% in 1991.

Incidentally, in 2002 65% of deceased belonged to the taxable value class of less than 200 million yen and 81% to the taxable class of less than 300 million yen. Only 20% of deceased belong to the taxable class of over 300 million yen, and bear the highest tax rate of 50%. These numbers explain a decrease in the revenues from heritance tax in 2009. That is, the maximum 50% tax rate was applied to the inherited property of only 16% of ancestors. Also, the share of ancestors whose taxable value class of less than 200 million yen was 84%. These trends indicate the dominant effect of the burst bubble economy over the last 20 years.

2-2. Korean Inheritance Tax System

The Korean inheritance tax system is designed basically as an estate tax to be imposed on the entire properties of ancestors using a progressive tax rate. According to the calculation principle, the entire inheritance tax is paid by those who inherit properties. The share of the payment of each heir depends on the amount of property received. This method has an advantage in determining inheritance tax irrespective of the size of property or the method of division. .As is Japan's case, residency status is also crucial to determining an individual's inheritance tax obligations. Those who have to pay inheritance tax are the heirs or devisors of property under a person's will. Each pays an amount of inheritance tax depending on the amount of property received. The calculation method of the taxation standard for Korean inheritance tax is as follows:

Inheritance tax taxation standard

= <receiving property> – <tax exempt property> – <public impost, debts left by the bequeathed of the inheritance, and funeral expenses between 5 million and 10 million won> + <values of donated property within 10 years or 5 years> － <inheritance deduction>

The range of inheritance property varies depending on whether it is classified as inheritance property per se, deemed inheritance property, or estimated inheritance property. Inheritance property per se means an object with economic value convertible into money, and every claim which has legal and practical property value. Deemed inheritance property includes insurance money, trust property, retirement money and so on which are regarded as inheritance property. Finally estimated inheritance property means disposition of property or debt whose value is worth more than 200 million won but less than 500 million won if it is within one year, or more than 500 million won if it is within two years from the date of the commencement of the inheritance, and its expenditure is not unaccounted for.

As Table 7 shows, Korean inheritance tax also has a deduction system. Table 8 summarizes the current Korean inheritance/gift taxation type and tax rates.

Table 7 Deduction System of Inheritance Tax in Korea

Classification	Items	Deductions
①Basic Deduction	General	200 million won
②Human Deduction	-for Spouse	actual amount inherited by spouse deductible- min 50 million won, max 3 billion won.
	-for dependents	30 million won per person
	-for minors	an annual deduction of 5 million won until he or she becomes 20 years old
	-for the elderly	30 million won
	-for the disabled	an annual deduction of 5 million won until he or she becomes 75 years old
③ Lump-Sum Deduction		500 million won
④ Additional Deduction	-for inherited family business:	up to 100 million won
	-for inherited farms, fisheries, and forestry:	up to 200 million won
⑤Deduction for Financial Assets	net financial assets -	(= financial assets – financial debt) -less than 20 million won: total amount -20 million～100mill won: 20 million won -more than 100 million won: 20% of the total amount (However, limit is 200 million won)
⑥ Deduction for Losses	Fires, collapse of buildings, explosions etc., which affect the inherited property. -an amount equivalent to that of the loss incurred.	

(Notes) 1) One can choose ① Basic Deduction plus either ② Human Deduction (except Spouse Deduction) or ③ Lump-sum Deduction.
2) If taxpayer is a non-resident, then he or she is excluded from above deductions except basic deduction (200 million won).

(Source) Ministry of Finance and Economy［2005］*Tax Summary*

Table 8 Legal Tax Rate Structure in Korea

(Unit: million won)

Before 1996.12.31		1997.1.1～1999.12.31	After 2000.1.1
<Inheritance Tax>			
Below 50	10%		
Below 250	20%		
Below 550	30%	same tax base and tax rates	·
Over 550	40%	·Below 100 10%	Below 100 10%
		· Below 500 20%	· Below 500 20%
<Gift Tax>		· Below 1 billion 30%	· Below 1 billion 30%
Below 20	10%	· Below 5 billion 40%	· Below 3 billion 40%
Below 150	20%	·Over 5 billion 45%	· Over 3 billion 50%
Below 300	30%		
Over 300	40%		

(Note) If bequests that skip a generation such that one designates a grandchild as the beneficiary of a bequest, surtax amounting 30% shall be levied as inheritance tax.
(Source) Ministry of Finance and Economy ［2005］ *Tax Summary* .

