

Japan's Income Tax Base: Comparison with Other Countries and Estimation of Tax Reform

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Abstract

This paper shows that Japan's income tax base is eroded mainly by the employment income deduction and social security benefits/contributions not being included in the tax base, through comparison with other countries, and how it is possible to increase income tax revenue by correcting these deductions with a simple estimation using tax affair statistics.

Firstly, we re-estimate the trend in Japan's income tax base presented in Morinobu and Nakamoto (2013), reflecting the revision of the benchmark year and retroactive adjustment of SNA. Even though the trend was adjusted downward by 2 or 3%, reflecting the downward adjustment of household receipts, the main causes of the erosion are the deductions for employment income and social security benefits/contributions under Japan's aging society, in the same way as mentioned in Morinobu and Nakamoto (2013). These features of Japan's income tax system are confirmed by both comparisons with the macro-estimated income tax base in the U.S. and with more-easily estimated income tax base of the average income class household in the U.S. and other European countries. Recently, the significance of one of the purposes of the employment income deduction, the adjustment to other incomes, has been decreasing, so it is necessary to review the employment income deduction to confine the feature to the deduction for approximate work-related costs. This paper estimates the amounts of increased tax revenue under the assumed reform in the employment income deduction. Tax revenue will increase 50%, with the reform in the employment income deduction, and additionally increase 10% with the extra reform in the deduction for the social security contributions. In short, it's useful to review the employment income deduction to restore the income tax revenue, especially of the low and middle income brackets.

Keywords: income taxation, income tax deductions, taxation base, tax system reform
JEL Classification: E62, H24

I. Introduction

The erosion of Japan's income tax by various deductions and the necessity for a remedy has been pointed out by many researchers.

There are two problems with the income tax erosion by the deductions. One of them is the significant loss of the revenue-raising function. Although the consumption tax rate is now under sequential hike (from 5 to 8% in April 2014, and to 10% in October 2015) for the sake

of a sustainable social security system, it is an important challenge to recover income tax revenue considering that the aging of society will continue. Another problem is the loss of the redistribution function: the benefit to the high-income class from income deduction is larger than that to the low-income class, as shown by Cabinet Office, Government of Japan (2002).

Following the expansion of the erosion in line with the expansion of various tax deductions for economic recovery through the 90s' after the economic bubble burst, many reforms have been conducted in the 2000s', including the reduction of exemptions for dependents and spouses. However, the tax base expansions of these reforms are canceled out by the swelling of the social security benefits and contributions not included in the tax base as the aging of society progresses. The swelling with tax base erosion will be expected to continue (Morinobu and Nakamoto (2013)).

In this paper, we examine the features of the erosion of Japan's income tax system through comparison with U.S. and European countries, and estimate the changes of the tax burden of different income classes and revenue increases by reforms consisting of deductions.

In the next section, we start with re-estimation of Morinobu and Nakamoto (2012), using renewal data because of the revision of the benchmark year of SNA. The feature of Japan's income tax base is shown through comparison of the macro-estimation with the U.S in section III and comparison with the income tax base of average income households in the U.S. and European countries using OECD statistics in section IV. In section V, we estimate the impact of the reform of employment income deduction and/or social security contributions. Section VI concludes this paper.

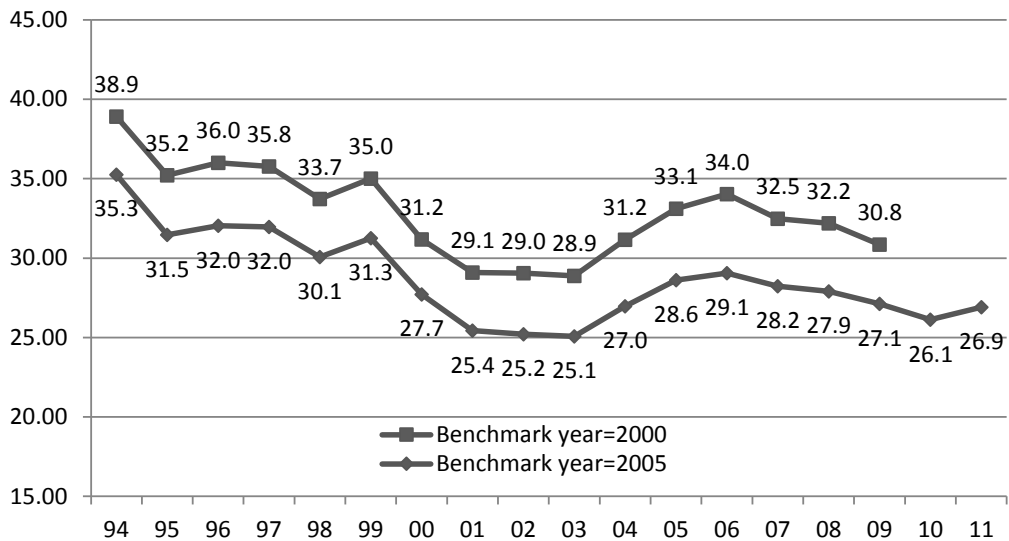
II. Re-estimation of the trend in Japan's Income Tax base

We estimate the trend in the Japan's income tax base using 93SNA in Morinobu and Nakamoto (2013). One of the contributions of the paper, the estimation was conducted considering the deductions for public pensions of non-declared income and the salaries of public employees, which have not been considered by previous research. We found a decreasing trend in the income tax base due to the expansion of the social security benefits and contributions under the aging society, and formulated the proposition that it is important to repair the tax base by reviewing the various deductions.

