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**TAX REFORM IN JAPAN:  
THE CASE OF PERSONAL TAXES**

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# Tax Reform in Japan: The Case of Personal Taxes

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**Abstract:** In this paper, we conduct a theoretical analysis of personal taxes (defined to include consumption and income taxes), describe and evaluate the past and present structure of personal taxes in Japan, and based on our findings, make a number of policy recommendations about how to reform personal taxes in Japan. We find that the structure of Japan's current consumption and income taxes is problematic from the viewpoints of both efficiency and equity and propose a reform package that improves both the efficiency and equity of Japan's personal taxes and, at the same time, achieves fiscal reconstruction.

**Key words:** Consumption; consumption tax; Corlett and Hague; countercyclical policy; economic stimulus; efficiency; equity; excess burden; fiscal reconstruction; fiscal reform; government debt; imputed rent; income tax; inverse elasticity rule; Japan; Japanese economy; labor supply; leisure; luxury goods; necessities; optimal taxation; personal taxes; primary balance; progressivity; Ramsey; regressivity; saving; and tax reform

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## 1. Introduction

The Japanese government's outstanding debt as a ratio of GDP is currently in excess of 150% and is by far the highest among the major industrialized nations, due in large part to the repeated economic stimulus packages implemented during the decade-long recession of the 1990s. Thus, fiscal reconstruction is an urgent priority of the Japanese government, and it has pledged to restore the primary balance (defined as government revenues excluding bond revenues minus government expenditures excluding interest payments and debt redemption) to surplus by the early 2010s. The Japanese government plans to achieve fiscal reconstruction through a combination of spending cuts and tax increases since neither of them will be enough to do the trick by itself. With respect to tax increases, the Japanese government appears to be planning to rely primarily on hikes in the consumption tax, but in March 2006, the Fiscal System Council (Zaisei Seido-tou Shingikai) released the results of its projections showing that the consumption tax will have to be raised sharply from the current 5% to a full 22% by 2015 if fiscal reconstruction is to be achieved by relying solely on hikes in the consumption tax.

The authors are strongly against using hikes in the consumption tax to achieve fiscal reconstruction, at least if the current highly regressive structure of the consumption tax is not changed. Unless the consumption tax can be made more progressive by converting it to an expenditure tax or by setting a lower tax rate for food and other necessities than for other goods, we favor relying instead on increasing income tax revenue by stricter enforcement and/or greater progressivity.

In Japan, there is substantial tax evasion, especially by farmers and the self-employed, and thus revenue from the income tax could be increased considerably even

without changing tax rates if enforcement were made stricter (for example, by introducing a taxpayer identification number system, increasing the number of tax auditors, and/or increasing the proportion of tax returns that are audited). Moreover, stricter enforcement of the income tax would simultaneously enhance the inter-occupational equity thereof.

If stricter enforcement of the income tax does not increase tax revenue by a sufficient amount, we favor increasing tax revenue by increasing the progressivity of the income tax. Since the burden of income taxes in Japan is far lower than in other countries, there is considerable scope for raising income taxes and making them more progressive, and doing so will allow us to raise more revenue and to improve the equity of the tax at the same time.

We favor achieving fiscal reconstruction by raising revenue from the income tax rather than by raising revenue from the consumption tax primarily because of equity considerations. The income tax is far more progressive (and hence more equitable) than the consumption tax to begin with, and moreover, if we enforce it more strictly and increase its progressivity, it would generate more revenue and, at the same time, become even more equitable (across occupations as well as across income groups), thereby killing two birds with one stone.

If there is no choice but to rely partly or wholly on hikes in the consumption tax as a way of increasing tax revenue and achieving fiscal reconstruction, we favor increasing the progressivity of the consumption tax by introducing a differential tax rate for food and other necessities and eliminating the distortions caused by the consumption tax using the means described in detail in section 4.