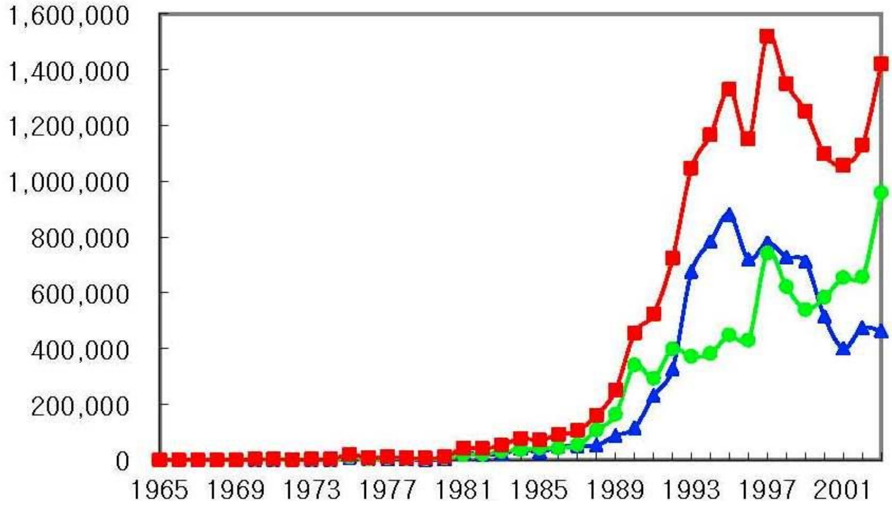
The due date for self-assessed payment of inheritance tax is within 6 months of the commencement of the inheritance (if the address is overseas, it is 9 months).[6] After the amount of tax is calculated, various tax credits are established. The main credits include: gift tax credit, foreign tax credit, credit for inheritances that are passed on quickly from generation to generation and a 10% credit for prompt submission of a tax return. A gift tax credit is granted for a property that is included as part of the inheritance property. Foreign tax credits are equivalent to the tax amount already paid to a foreign country as an inheritance tax, and if a new inheritance occurs within 10 years of the commencement of the inheritance for the first generation, a progressive credit is granted to the second generation heirs of the inherited property.

Below we will examine the current state of the inheritance tax revenue and inheritance property. The Korean inheritance/gift tax system shows that the revenues from inheritance/gift taxes were very low until the early 1980s, after that they increased continuously. In the 1990s revenues increased further, and hit a peak of 1.52 trillion won in 1997. After that, they decreased for a while, but have increased since 2000. Especially, tax revenue from gift tax exceeded inheritance tax after 1995.[7]

6 The due of gift tax payment is within 3 months after the gift.

7 The share of inheritance/gift taxes in the entire tax revenues was 2% in 1993, 1% in 2003, and 1.5% in 2005 as is shown in Table 1.

Figure 3 Trend of Tax Revenue from Inheritance/Gift Tax



(Note) —▲—Inheritance Tax, —●—Gift Tax, —■— Sum of the two, in million won.
(Source) Kim［2005］(11).

2-3. Comparison of Inheritance Estate by Type of Asset in Japan and Korea

Tables 9a and 9b show the values of inheritance estate by assets type in Japan and Korea. The share of land in Japan decreased over time with the exceptions of the years 2008 and 2009, during which time we saw an acute fall of stock prices due to the Lehman's fallout. On the other hand, as the shares of both securities and financial assets declined in Korea, building shares were pushed upward, even though the land share had been volatile. Japan's value of inheritance estate had been stable over the years, but Korea's value fluctuated year by year which showed the dynamism in Korea's economy.

Table 9a Trend of Value of Inheritance Estate by Type of Assets in Japan

(in million yen, %)

	Land	Buildings	Securities (Financial Property)	Cash etc. (Financial Property)	Others	Total billion Yen (100%)
2003	56.2	4.9	9.0	18.1	11.8	11,800.4
2004	53.2	5.4	11.4	19.9	10.0	10,948.8
2005	50.4	5.6	13.3	20.5	10.2	11.288.4
2006	47.8	5.0	15.8	20.6	10.8	11,397.4
2007	47.8	5.3	15.8	20.5	10.7	11,694.8
2008	49.6	5.4	13.3	21.5	10.2	11,801.7
2009	49.7	5.5	12.0	22.3	10.5	11,059.3

(Sources) National Tax Agency［each year］*National Tax Agency Annual Statistics Report*.