The period of the estimation of Morinobu and Nakamoto (2013) is from 1980 to 2009, using SNA with the benchmark year of 2000. Here we re-estimate the trend from 1994 to 2011, reflecting the revision of the benchmark year to 2005 and retroactive adjustment of SNA. The trend is presented in Figure 1.¹ Because the revision includes the change of the household receipts and of the number of workers and employees, the estimation was adjusted downward.

¹ The method used for the estimation is largely discussed in section III. See also Morinobu and Nakamoto (2013) in detail.

Figure 1 Trend of the income tax base before/after revision



However, Table 1 shows that the change of the components of the trend is the same as that shown in Morinobu and Nakamoto (2013). In short, the tax base has been scaled down by the expansion of deductions for social security benefits and contributions overwhelming the shrinking deductions for dependents and spouses.

Over the past two years, personnel deductions have shrunk to a large degree due to the abolition of exemptions for general dependents under 16 years old (380,000 yen) and additional exemptions for special dependents from 16 to 19 years old (250,000 yen). But this is overwhelmed by the expansions of the deductions for social security benefits and contributions, so the tax base has continued to shrink. Also, the most important factor of the shrink is still the employment income deduction.

Table 1 Trend in the income taxation base of Japan and its components

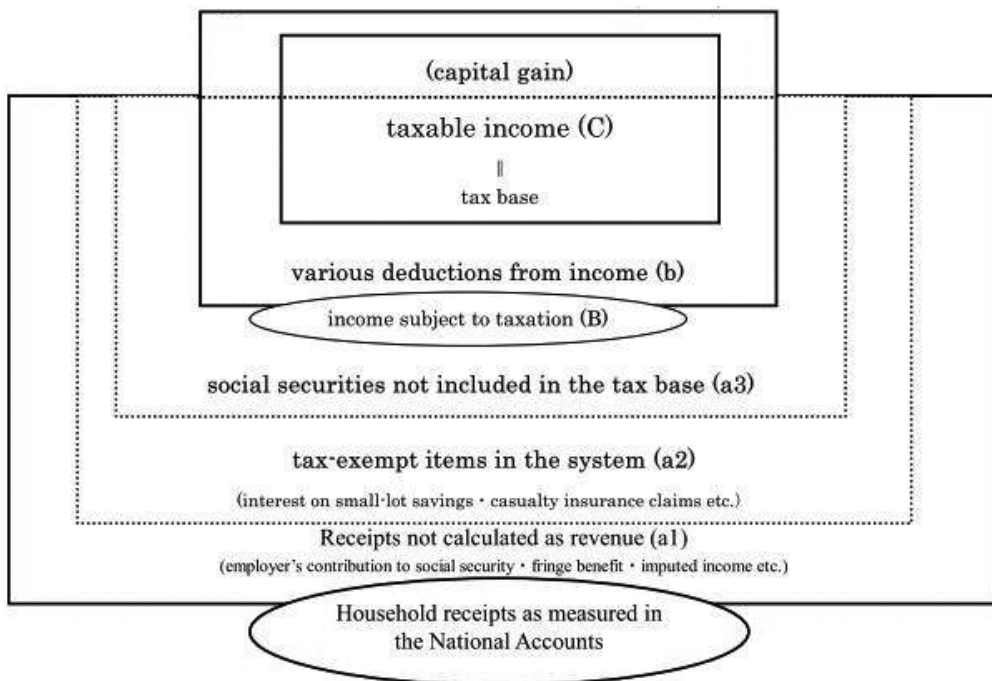
Factors excluded from the tax base	A.1997	B.2003	C.2006	D.2009	E.2011	B-A	C-B	D-C	E-D	E-A
Social security benefits/contributions not included in tax base	28.4	34.1	33.7	36.7	38.8	5.7	▲ 0.4	2.9	2.1	10.4
Employers' actual social contributions	6.8	7.3	7.4	7.5	8.0	0.5	0.1	0.1	0.6	1.2
Unfunded employee social benefits	2.7	2.9	2.7	2.6	2.5	0.2	▲ 0.2	▲ 0.1	▲ 0.1	▲ 0.2
Deduction for public pension	7.3	10.2	10.4	12.0	12.6	2.9	0.1	1.6	0.6	5.3
Deduction for social security benefits (other than pensions)	3.9	4.7	4.6	5.8	6.3	0.8	▲ 0.1	1.2	0.5	2.4
Deduction for social insurance premiums	7.1	8.2	7.9	7.8	8.4	1.1	▲ 0.3	▲ 0.1	0.6	1.2
Deduction for medical expenses	0.5	0.7	0.8	1.0	1.0	0.2	0.1	0.2	0.0	0.5
Income deductions	30.3	31.8	28.6	28.3	26.3	1.5	▲ 3.3	▲ 0.3	▲ 2.0	▲ 4.0
Basic deduction	6.3	6.6	6.6	6.7	6.6	0.3	▲ 0.0	0.1	▲ 0.1	0.3
Personnel deductions	8.9	9.3	6.6	6.4	4.2	0.4	▲ 2.7	▲ 0.3	▲ 2.2	▲ 4.7
Special personnel deductions	0.7	0.8	0.2	0.2	0.3	0.10	▲ 0.58	0.01	0.02	▲ 0.46
Exemption for spouse	1.9	2.0	1.9	1.8	1.7	0.07	▲ 0.12	▲ 0.07	▲ 0.11	▲ 0.23
Special exemption for spouse	1.5	1.6	0.1	0.1	0.1	0.08	▲ 1.50	0.01	0.02	▲ 1.40
Exemption for dependents	4.7	4.9	4.4	4.2	2.1	0.17	▲ 0.49	▲ 0.22	▲ 2.11	▲ 2.65
Employment income deduction	15.1	15.9	15.3	15.2	15.5	0.8	▲ 0.5	▲ 0.1	0.2	0.4
Other deductions	1.3	1.2	1.1	1.1	1.1	▲ 0.06	▲ 0.09	▲ 0.04	▲ 0.01	▲ 0.20
Deduction for casualty loss	0.0	0.0	0.0	0.0	0.1	0.00	0.00	▲ 0.00	0.05	0.05
Deduction of life insurance premium	1.0	1.0	0.9	0.8	0.7	▲ 0.05	▲ 0.10	▲ 0.04	▲ 0.15	▲ 0.33
Deductions from premiums for small-scale company mutual aids and so on	0.2	0.2	0.2	0.2	0.2	0.0	▲ 0.0	0.0	0.0	0.0
Deduction for donation	0.1	0.1	0.1	0.1	0.1	▲ 0.01	0.01	▲ 0.01	0.08	0.07
Deduction of nonlife insurance premium	0.0	0.0	0.0	0.1	0.1	▲ 0.00	▲ 0.00	0.02	▲ 0.00	0.01
Other transfer	6.1	6.0	5.6	5.0	5.1	▲ 0.2	▲ 0.3	▲ 0.7	0.1	▲ 1.0
Tax-exempt items in the system	0.5	0.3	0.1	0.1	0.0	▲ 0.1	▲ 0.2	▲ 0.0	▲ 0.0	▲ 0.4
Taxable income(Tax base)	33.5	26.6	30.9	28.9	28.7	▲ 6.9	4.3	▲ 1.9	▲ 0.2	▲ 4.8