In the remainder of this paper, we conduct a theoretical analysis of personal taxes (defined to include consumption and income taxes), describe and evaluate the past and present structure of personal taxes in Japan, and based on our findings, make a number of policy recommendations about how to reform personal taxes in Japan. We find that the structure of Japan's current consumption and income taxes is problematic from the viewpoints of both efficiency and equity and propose a reform package that improves both the efficiency and equity of Japan's personal taxes and, at the same time, achieves fiscal reconstruction.

The organization of the paper is as follows: In section 2, we conduct a theoretical analysis of personal taxes (consumption and income taxes) from the viewpoints of efficiency and equity; in section 3, we describe and evaluate the past and present structure of personal taxes in Japan from the viewpoints of efficiency, equity, and countercyclical policy; and finally, in section 4, we make policy recommendations based on our findings.

## **2. A Theoretical Analysis of Personal Taxes**

In this section, we conduct a theoretical analysis of personal taxes (consumption and income taxes). When evaluating a tax, there are two criteria that are commonly used—efficiency and equity. Efficiency refers to whether a tax distorts the decision-making process of economic agents (i.e., whether it causes an excess burden), and equity refers to whether a tax has favorable or unfavorable distributional consequences. In this section, we evaluate the consumption and income taxes from the viewpoints of efficiency and equity.

## **2.1. Efficiency**

First, we analyze the consumption and income taxes from the viewpoint of efficiency.

### **2.1.1. The Consumption Tax**

The consumption tax introduces at least two distortions: it distorts the allocation of consumption among different consumption goods (excluding leisure), and it distorts the allocation of consumption between leisure and other consumption goods.

Looking first at the distortion in the allocation of consumption among different consumption goods (excluding leisure), the consumption tax distorts this allocation decision by raising the prices of some or all consumption goods.<sup>1</sup> A comprehensive consumption tax raises the prices of all consumption goods (excluding leisure) by the same percentage, but this does not necessarily mean that such a tax does not cause any distortions. The reason is that different consumption goods have different compensated price elasticities of demand. Even if the prices of all goods are increased by the same percentage, goods whose compensated price elasticity of demand is relatively high (in absolute value) will show a more pronounced decline in demand than goods whose compensated price elasticity of demand is relatively low (in absolute value).

Ramsey (1927) first pointed out this problem and proposed the “inverse elasticity rule” or “Ramsey rule” as a way of eliminating the distortion in the allocation of consumption among different consumption goods caused by the imposition of a

consumption tax. This rule states that the tax rate of each good should be inversely proportional to the absolute value of the compensated price elasticity of demand for that good. As pointed out by Hatta (2004a, 2004b), this rule is not very useful in actual practice because it suffers from an important defect: it makes the unrealistic assumption that all cross-price elasticities of demand are zero and that even goods with a high compensated price elasticity of demand (in absolute value) have no substitutes. Moreover, since necessities often have low compensated price elasticities of demand, applying Ramsey's (1927) inverse elasticity rule will require us to impose higher tax rates on necessities, making the tax regressive. Thus, implementing the inverse elasticity rule may or may not improve efficiency, and moreover, it will have an adverse impact on equity.

Looking next at the distortion in the allocation of consumption between leisure and other consumption goods, it is almost impossible to accurately measure the leisure consumption of each individual (i.e., the number of hours each individual devotes to leisure), and thus it is not feasible to impose a tax on leisure. And if all consumption goods other than leisure are taxed while leisure is not, this will lead to a distortion in the allocation of consumption between leisure and other consumption goods, with leisure being overconsumed and all other consumption goods being underconsumed.

Corlett and Hague (1953) pointed out that this distortion can be alleviated by taxing complements of leisure (such as summer homes, yachts, golfing goods, movie tickets, etc.) more heavily and substitutes of leisure (such as washing machines, vacuum cleaners, electric ranges, etc.) more lightly than other consumption goods.