Table 9b Trend of Value of Inheritance Estate by Type of Assets in Korea

(in billion won, %)

	Land	Buildings	Securities (Financial Property)	Financial Property	Others	Total billion Won (100%)
2003	50.5	11.7		28.7	9.1	2,777.4
2004	38.6	9.9		40.2	11.3	4,210.3
2005	44.9	14.4	17.7	16.8	6.2	3,638.9
2006	45.8	17.6	14.3	16.1	6.3	4,021.4
2007	40.7	21.4	16.1	16.5	5.3	5,639.5
2008	41.0	27.2	12.6	14.4	4.8	7,274.0
2009	40.8	27.0	10.5	15.6	6.1	8,349.2
2010	42.9	27.3	7.0	17.0	5.8	7,469.0

(Sources) Korean National Tax Service, *Statistical Yearbook of National Tax*

This section will compare the regional distribution of inheritance tax in the Metropolitan areas of both Japan and Korea. The metropolitan area in Japan includes Tokyo, Saitama Prefecture, Chiba and Kanagawa Prefectures. The Korean metropolitan area includes Seoul, Incheon City, and Gyeonggi-Do. Tables 10 and 11 show the population, area, regional distribution of national taxes, and the inheritance tax burden of Japan and Korea for the years 2004 and 2009. Note that the figures in the parentheses in the tables below are the 'tax burden index' defined below.

Table 10 Distribution of Japanese Population, National Tax, Inheritance Tax Burden

	Population		National Tax		Inheritance Tax	
	2004	2009	2004	2009	2004	2009
Tokyo	9.6%	9.9%	34.5%(3.59)	35.9%(3.63)	28.6%(2.98)	26.0%(2.63)
Saitama	5.5%	5.6%	2.6%(0.47)	2.6%(0.46)	8.0%(1.45)	6.9%(1.23)
Chiba	4.7%	4.8%	3.2%(0.68)	3.2%(0.67)	4.0%(0.85)	3.9%(0.81)
Kanagawa	6.8%	7.0%	6.0%(0.88)	6.0%(0.86)	10.4%(1.53)	10.3%(1.47)
Total	26.7%	27.3%	46.3%(1.73)	47.7%(1.75)	50.9%(1.91)	47.1%(1.73)
Nation Wide(100%)	126.87 million	127.06 million	49.66 trillion yen	46.71 trillion yen	1.49 trillion yen	1.68 trillion yen

(Note) Figures in parentheses are the tax burden index which measures the percentage tax burden per 1% of population. This index is derived from dividing the tax burden rate of each region by the population ratio. For example, a national tax burden index of 3.59 is derived from dividing the national tax burden rate by the population ratio in Tokyo, 9.6%.

(Sources) National Tax Agency (Japan) （http://www.nta.go.jp）.

Economic and Social Research Institute, Cabinet Office (Japan), S*ystem of Prefectural Accounts,* （http://www.esri.go.jp/）.

Table 11 Distribution of Korean Population, National Tax, Inheritance Tax Burden

	Population		National Tax		Inheritance/gift Tax	
	2004	2009	2004	2009	2004	2009
Seoul	21.0%	20.5%	45.7%(2.18)	47.5%(2.31)	61.0%(2.90.)	59.6%(2.91)
Incheon	5.3%	5.4%	3.2%(0.60)	3.7(0.69)	2.5%(0.47)	2.9%(0.54)
Gyongi	21.7%	23.0%	13.4%(0.61)	14.2%(0.62)	17.2%(0.79)	17.7%(0.77)
Total	48.0%	48.9%	62.3%(1.31)	65.4%(1.34)	81.8%(1.71)	80.2%(1.64)
Nation wide(100%)	49.05 million	49.77 million	84.89* trillion won	113.32* trillion won	1.71 trillion won	2.43 trillion won

(Note) Figures in parentheses are the tax burden index which is derived in the same manner as is explained in Table 10 above. For example, a national tax burden index of 2.18 for Seoul is derived from dividing the national tax burden rate of 45.7% by the population ratio in Seoul, 21.0%.

* Figure is calculated as the total revenue from national tax minus import tax (25.3 trillion won). Thus, the total national tax revenue was 110.2 trillion won in 2004.