III. Comparison of the macro-estimation of the tax base with the United States

The feature of Japan's tax base will be clarified through comparison with other countries in sections III and IV. In this section, like Morinobu and Maekawa (2000), we estimate the U.S. income tax base using the National Income and Product Account (NIPA) in order to compare the structures of income tax base erosion between Japan and the U.S.

The estimation of the income tax base using SNA has been conducted as shown in Figure 2 depending on Morinobu and Maekawa (2000). In short, firstly calculate tax-exempt items (B) by subtracting 'receipts not calculated as revenue' from 'Household receipts (A),' and then calculate taxable income (C) by again subtracting various deductions.

Figure 2 Estimation of the income tax base using SNA



Source: Morinobu and Maekawa (2000)

III-1. Household receipts (A)

For Japan, we calculate household receipts using data in the ‘Annual Report on National Accounts of 2013, including retroactive results from 1994.’ For the U.S. we use “Personal Income” of ‘Table 2.1 Personal Income and Its Disposition’ in NIPA.²

III-2. Receipts not counted as revenue (a1)

Firstly, we subtract ‘receipts not calculated as revenue’ from household receipts (A). Imputed rents and fringe benefits are classified in this category. But fringe benefits are not calculated because we cannot evaluate them as concrete figures.

As for the imputed rents, “Imputed service from owner-occupied dwellings” of SNA is used for Japan, while ‘Nonfarm owner-occupied housing’ of NIPA is used for the U.S. This category accounts for 6.6% in Japan, and 2.4% in the U.S. respectively in 2011.

² The NIPA personal sector is more broadly defined than the SNA households. Actually, the former includes SNA households and SNA nonprofit institutions serving households, and the net income of all private unincorporated businesses (Mead et al (2004)).

Here, household receipts (A) minus receipts not counted as revenue (a1) form the base of the share of the various components calculated from here on.

III-3. Tax-exempt items in the system (a2)

For Japan, ‘other current transfer’ of SNA, denoting money transfers such as remittances and gifts, is used as this category. Also, some preferential treatments about interest on savings calculated using ‘National Tax Agency Annual Statistics Report’ are used.

For the U.S., ‘Other current transfer receipts, from business (net)’ of NIPA is used in this category. The interests of government bonds of households are also used, and are calculated as follows: ‘Interest payments to persons and business’ of NIPA Table 3.1 ‘Government Current Receipts and Expenditures’ are divided into the firm sector and household sector using the ratio of ‘net interest’ of Table 1.13 ‘National Income by Sector, Legal Form of Organization, and Type of Income’ between firms and households.

III-4. Social securities not included in the tax base (a3)

For Japan, the deductions relating to “employers’ actual social contributions,” “social security benefits in cash,” “social assistance benefits,” “social insurance premiums” and “medical expenses” are taken into account in this category. These are calculated using tax affairs statistics and SNA (see Morinobu and Nakamoto (2013) for details).

For the U.S., “Employer contributions for government social insurance” of NIPA Table 2.1 is used. As pointed out in Morinobu and Maekawa (2000), social benefits and public pensions are taxed in principle, which is a major difference from Japan. Also, we must calculate public pensions and private pensions separately, reflecting the difference in their treatment under tax law.

We calculate the deductions for public pensions, subtracting “Taxable social security benefits” of *Source of Income* (SOI) from “Social security” of NIPA of Table 2.1 ‘Personal current transfer receipts.’ Also the deductions for private pensions are calculated by subtracting “Taxable pensions and annuities” from “Total pensions and annuities” of SOI.