### **2.1.2. Income Tax**

The income tax introduces at least two distortions. The first distortion caused by the income tax is that, by taxing labor income, it discourages labor, or to put it another way, it subsidizes leisure, as in the case of the consumption tax. Thus, it leads to an undersupply of labor and to an overconsumption of leisure. The solution is to make labor income tax-exempt.

The second distortion caused by the income tax is that, by taxing capital income (interest, dividends, rent, etc.), it discourages saving. The solution is to make capital income tax-exempt.

However, if both labor income and capital income are made tax-exempt, the government will not be able to raise any tax revenue. Thus, the government needs to impose taxes on either labor income and/or capital income. It can be shown that it is optimal to tax labor income if labor supply has the lower compensated price elasticity and to tax capital income if saving has the lower compensated price elasticity. It is believed that labor supply has a lower compensated price elasticity than saving, and if that is the case, it is optimal to make capital income tax-exempt and to tax only labor income (i.e., to impose a wage tax).

### **2.1.3. Conclusion**

As we have seen, both the consumption and income taxes cause distortions in consumer behavior. The only tax that does not cause any distortions is a poll or lumpsum tax, which collects the same amount of tax from each individual, or if individuals are



heterogeneous, a poll or lumpsum tax that collects the same amount of tax from all individuals of each type, but poll taxes are unrealistic, not to mention regressive. Thus, the only choice is to impose a tax that causes one kind of distortion or another.

As Hatta (2004a, 2004b) notes, it is often the case that, by mitigating one distortion, one exacerbates a different distortion. For example, raising the tax rate on complements of leisure and lowering the tax rate on substitutes for leisure will mitigate the distortion in the allocation of consumption between leisure and other consumption goods, but at the same time, it will exacerbate the distortion in the allocation of consumption among different consumption goods (excluding leisure). Thus, there is a trade-off between these two kinds of distortions.

An optimal tax structure is one that takes account of this trade-off and maximizes social welfare. According to Hatta (2004a, 2004b), an optimal tax structure is one in which a higher tax rate is imposed on strong complements of leisure, a lower tax rate is imposed on strong substitutes for leisure, and a uniform tax rate is imposed on all other goods (goods with a low cross-price elasticity of demand with leisure). In other words, he finds that it is optimal to use consumption taxes to alleviate the distortion in the allocation of consumption between leisure and other consumption goods.

## **2.2. Equity**

In this section, we analyze the consumption and income taxes from the viewpoint of equity.

### **2.2.1. Consumption Tax**

Since the propensity to consume generally decreases with income, a sales tax that is imposed at the time of sale will be regressive and hence inequitable.<sup>2</sup> The solution is to impose an expenditure tax instead of a sales tax. An expenditure tax is a tax in which individuals file a tax return and pay a tax on the difference between their income and their saving (where saving is calculated as the net increase in their assets). The two taxes are similar in the sense that they are both imposed on consumption but they are different in the sense that a sales tax cannot be made progressive while an expenditure tax can be made as progressive as one wants. The problem is that an expenditure tax is difficult to implement and has never been tried in actual practice in any country.

Given that an expenditure tax is not practical, the second-best solution is to impose a sales tax but to impose a lower or zero tax rate on food and other necessities and to impose a higher tax rate on luxury goods. There are many examples both in Japan and in other countries of certain goods being exempted entirely from consumption taxes or of differential tax rates being imposed on different commodity groups. For example, in the United States, there is no national consumption tax, but most states have a state sales tax, and in about half of the states that have a sales tax, food is tax-exempt, and in most states that have a sales tax, prescription drugs are tax-exempt. As another example, in many European countries, the consumption (value added) tax has two or three tiers, with a lower tax rate being levied on food, drugs, books, newspapers, etc. As a final example, Japan imposed a commodity tax on certain consumption goods (primarily luxury goods) until the general consumption tax was introduced on April 1, 1989. Thus, many countries including

Japan have made efforts to alleviate the regressivity of the consumption tax.

### **2.2.2. Income Tax**

The income tax can be made as progressive as one wants, and thus it is easy to achieve equity using the income tax.