(Sources) Korean National Statistics Office (http://www.nso.go.kr/).
National Tax Agency (Korea), Annual Report of National Tax Statistic (http://www.nts.go.kr).
Ministry of Government Administration and Home Affairs [2005] *Financial Yearbook of Local Government*.

During the five year period the increase in population in both metropolitan areas was not so conspicuous. The population share in the Tokyo metropolitan area was 26.6% in 2004 and increased slightly to 27.3% in 2009. In the Seoul metropolitan area it was 48% in 2004 and 48.9% in 2009. It is worth pointing out that almost half of the entire population is concentrated in the Seoul metropolitan area.

When we compare the regional distributions of the two countries, it is misleading to compare just the ratios of metropolitan tax revenue to total tax revenue, since the metropolitan areas in each country have different population structures. In order to modify this we divide the tax revenue ratios by the population ratio, and derive the "tax burden index". That is, the tax burden index is an index which represents the percentage of tax burden for one percent of population.

Tax Burden Index =

$$\frac{\text{Tax Burden Ratio of the Region (\%)}}{\text{Pulation Ratio of the Region (\%)}} \quad \cdots\cdots\cdots\cdots\cdots\cdots \text{(1)}$$

The formula (1) is independent of the unit and can be used for comparison of the regional tax distributions of the two countries objectively. The higher the tax burden index, the higher the concentration of tax burden in the region. Below we will discuss the features of regional distribution of the two countries using this tax burden index.

First, although the share of national tax revenue of Seoul (45.7%) was higher than that of Tokyo (34.5%) in 2004, the tax burden index of Tokyo (3.59) was higher than that of Seoul (2.18) since Seoul was higher than Tokyo in the relative population composition ratio. That is, the tax burden of Tokyo was 3.59% for 1% of population, and that of Seoul was 2.18%.

The same is applied to the distribution of national tax revenues in the metropolitan areas. In 2004 the metropolitan area of Korea shows a higher concentration of national tax revenue (62.3%) than that of Japan (46.3%), but the picture is reversed if we compare the two areas by using the tax burden index. That is, the tax burden index of the metropolitan area of Japan (1.73) is higher than that of Korea (1.31). After five years, the tax burden indices of both Tokyo and Seoul metropolitan areas as well as Tokyo and Seoul are almost the same.

Finally it should be noted that the regional differences of inheritance tax revenue in Korea are extremely acute. How concentrated is the inheritance tax revenue in Seoul? It turns out that Seoul's share of the entire inheritance tax revenue was 61.0% and that of Korea's whole metropolitan area was 81.8% in 2004. The situation did not change much in five years. On the other hand, the degree of concentration of Japanese inheritance tax revenue is that Tokyo's share is 28.6%, and the share of the whole metropolitan area was 50.9% in 2004. These shares are higher than the concentration of national tax, but smaller than the concentration of those in Seoul or the metropolitan area of Korea. However, the tax burden index indicates an extremely high concentration of inheritance tax in both Tokyo (2.98% per 1% population) and Seoul (2.90% per 1% population).

It should be noted here that the share of inheritance tax revenues from Tokyo and its metropolitan area are 50.9% in 2004 and 47.1% in 2009. We can see a decrease in the taxable value of inherited property during five years, one of the consequences of the prolonged economic recession of recent years.

3. Regional Distribution and Difference of Major National Tax and Inheritance Tax

3-1. Distributions of Main National Taxes and Inheritance Tax

In the previous section we compared the regional distributions of the national taxes and the regional distributions of inheritance tax in the years 2004 and 2009. In this section we compare the regional distributions of both major national taxes and inheritance tax in Japan and Korea. Tables 12 and 13 show the regional distributions of the major national taxes including inheritance tax in Japan and Korea for the years 2004 and 2009.