In addition to these, the following are classified in this category: Medicare, Medicaid, Unemployment insurance, etc. of NIPA “Government social benefits to persons” and adjustments considered as relating to social security, such as “One-Half of the Self-Employment Tax Paid,” “Total taxpayer IRA adjustment,” “Self-employed Health Insurance,” “Keogh retirement plan,” and “Health savings account deduction.”

III-5. Various deductions from income (b)

Further, we proceed to subtract various income deductions. For Japan, the following matters are calculated using tax affairs statistics and classified in this category: 1) “employment income deduction,” which is characterized as a business expense, 2) personnel

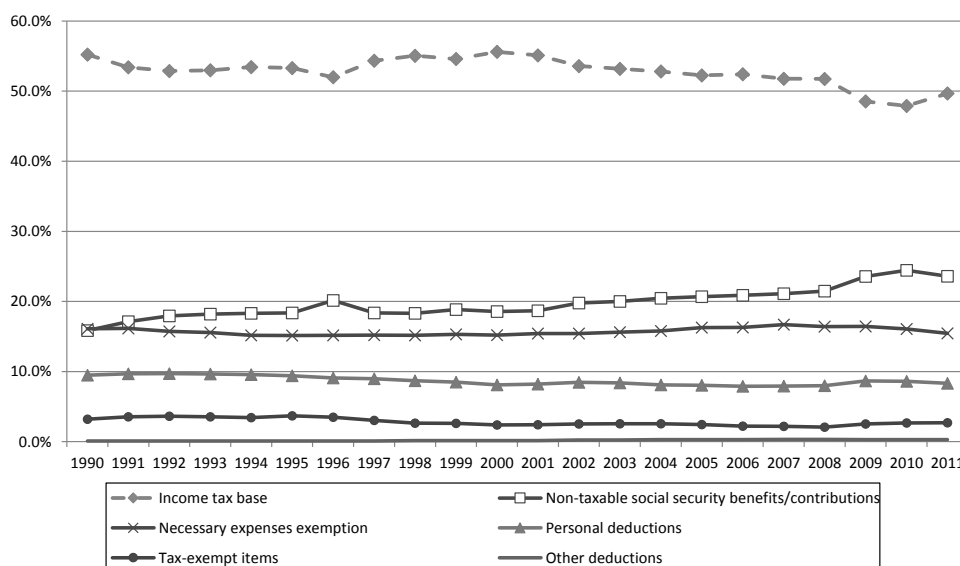
deductions (primary personnel deductions, such as the basic deductions, various exemptions for spouse and various exemptions for dependents, as well as special deductions, such as deductions for people with disabilities and so on), and 3) other deductions (“deduction for casualty loss,” “deduction of life insurance premiums,” “deduction of nonlife insurance premiums,” “deductions from premiums for small-scale company mutual aids and so on” and “deduction for donations”).

For the U.S., personal exemption, standard deduction, and itemized deductions are classified in this category. The latter two items are alternatives. Recently, 65% of taxpayers receive a standard deduction (Ito (2013)), and adjustments not mentioned above in III-4 are also counted in this category, such as “Penalties on early withdrawal of savings,” “Alimony paid adjustments,” “Moving expenses,” “Student loan interest deduction,” “Tuition and fees deduction,” “Educator expenses,” “Certain business expenses of reservists, performing artists, etc.,” and “Domestic production activities deduction”.

What is the connection between these deductions? All taxpayers in the U.S. are allowed a personal exemption comprised of the amounts for the individual taxpayer, his/her spouse, and children, which is the same as the primary personnel deductions in Japan, such as the basic deductions, various exemptions for a spouse and various exemptions for dependents.

The amount of standard deductions is defined based upon taxpayer’s filing status, which is superficially like personnel deductions. But taxpayers eligible for standard deductions can choose itemized deductions, which are composed of the amounts for certain expenditures, such as medical and dental expenses deduction, tax paid deduction, interest paid deduction, charitable contribution deduction, etc. Morinobu and Maekawa (2000) considered itemized deductions having the combined functions of other deductions defined above and the

Figure 3 Trend in U.S. income tax base and its components



“employment income deduction,” as business expenses. They classified standard deductions as the same based on the relationship in the system between standard deductions and itemized deductions. This paper follows that approach.

III-6. Comparison

The trend in the U.S. income tax base estimated above is shown in Figure 3. Although recently the tax base has shrunk, following the Lehman shock and the decrease of household receipts (and expansion of the share of deductions), the trend is for the tax base to basically stay over 50%, which is much different from Japan, which is under the pressure of swelling social security benefits and contributions not being included in the tax base.

Table 2 compares the components of the household receipts between Japan and the U.S. Through this comparison, the features of Japan’s income tax system can be seen in the area

Table 2 Comparison between the income tax bases of Japan and the U.S.