### **2.2.3. Conclusion**

Unless the consumption tax takes the form of an expenditure tax, which is not practical, it is difficult to achieve full equity using the consumption tax, and thus it is easier to achieve full equity using the income tax.

## **2.3. Consumption Tax or Income Tax?**

In order for the government to function, it needs tax revenue, and thus the government needs to impose one kind of tax or another. The trick is to find a tax system that simultaneously achieves efficiency and equity. The problem is that, although it is sometimes possible to achieve efficiency and equity simultaneously, the two objectives are often contradictory.

For example, in the case of the consumption tax, since the compensated price elasticity of demand is often low (in absolute value) in the case of necessities, if we apply Ramsey's (1927) inverse elasticity rule, we would have to set a higher tax rate for necessities than for other goods, and thus we would have to sacrifice equity for efficiency. By contrast, since Corlett and Hague's (1953) rule entails imposing a higher tax rate on

complements of leisure and since many complements of leisure are luxury goods, we can achieve both efficiency and equity simultaneously by implementing Corlett and Hague's rule.

In the case of the income tax, it is optimal from the viewpoint of efficiency to tax labor income more heavily than capital income (assuming that labor supply is more price-inelastic than saving), but in general, the share of capital income in total income rises with income, and thus from the viewpoint of equity, it is optimal to tax capital income more heavily than labor income. Thus, the two objectives conflict in this case.

Hatta (2004a, 2004b) argues that we should not attempt to achieve equity through the consumption tax because there are other taxes (such as the progressive income tax, the land tax, the inheritance tax, etc.) that are better suited to attaining equity. Hatta (2004, 2004b) asserts that we should leave the attainment of equity to these taxes and that we should use the consumption tax to alleviate the distortion in the allocation of consumption between leisure and other consumption goods by applying Corlett and Hague's (1953) rule, but as argued earlier, we can achieve both efficiency and equity simultaneously by applying Corlett and Hague's rule.

### **3. An Evaluation of Personal Taxes in Japan**

In this section, we describe and evaluate the past and present structure of personal taxes in Japan from the viewpoints of both efficiency and equity.

### **3.1. Consumption Tax**

First, we describe and evaluate the past and present structure of Japan's consumption tax.

#### **3.1.1. Efficiency**

Until March 31, 1989, Japan did not have a general consumption tax but commodity taxes ranging from five to 30 percent were imposed on certain goods (mostly luxury goods). If we look at the structure of the commodity taxes, food and other goods with a low compensated price elasticity of demand (in absolute value) were tax-exempt, meaning that Ramsey's (1927) inverse elasticity rule was not being followed and that the opposite was being done. Looking next at whether the structure of the commodity taxes was consistent with Corlett and Hague's (1953) rule, many of the goods upon which commodity taxes were imposed are clearly close complements of leisure (such as golfing goods, billiard goods, motor boats, water game supplies, hand gliders, musical instruments, televisions, stereos, etc.), and some of them are close substitutes for leisure (such electric vacuum cleaners, electric washing machines, etc.) so it is not clear whether or not the structure of the commodity taxes was consistent with Corlett and Hague's (1953) rule. However, it is probably the case that commodity taxes were imposed more frequently on complements of leisure than on substitutes for leisure, meaning that they alleviated the distortion in the allocation of consumption between leisure and other consumption goods to some extent, thereby improving efficiency.

The Japanese government abolished the commodity taxes on selected goods and

introduced a 3% general consumption tax on April 1, 1989, and raised the general consumption tax from 3% to 5% on April 1, 1997. This general consumption tax is uniform, and thus it does not reflect either Ramsey's (1927) inverse elasticity rule or Corlett and Hague's (1953) rule. Thus, it distorts both the allocation of consumption among different consumption goods (excluding leisure) as well as the allocation of consumption between leisure and other consumption goods and is not an efficient tax by any means. However, unlike the earlier commodity taxes, food and other necessities with a relatively low compensated price elasticity of demand (in absolute value) are no longer tax-exempt, and thus the current general consumption tax is closer to Ramsey's (1927) inverse elasticity rule than the earlier commodity taxes. However, whereas the earlier commodity taxes adhered to Corlett and Hague's (1953) rule to some extent, the current general consumption tax does not adhere to this rule at all.