Table 12 Regional Distributions of Major National Taxes and Inheritance Tax in Japan

	Income Tax		Corporate Tax		Consumption Tax		Inheritance Tax	
	2004	2009	2004	2009	2004	2009	2004	2009
Tokyo	34.7% (3.61)	38.8% (3.92)	43.1% (4.89)	47.5% (4.80)	38.4% (4.00)	37.8% (3.82)	28.6% (2.98)	26.0% (2.63)
Saitama	3.5% (0.64)	3.1% (0.55)	1.8% (0.33)	1.9% (0.34)	2.4% (0.44)	2.7% (0.48)	8.0% (1.45)	6.9% (1.23)
Chiba	2.6% (0.55)	2.7% (0.56)	1.3% (0.28)	1.8% (0.38)	2.0% (0.43)	2.3% (0.48)	4.0% (0.85)	3.9% (0.81)
Kanagawa	6.2% (0.91)	5.6% (0.80)	3.8% (0.56)	3.1% (0.56)	4.3% (0.63)	4.6% (0.66)	10.4% (1.53)	10.3% (1.47)
Total	47.0% (1.76)	50.2% (1.83)	50.0% (1.87)	54.3% (1.98)	47.1% (1.76)	47.4% (1.73)	50.9% (1.91)	47.1% (1.72)

(Note) Numbers in parentheses indicate the tax burden index which shows the percentage tax burden per one percent of population. For the derivation of this index, see the note of Table 10.
(Sources) Table 10 and National Tax Agency (Japan) （http://www.nta.go.jp） .

Table 13 Regional Distributions of Major National Taxes and Inheritance Tax in Korea

	Income Tax		Corporate Tax		Value-Added Tax		Inheritance/Gift Tax	
	2004	2009	2004	2009	2004	2009	2004	2009
Seoul	52.2% (2.49)	51.4% (2.50)	61.2% (2.91)	57.5% (2.80)	57.5% (2.73)	47.8% (2.33)	61.0% (2.90)	58.8% (2.87)
Incheon	3.2% (0.60)	3.5% (0.65)	2.2% (0.42)	2.9% (0.54)	4.9% (0.92)	4.8% (0.89)	2.5% (0.47)	3.2% (0.59)
Gyeonggi-Do	17.1% (0.78)	19.1% (0.87)	17.9% (0.82)	12.9% (0.56)	4.9% (0.22)	16.7% (0.73)	17.2% (0.79)	17.7% (0.77)
Total	72.5% (1.52)	74.0% (1.51)	81.3 (1.71)	73.3 (1.50)	67.2% (1.41)	69.3% (1.42)	81.8% (1.71)	79.7% (1.63)

(Note) 1) Numbers in parentheses indicate the tax burden index which shows the percentage tax burden per one percent of population. For the derivation of this index, see the note of Tables 10 and 8.
2) The value added tax is calculated by subtracting import tax revenue (25.3 trillion won). Therefore, total of national tax revenue in 2004 is 110.2 trillion won.
(Sources) Table11, National Tax Service (Korea), *Statistical Yearbook of National Tax* (http://www.nts.go.kr).

From Tables 12 and 13 we can see that the regional distribution of corporate taxation is more uneven than that of income tax and consumption (value added) tax in both countries. According to Table 12, the ratio of corporate tax revenue in Tokyo is 43.1% (50.0% in the metropolitan area), which is higher than that of income tax revenue 34.7% (47.0% in the metropolitan area), and that of consumption tax revenue 34.6% (43.3% in the metropolitan area). This feature is strengthened in the year 2009, one year after the Lehman crisis. The share of corporate tax collected in Tokyo is up from 43.1% to 47.5%. In Korea the share of corporate tax revenue in Seoul is 61.2% (81.8% in the metropolitan area), which is higher than that of income tax revenue 52.2% (72.5% in the metropolitan area), and that of value added tax revenue 57.5% (67.2% in the metropolitan area). This feature can be explained by the nature of corporate tax which is easily influenced by business cycles.[8] In 2009, the share of corporate tax collected in Seoul was down from 61.2% to 57.5%. This illustrates an interesting contrast between Japan and Korea's metropolitan areas. We see an increase in the former and a decrease in the latter. Here, too, we can recognize the dynamism of the Korean economy, with its extensive fluctuations.

Next, comparing the major national taxes and inheritance taxes, it is interesting to observe that the regional distribution of the shares of taxes both in Japan and Korea are so different. In Japan the regional distribution of inheritance tax is not so strong compared to those of income tax, corporate tax and consumption tax. On the other hand, in Korea, inheritance/gift tax displays almost the same distribution as corporate tax, but is more uneven than those of income tax and value added tax. Corporate tax revenue share in Tokyo (43.1%) is much higher than the inheritance tax share (28.6%) as is shown in Table 12 for the year 2004.