Japan(2011)		U.S(2011)	
Non-taxable social security benefits/contributions	38.8	Non-taxable social security benefits/contributions	23.6
Employers' actual social contributions	8.0	Employer contributions for government social insurance	3.8
Deduction for social insurance premiums	8.4	<u>Adjustments</u> (HSA,IRA,Keogh, self-employed health insurance)	0.7
Deduction for public pension	12.6	Deduction for public pension	4.0
Unfunded employee social benefit	2.5	Personal pensions	3.1
Deduction for social security benefits (other than pensions)	6.3	Medicare	4.2
Deduction for medical expenses	1.0	Other social benefits(Medicade, Unemployment insurance etc.)	7.8
Personal deductions	10.8	Personal deductions	8.3
Basic deduction	6.6	Exemptions	8.3
Other personnel deductions	4.2		
Special personnel	0.3		
Exemption for spouse	1.7		
Special exemption for	0.1		
Exemption for dependents	2.1		
Necessary expenses exemption	16.6	Necessary expenses exemption	15.4
Employment income deduction	15.5	Standard Deduction	6.0
Deduction for casualty loss	0.1	Itemized Deduction	9.5
Deduction of life insurance premium	0.7		
Deductions from premiums for small-scale company mutual aids and so on	0.2		
Deduction for donation	0.1	Adjustments (other than social insurances	0.3
Deduction of nonlife insurance premium	0.1		
Other transfer	5.1	Other current transfer receipts, from business (net)	0.4
Tax-exempt items in the system	0.02	Interest payments	2.3
Taxable income(Tax base)	28.7	Taxable income(Tax base)	49.7

of social security benefits/contributions and income deductions, including the employment income deduction.

III-6-1. Non-taxable social security benefits/contributions

Morinobu and Maekawa (2000) estimated that the proportion of “Non-taxable social security benefits/contributions” is 25.2% in Japan, and 21.6 in the U.S. The difference was 3.6 points.³ Morinobu and Maekawa (2000) pointed out the difference in the way to levy pension income: In the U.S., there is no deduction on the contributions and part of the benefits is levied, while in Japan all contributions and almost all benefits are treated as deductions.

These income tax systems remain unchanged. Even though the amounts of Medicare and Medicaid have been growing, the proportion of the deductions relating to social securities has not grown much (23.4%). In Japan, with its aging society and subsequent rising contribution burden, the deduction for social insurance premiums and benefits of public pension have grown so dramatically that the amount of non-taxable social security benefits/contributions has increased by more than 10% from the estimation of Morinobu and Maekawa (2000). (38.8%, see Table 1).

III-6-2. Income deductions

Morinobu and Maekawa (2000) estimate that the proportions of income deductions, defined as the sum of personal exemptions and necessary expense deductions, were 31.7% in Japan, and 21.4% in the U.S. The difference is more than 10 points.

One reason why the difference has shrunk (from 12.7% in Morinobu and Maekawa (2000) to 10.8% in this estimation) is that personnel deductions in Japan have decreased greatly as a result of the abolition of some of the exemptions for a spouse and dependents, as described above. In contrast, personal exemption in the U.S remains almost unchanged, 8.3%. In short, although the difference from this part shrunk by 2%, due to reform in Japan, 2.5% remains.

Some of the change is a result of the differences between the calculation method of this paper and of Morinobu and Maekawa (2000). For example, the retirement lump sum grant, which is a 2.2% deduction in Morinobu and Maekawa (2000), is not calculated in this paper explicitly, because of the revision of SNA accompanying the change of item definitions (see Morinobu and Nakamoto (2013) for details).

In spite of the shrinkage, in addition to the difference of 2.5% in income deductions, there is also a difference of 1.1% in “Necessary expenses exemption”; Japan’s income

³ See Morinobu and Maekawa (2000) for details. It should be noted that the denominator of Morinobu and Maekawa (2000) is slightly different from that of this paper: They used ‘the household receipts including imputed rent,’ whereas this paper uses ‘the household receipts excluding imputed rent.’ Because the denominator of this paper is smaller, the proportion of the components is larger.

Table 3 The components of Itemized Deductions (2011)

items	deducted amount (billion \$)	Proportion (%)
Medical and dental expenses deduction	82.2	7.0%
Taxes paid deduction	450.8	38.6%
Interest paid deduction	371.6	31.9%
Charitable contributions deduction	160.3	13.7%
Total Itemied deductions	1166.3	100.0%

Source: Internal Revenue Service (2013)

Note: The sum of proportions is not 100%, because there are other items, such as ‘Casualty and theft losses’ and others.

deductions are much more generous. On the face of it, the necessary expenses exemption of U.S. (15.4%) and employment income deduction (15.5%) of Japan appear to be very close. However, itemized deductions, which are part of necessary expenses, include such items that we should not consider as being related to the necessary expenses for employees. For example, ‘Interest paid deduction,’ ‘Charitable contribution deduction,’ etc., are more like other deductions, as Morinobu and Maekawa (2000) pointed out (Table 3). In summary, Morinobu and Maekawa indicate that the employment income deduction has been too generous and is the most important factor in the erosion of the income tax base.

IV. Comparison of the tax base of average income households

We confirm the importance of the employment income deduction to the erosion of the income tax base, which can be confirmed with OECD statistics, again.

We use *Taxing Wages* (2013), in which tax burdens of each income level and each type of household are calculated according to the tax/benefits system of each country. Although we cannot estimate the macro-based income tax base due to the lack of the data of income class and household-type distributions, we can calculate and compare the amounts of the deductions and benefits applied to each income class and/or each household type under a unified definition (for example, see Tajika and Yashio (2010)).

The results are shown in Table 4. Here, we calculate the proportion of various deductions to the total labor cost, and the sum of gross wage earnings and employee’s social security contributions, of average income households. The data was mainly on employment income earners, so social security benefits such as pension benefits and medical expenses are left out of consideration. Further, *Taxing Wages* shows only ‘standard deductions,’ so various deductions based on the specified condition of each household are not taken into account.