However, the share of inheritance tax revenue in Seoul is 61.0%, which is almost equivalent to that of corporate tax, 61.2%. This is true for the other two Korean cities. We learn from these facts that inheritance tax is extremely concentrated in Seoul according to the 2004 data. This feature of the concentration in Seoul of both corporate and inheritance taxes holds for the 2009 data, although the percentage for 2009 is lower than the percentage for 2004.Corporate tax in the Seoul metropolitan area, however, is not equivalent to the share of inheritance tax. That is, a smaller percentage 73.3% in 2009 than 81.3% in 2004.

However, the regional distribution of Japanese inheritance tax is almost equivalent to the distribution of corporate tax, if we widen the definition of Tokyo to include its metropolitan area. Table 12 tells us that the share of Japanese inheritance tax revenue from the metropolitan area is 50.9% which is almost the same as that of corporate tax revenue (50.0%). This can be explained by the fact that the share of inheritance tax burden in Chiba, Saitama, and Kanagawa well exceeds the share of corporate tax burden of each prefecture. For example, we can confirm that the share of inheritance tax is 10.4%, but that of corporate tax is only 3.8% in Kanagawa. This feature of a higher inheritance tax share than corporate tax share is applied to the other metropolitan areas such as Saitama and Chiba. These three prefectures feature bed room suburbs for people who work in Tokyo, therefore inheritance

8 These results suggest that Seoul is more volatile than Tokyo in the regional distribution of major national taxes, but Tokyo and its metropolitan area bear a heavier tax burden than other regions if measured by the tax burden index. For example, Table 10 indicates that the tax burden index of Tokyo is: income tax 3.61, corporate tax 4.89, and consumption tax 3.60. On the other hand, according to Table 9, Seoul's tax burden index is: income tax 2.49, corporate tax 2.91, and consumption (value added) tax 2.73%. These figures confirm the much higher burden in the Tokyo area than the Seoul area.

occurs frequently in their residential areas.[9] On the other hand, Table 13 indicates that the share of inheritance tax revenue in each Korean metropolitan area is very close to the share of corporate tax revenue of the area. This can be explained by the fact that the share of inheritance tax revenue is almost the same as that of corporate tax revenue both in both Incheon and Gyeonggi-Do.

3-2. Regional Differences of Major Taxes and Inheritance Tax

So far we have discussed the regional distribution of major national taxes and inheritance taxes in Japan and Korea. Below we will compare regional differences of major national income and inheritance taxes in the two countries. Tables 14 and 15 summarize the indices which are related to the regional differences of tax burden in major national taxes and inheritance tax. Table 14 lists 8 statistics concerning three major taxes and inheritance tax in Japan. The first line, the average, is derived by dividing each tax by the entire population in Japan, that is, the per capita tax payment of each tax. The second line, the coefficient of variation, is calculated based on the data of 47 prefectures. The third line, the Tokyo/average, is derived by dividing each tax in Tokyo by the nation- wide average. For example, the income tax burden of Tokyo, 455,021 yen, is 3.62 times as large as the national average. The fourth line is the prefecture with the largest tax burden. The fifth line is the smallest amount of per capita tax burden, and the sixth line is the prefecture with the smallest tax burden. The last line is the ratio of maximum to minimum per capita income.

Table 14 is Japan's data both in 2004 and 2009. Table 15 is Korea's data in both 2004 and 2009.

9 This is true for the year 2009. For example, the ratio of inheritance tax burden in Kanagawa is 10.3% while that of corporate tax burden is only 3.1% . That is, the ratio of inheritance tax burden far exceeds that of corporate tax burden.

Table 14 Regional Differences of Major National Taxes in Japan

	Year	Income tax	Corporate tax	Consumption Tax	Inheritance tax	National Taxes
Average (yen)	2004	125,685	84,104	99,174	10,937	389,183
	2009	121,303	74,776	103,729	11,802	359,211
Coefficient of variation	2004	0.4783	0.6531	0.5414	0.4643	0.4922
	2009	0.5300	0.6937	0.5130	0.4720	0.5025
Tokyo/average (multiple)	2004	3.62	4.49	4.03	2.98	3.60
	2009	4.00	4.91	3.89	2.94	3.70
MAX (yen)	2004	455,021	377,775	399,217	32,574	1,400,456
	2009	485,598	336,837	403,273	34,744	1,328,318
Max Region	2004	Tokyo	Tokyo	Tokyo	Tokyo	Tokyo
	2009	Tokyo	Tokyo	Tokyo	Tokyo	Tokyo
MIN (yen)	2004	52,041	17,223	33,240	2,453	127,589
	2009	44,010	14,956	36,363	2,547	120,966
Min Region	2004	Akita	Nara	Nara	Saga	Nara
	2009	Akita	Akita	Nara	Nagasaki	Nara
MAX / MIN	2004	8.74	21.93	12.01	13.28	10.976
	2009	11.03	24.53	11.09	13.64	10.981

(Source) National Tax Agency (Japan) （http://www.nta.go.jp/） .

Table 15 Regional Differences of Major National Taxes in Korea

	Year	Income tax	Corporate tax	Consumption Tax	Inheritance tax	National Taxes
Average (won)	2004	477,728	503,096	704,784	34,825	2,246,898
	2009	691,603	708,241	253,704	48,828	2,276,673
Coefficient of variation	2004	0.5110	0.6778	0.3744	0.7027	0.6890
	2009	0.5200	0.6918	1.3837	0.6546	0.7402
Seoul/average (multiple)	2004	2.49	2.92	0.96	2.91	1.68
	2009	2.50	2.80	2.33	2.87	2.32
MAX (won)	2004	1,190,066	1,466,867	675,737	101,228	6,474,835
	2009	1,731,711	1,985,084	854,813	139,964	6,759,902
Max Region	2004	Seoul	Seoul	Seoul	Seoul	Ulsan
	2009	Seoul	Seoul	Seoul	Seoul	Ulsan
MIN (won)	2004	143,813	64,269	-541,730	3,174	621,229
	2009	199,568	110,429	-736,276	4,903	740,845
Min Region	2004	Jeonnam	Jeonbuk	Ulsan	Jeonnam	Jeonbuk
	2009	Jeonnam	Jeonbuk	Ulsan	Jeonnam	Jeonbuk
MAX / MIN	2004	8.3	22.8	-	31.9	10.4
	2009	8.7	18.0	-	28.5	9.1

(Note) As Ulsan received enormous traffic tax revenue in 2004 (4.7 trillion) which is a singular value, Ulsan appears to be the maximum region for the total of national tax burden.

(Source) National Statistical Office (Korea) (http://www.nso.go.kr） .

National Tax Service (Korea), Statistical Yearbook of National Tax （http://www.nts.go.kr） .

Now we can point out that the regional difference for corporate tax is larger than that for income tax or for consumption tax. This relates to the previous statement that corporate tax has a more uneven regional distribution than that of income tax or of consumption tax. Table

14 indicates that the coefficient of variation for Japanese corporate tax was 0.6531 in 2004, which was larger than that for income tax 0.4783 or consumption tax 0.5414. The reasoning can be applied to the 2009 data in Table 14 with a stronger coefficient of variation of corporate tax, 0.6937. The same is applied to the Korean case. Table 12a shows that the coefficient of variation of corporate tax in Korea is 0.6778, which is larger than income tax 0.5110 or value added tax 0.374[10] for the year 2004. Note that in 2009 the coefficient of variation of corporate tax increased to 0.6918.

However, the regional distributions of both major national taxes and inheritance tax between Japan and Korea are very different. As we see in Tables 14 and 15, inheritance tax does not exhibit strong regional differences compared to income tax, corporate tax, and consumption tax in Japan. In contrast, the regional difference of inheritance/gift tax exceeds that of income tax, corporate tax, and consumption tax in Korea. The coefficient of variance (abbreviated as CV below) for Japanese inheritance tax is 0.4643 according to Table 14 which is smaller than the CVs of income tax (0.4783) and of consumption tax (0.5414), and is much smaller than the CV of corporate tax (0.6531).

Table 14 shows that the CV of inheritance tax is 0.4720, a bit higher than five years ago. The CV is smaller than the CVs of income tax, 0.5300, consumption tax, 0.4130, and of corporate tax, 0.6937.

The Korean case makes an interesting contrast with the Japanese case. That is, the CV of inheritance tax in Korea is 0.7027, which is much greater than the CVs of income tax, 0.5110, of consumption tax, 0.3744. Interestingly, it is also greater than the CV of corporate tax, 0.6778.

The 2009 data in Table 15 assures consistent reasoning with the result of five years ago. That is, the CV of inheritance tax 0.6546, which decreased from 0.7027, is greater than CVs of both income tax, 0.5200, and of value added tax, 0.3837.[11] These facts imply that the concentration of inheritance property has accumulated more intensively in Seoul than in Tokyo.