Table 4 Comparison of the standard tax allowances of the average wage households

Married with 2 children

(%)

	Basic allowance	Married or head of family	Dependent children	Deduction for social security contributions and income taxes	Work-related expenses	Other	amount of allowances
Japan	6.9	6.9		12.0	27.3		53.2
U.S	37.3		14.5				51.8
U.K	20.4						20.4
Germany	29.9			11.3	1.9	0.1	43.2
Sweden	2.7						2.7

Single

(%)

	Basic allowance	Married or head of family	Dependent children	Deduction for social security contributions and income taxes	Work-related expenses	Other	amount of allowances
Japan	6.9			12.0	27.3		46.2
U.S	18.6						18.6
U.K	20.4						20.4
Germany	14.9			11.5	1.9	0.1	28.4
Sweden	2.7						2.7

Source: OECD, Taxing Wages 2013

Note: Regarding the proportion of various deductions to the total labor costs of each country, which are calculated below, we take both national and local tax into consideration.

	Total labour cost	Proportion of each component			
		Gross wage earnings	Employees' social security contributions	Gross wage earnings	Employees' social security contributions
Japan	5,480,355 ¥	4,788,323 ¥	692,032 ¥	87.4%	12.6%
U.S	52,286 \$	47,650 \$	4,636 \$	91.1%	8.9%
U.K	39,802 £	35,883 £	3,919 £	90.2%	9.8%
Germany	53,583 €	44,811 €	8,772 €	83.6%	16.4%
Sweden	473,312 Kr	387,294 Kr	86,018 Kr	81.8%	18.2%

Note: For singles in Germany, a zero tax rate applied for income under 8004 Euros, so we calculated 8004 Euros as the basic allowance. For married people in Germany, we doubled 8004 Euros according to the tax system.

It is obvious on the face of it that income tax allowances have a very high proportion in Japan, especially 'work-related expenses,' as pointed out by Tajika and Yashio (2010).

Another feature is the presence of the deduction for social security contributions and income taxes. The proportion of the employees' social security contributions is 12.6%, and approximately the same amount was deducted for social security contributions. The same is true of Germany, where, however, almost all of the pension benefits are objects of taxation. Japan's pension tax system is too rare, considering that not only contributions but also

benefits are deductible from tax income.⁴

V. Estimation of the revenue increasing effects of income tax reform

V-1. Purpose of the employment income deduction

As confirmed above, Japan's income tax base has been eroded by mainly the employment income deduction; therefore, there is a need for reform to restore the revenue raising function and redistributive function.

'Outline of the 2014 Tax Reform Proposals' states that the current level of the employment income deduction erodes the income tax base to such a significant degree that it is necessary to incrementally review the deduction, aiming at the level of other major countries. This series of reviews has started with putting a deduction ceiling on high income classes, to be more precise, 2.45 million yen applied to income over 15 million yen, in the tax system reform of FY2014. In the future, the deduction ceiling will be reduced down to 2.30 million yen applied to income over 12 million yen from 2016, and 2.20 million yen applied to income over 10 million yen from 2017, as stated in "Outline of the 2014 Tax Reform Proposals." Incidentally, the outline also indicated that the reform will be followed by tax revenue raising: 3.8 billion yen in 2016 and 8.1 billion yen in 2017.

In light of the comparisons above, the direction of the reform is preferable. Hereafter, with a brief review of the argument concerning the purpose of the employment income deduction, let us estimate to what extent income tax revenue will be restored, assuming some radical reforms.

The purpose of the employment income deduction is conventionally divided into two parts: the deduction for approximate work-related costs and the deduction for the adjustment to other incomes.⁵ However, "Outline of the 2012 Tax Reform Proposals" states that the necessity for adjustment of deductions other than employment income has been decreasing because the number of employment income earners accounts for 90% of all income earners and the employment pattern is becoming diverse, with irregular employment increasing. Although others argue that adjustment continues to be necessary due to the inherent property of employment income, such as the uncertainty of the employment relationship and long work hours (Hasegawa (2006)), it is essential to conduct a significant review of the employment income deduction, especially on the aspect of adjustment to other incomes.

To what extent should the deduction for approximate work-related costs be protected? As shown above, the employment income deduction accounts for about 15% of household receipts on a macro-estimated basis, and about 30% of average income. 'Outline of the 2012

⁴ In Japan, all the pension contributions are deductible. Regarding pension benefits, 700,000 yen for those under 65 years old and 1.2 million yen those over 65 years old, are deductible, meaning that, in short, almost all pension benefits are deductible.

⁵ As the system has changed, the purpose of the deduction has been changed from earned income deduction to employment income deduction. See Tanaka (2005) for details.

Tax Reform Proposals' points out that the proportion of the work-related costs to the employment income is only about 6%, while Tanaka (2005) concluded that the proportion is not more than about 10%. Be that as it may, it is appropriate to firmly maintain that the amount of the employment income deduction should be reduced to restrict the features to the deduction for approximate work-related costs, as Tax Commission (2002) proposed.

V-2. The estimation of the tax revenue change accompanying the reform of employment income deduction

Let us estimate the increased tax revenue that would accompany a reform of the employment income deduction. The tax burden increase as a result of the abolition of the various income tax deductions was estimated by Cabinet Office (2002) and Uemura (2008). Their estimations are relatively simple, assuming unchanged consumer behavior through the reform. Here, we estimate the effects of the reform, following Uemura (2008).

Uemura (2008) first calculates per-person tax expenditure of the deduction according to every income classes, and then multiplies the number of taxpayers using the deduction.

Calculating tax expenditure, Uemura (2008) first estimates the marginal tax rate by subtracting the employment income, the basic deduction, and the deduction for social contributions from the average income of each income class. Per-person tax expenditure of the class is calculated by multiplying the marginal tax rate and the amounts of the deduction together.

Uemura (2008) takes the standpoint that the employment income deduction was not regarded as tax expenditure, because of the need for adjustment of the definition of "income" between employment income and declared income.⁶

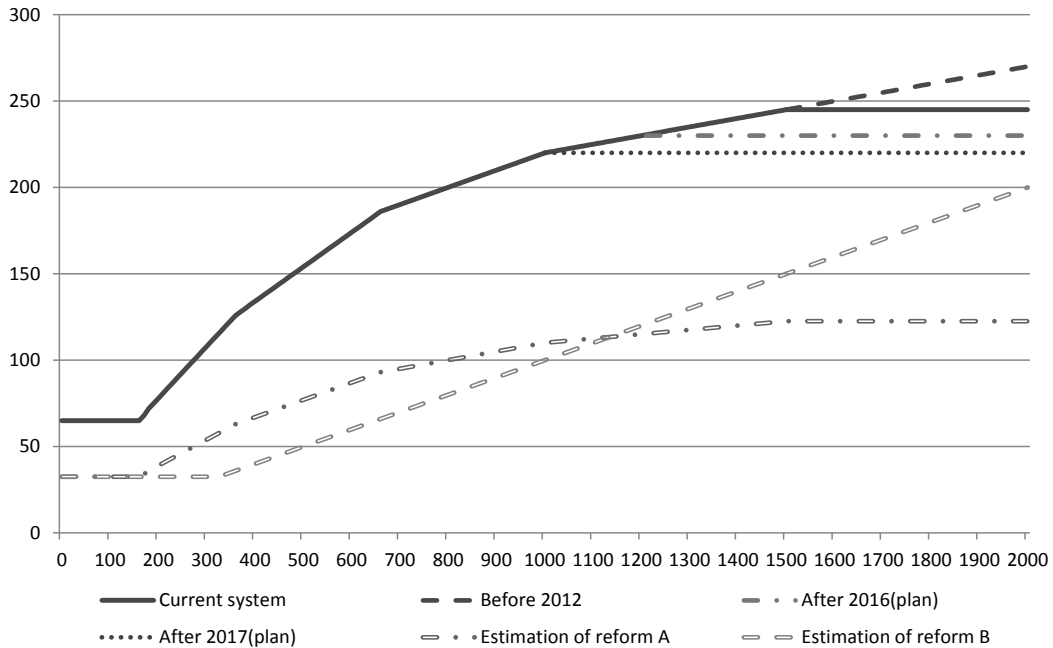
However, the most important factor for the erosion of the income tax base is the employment income deduction, as shown above, so the loss of tax revenue by the deduction should be estimated quantitatively to restore the tax revenue function of income tax. Here, we need not adjust the definition of "income." Let us estimate the tax revenue change by the reform of the employment income deduction.

We estimate the effects under two assumptions of the reform. First, the reform curtails the employment income deduction to half the current level (henceforth, "reform A"). It seems drastic, but the idea is feasible based on the fact that the review of the deduction for specified expenditure in 2012 showed that the two features of the employment income deduction mentioned above account for 50% each. If so, the deduction for approximate work-related cost to be protected is half of the existing employment income deduction.

Actually, the amount of the work-related cost of reform A is still higher than the estimations produced in the previous studies above. So, we assume reform B, under which the deduction for the approximate work-related cost accounts for 10% of the employed income, as estimated by Tanaka (2005) (we set 325,000 yen as lower boundary). These two

⁶ See footnote 14 of Uemura (2008)

Figure 4 Level of employment income deduction
(Past, current, future, and assumptions for the estimation)



Source: Outline of the 2014 Tax Reform Proposals

reforms assumed are shown in Figure 4 with past, current and future levels of the employed income deduction.

Further, we estimate the effects of the deduction for social security contributions, since the proportion of the deduction is remarkably large, as shown in Table 2 and Table 4. Also, many researchers have pointed out the need to reform pension tax, in which both all contributions and almost all benefits are deducted from taxable income. Morinobu (2001) said, “Since income tax and social security contributions are levied under different purposes, there is no reason that social security contributions should be deducted from taxable income.” Tajika and Yashio (2010) said, “The pension tax system of Japan needs to be reformed in internationally general terms.”

Here, we assume simply putting a ceiling on social security contributions, the average amount of which is currently 571,000.

We use “Statistical Survey of Actual Status for Salary in the Private Sector” of fiscal year 2011. It should be noted that the estimation has a limited scope of employed income in the private sector. We do not take account of effects on civil servants due to the reform of the employment income deduction. Also, we do not consider the effects on declared income earners due to the reform of social security contributions.