This observation leads us to an important policy implication, that of relaxing the uneven inheritance property distribution in Korea. On the other hand, in Japan, as we saw above, the revenues of major national taxes are concentrated in Tokyo, therefore it can be expected that the government should seek to ease this uneven distribution of tax revenues.

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10 In the case of income tax, the regional difference is larger in withholding income tax than in self-assessed income tax. This can be explained by the fact that withholding income tax is applied to wages and salaries for which tax is imposed progressively, and to interest and dividends.

11 Note that the CV of corporate tax in 2009, 0.6918, is larger than the CV of inheritance tax,

4. Issues of Inheritance Tax

This paper compares tax burdens between Japan and Korea by using the tax burden index, which is not influenced by differences in population composition or geography, and two data sets from different years, 2004 and 2009. We point out that the regional distribution of inheritance taxation in Korea is very uneven. The ratio of inheritance tax collected in Seoul to the total inheritance tax amount was 61.0% (81.8% in the metropolitan area) in 2004 and 58.8% in 2009 (79.7% in the metropolitan area) These are extremely high compared to the concentration degree of the sum of national and local taxes. In contrast, the ratio of inheritance tax revenue collected in Tokyo to the entire revenues was 28.6% (50.9% in the metropolitan area) in 2004 and 26.0% (47.1% in the metropolitan area) in 2009, which are much lower than those of Seoul and its metropolitan area. Nevertheless, per 1% population in Tokyo the degree of inheritance tax burden was 2.98% in 2004 and 2.63% in 2009, which was very close to the burden of 2.90% in 2004 and 2.87% in 2009 per 1% of population in Seoul as calculated by the tax burden index. The tax burden in the capital cities of both countries is remarkably similar and extremely high.

Furthermore, Japan and Korea look very different if we compare the distributions of national and inheritance taxation. The degree of regional variation in inheritance taxes in Japan is not so severe compared to income, corporate and consumption taxes. However, the degree of regional variation in inheritance/gift taxes is stronger than that of income and value added taxes, and is similar to that of corporate taxes. Nevertheless, if we focus our attention on metropolitan areas alone, the distribution of inheritance taxes in Japan closely resembles that of corporate taxes.

These results suggest to us that the concentration of bequeathed assets in Seoul is much higher than in Tokyo, and therefore the correction of such an extreme imbalance should be an urgent policy objective. In Japan, not only inheritance tax revenue, but also the major national tax revenues such as income and corporate taxes are overwhelmingly higher in Tokyo than in the rest of the country. We need to ease this unevenness to some extent.

We have another problem concerning how to characterize inheritance tax in the future. As income tax rates are smoothing out in accordance with global trends, and as consumption tax rates are scheduled to be raised in the near future, the redistribution mechanism of taxation will be weakened in Japan. Under these circumstances the redistribution mechanism built into inheritance taxes will become controversial. If we emphasize the importance of equal opportunity at the start of life, we will strengthen the imposition of inheritance tax.[12] But if we emphasize the importance of capital accumulation in the parents' generation, then we will

12 See, for example, Noguchi [2002].

weaken its imposition. In particular, the owners of small businesses desire to transfer their property to their children in order to continue their businesses even after their deaths. Therefore, they seek lighter inheritance tax burdens. These are important issues that should be taken into account when designing an optimal tax system.

When evaluating Japanese tax reform, we need to consider the reality of both a declining and rapidly graying population, not to mention a deteriorating fiscal environment. Recent Japanese efforts to pursue the balance of taxation on income, assets, and consumption can be praised for securing sound tax revenues. This trend will enhance the importance of taxation on assets, especially inheritance taxes.

In Korea the National Tax Service introduced revised regulations in December, 2003 aimed at closing tax loopholes. The changes revised the definition of a gift so that it is "not just a gift as specified by civil law, but a transfer of property at no cost to others." In this way the taxable gift range specified was comprehensibly widened. This revision implies that comprehensive inheritance and gift taxes are to be enforced. It was expected that this revised law would eliminate property transfers occurring without tax payments, realize fair taxation and equalize tax payers' economic positions through the redistribution mechanism. Although this revised inheritance/gift tax went into effect on January 1, 2004, the fair application of the law pertaining to generational transfers of property has not yet been realized. We do, however, expect inheritance/gift taxes to play a positive role in achieving fair generational transfers in the near future.

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