Table 5 Estimation of the increased tax revenue by the reform of the employment income deduction and the social security contributions (10 billion yen)

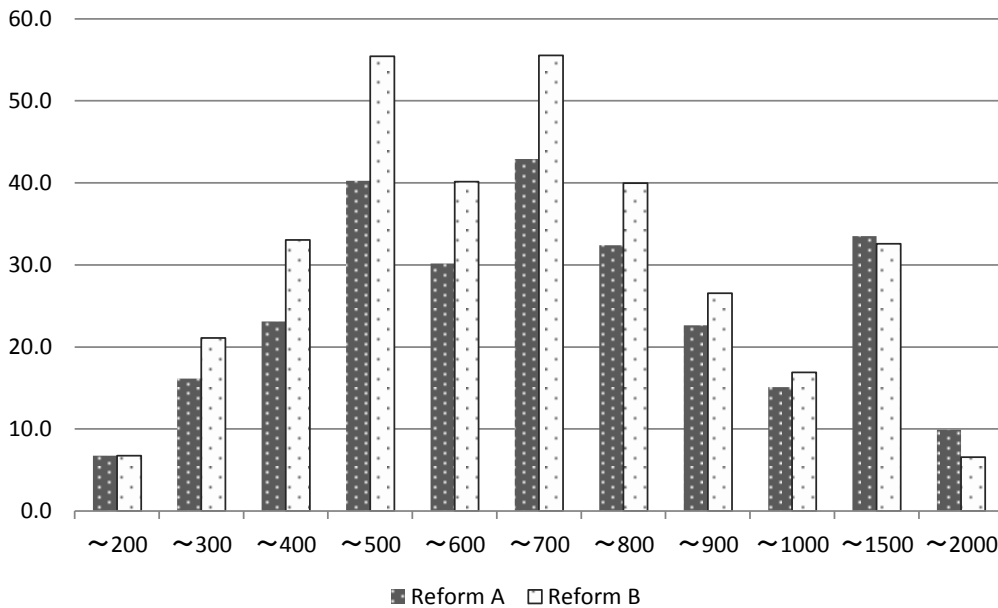
Income class	a.Tax burden under current system	Reform A		Reform B		Reform of social security contributions deduction	
		b.burden increased	(a+b)/a	b.burden increased	(a+b)/a	b.burden increased	(a+b)/a
Under 2 mil. Yen	6.5	6.7	2.04	6.7	2.04	0.0	1.00
2 mil to 3 mil.Yen	26.6	16.1	1.61	21.1	1.79	0.0	1.00
3 mil to 4 mil.Yen	46.5	23.1	1.50	33.1	1.71	0.0	1.00
4 mil to 5 mil.Yen	51.5	40.3	1.78	55.4	2.08	0.6	1.01
5 mil to 6 mil.Yen	50.9	30.2	1.59	40.1	1.79	5.1	1.10
6 mil to 7 mil.Yen	44.8	42.9	1.96	55.6	2.24	12.3	1.28
7 mil to 8 mil.Yen	47.8	32.4	1.68	40.0	1.84	12.2	1.26
8 mil to 9 mil.Yen	46.9	22.6	1.48	26.5	1.57	10.4	1.22
9 mil to 10 mil.Yen	40.4	15.1	1.37	16.9	1.42	7.6	1.19
10 mil to 15 mil.Yen	128.1	33.5	1.26	32.6	1.25	18.4	1.14
15 mil to 20 mil.Yen	56.6	9.9	1.17	6.6	1.12	5.7	1.10
Total	546.7	272.9	1.50	334.6	1.61	72.5	1.13

V-3. Estimation results

According to our estimation, the tax burden is increased, which, along with the ratio of total tax burden to the current one, is shown in Table 5.

Under reform A, which abolishes the part of adjustment to other income, the tax revenue increases by 2.7 trillion yen, which is 50% larger than current revenue. Under reform B, which regards work-related cost to be protected at a maximum of 10% of employed income, tax revenue increases by 3.3 trillion yen, 60% larger than current revenue. Reflecting the income distribution, tax revenue increases more under reform B, which is more severe in terms of low-income classes than reform A. In other words, the reform targeting high-income classes, such as those earning over 10 million yen as described in the ‘Outline of the 2014 Tax Reform Proposals,’ cannot restore the revenue raising function. In fact, the additional tax revenues, as ‘Outline 2014’ estimates, are only 3.8 billion yen in 2016 and 8.1 billion yen in 2017. Our assumed reform is certainly regressive (Figure 5), but it is very useful to remedy the generosity of the employment income deduction and to restore income tax revenue. To compensate for the regressive aspect, we need to proceed from income deduction to tax exemption, such as through the introduction of refundable tax credit.

Figure 5 Additional tax burden of the reform by each income class (10 billion yen)



VI. Conclusion

Morinobu and Nakamoto (2013) said, “The widening of the tax base is quite significant for envisaging the reforms of Japan’s tax system in the future,” on the grounds of not only enhancing horizontal fairness but also helping to restore the income re-distribution functions. This paper has shown that the widening of the tax base also helps to restore the tax finance function quantitatively.

The erosion of Japan’s income tax by various deductions and the need for a remedy have been pointed out by many researchers. Recently the government finally started to apply a deduction ceiling of 2.45 million yen to income over 15 million yen, in the tax system reform of 2014. ‘Outline of the 2014 Tax Reform Proposals’ shows that this ceiling will be down to 2.30 million yen applied to income over 12 million yen from 2016, and 2.20 million yen applied to income over 10 million yen from 2017. Although this series of reforms on the intact employment income deduction is preferable, the ceiling needs to be lowered and applied to low and middle income brackets to restore the income tax revenue. To correct the regressive aspect of the reform, we need to proceed from income deduction to tax exemption, such as through the introduction of refundable tax credits.

The deduction for social security benefits/contributions is also an important factor in tax erosion. Actually, the shrinking of the deductions for dependents and spouses in the 2000s is overwhelmed by the expansion of the social security benefits/contributions, especially pension benefits due to the aging society. We need to review the taxation system for pension benefits/contributions.

This paper only estimates the additional tax revenue according to the assumed reform of social security contributions. Further research is needed about the reform of other social security benefits/contributions not included in the tax base, such as pension benefits and medical expenses, etc.

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