Thus, by moving from the earlier commodity taxes to the current general consumption tax, the distortion in the allocation of consumption among different consumption goods (excluding leisure) was alleviated but the distortion in the allocation of consumption between leisure and other consumption goods, a more serious problem, was exacerbated. Thus, there is a high probability that the overall efficiency of the consumption tax declined due to the transition from commodity taxes to a general consumption tax.

Moreover, another defect of the current general consumption tax is that it does not tax the imputed rent on owner-occupied housing, thereby distorting the housing tenure decision in favor of owner-occupied housing and against rental housing.

### **3.1.2. Equity**

In the case of the commodity taxes that were in effect until March 31, 1989, food and other necessities were tax-exempt and a high tax rate was imposed on many luxury goods. Thus, the earlier commodity taxes achieved equity to a considerable extent.

However, the general consumption tax that was introduced on April 1, 1989, is a sales tax rather than an expenditure tax, and moreover, the tax rate on food and other necessities is not relatively low or zero and the tax rate on luxury goods is not relatively high. Thus, it can be said to be a regressive and thus inequitable tax.

### **3.1.3. Conclusion**

As we have argued, the transition from commodity taxes to a general consumption tax probably reduced the efficiency of the consumption tax and clearly reduced the equity thereof. Thus, from the viewpoint of optimal taxation, one cannot say that it was a desirable tax reform.

## **3.2. Income Tax**

Next, we describe and evaluate the past and present structure of Japan's income tax.

### **3.2.1. Efficiency**

In the past, the Japanese tax code included many tax breaks for saving (capital income) such as the *maruyuu* system (the tax-free system for small bank and postal

deposits, trusts, public bonds, public bond investment trusts, and *zaikai* (property formation savings)), and as a result, the tax rate on capital income was probably lower than the tax rate on labor income. Thus, (assuming that labor supply is more price-inelastic than saving) the structure of Japan's income tax scored high with respect to efficiency.

However, in recent years, the government has scaled back or eliminated many of the tax breaks for saving (capital income) that were in place earlier. For example, the *maruyuu* system was restricted primarily to those aged 65 or older on March 31, 1988, and was abolished even for those aged 65 or older on December 31, 2006. Moreover, capital gains on equity, which had previously been largely tax-exempt, became fully taxable, in principle, on April 1, 1989. These changes have reduced the efficiency of the income tax.

Turning to a separate issue, the progressivity of Japan's income tax has declined over time, as discussed in section 3.2.2. below, and this will improve efficiency to the extent that it alleviates the disincentive effects on the labor supply of high-income individuals. However, since labor supply is believed to be relatively inelastic (see, for example, Ohtake, Takenaka and Yasui (2006)), the efficiency gains from reduced progressivity are presumably relatively small.

### **3.2.2. Equity**

Japan's income tax is non-linear and progressive, but the degree of non-linearity and progressivity has declined over time. Table 1 shows how the number of brackets and the range of tax rates have fluctuated over time, and as this table shows, the degree of non-linearity and progressivity and hence the equity of Japan's income tax has declined



since the 1980s. Table 1 seems to suggest that the progressivity of the income tax will be enhanced in 2007, but this is primarily an illusion. It is true that the minimum tax rate of the national income tax will be lowered from 10% to 5% and that the top tax rate of the national income tax will be raised from 37% to 40%, but the local income tax, which currently ranges from 5% to 13%, will be made into a 10% uniform tax, meaning that the overall minimum tax rate and top tax rate will remain unchanged at 15% and 50%, respectively.

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Table 1: Trends in the Number of Brackets and in the Range of Tax Rates of the National  
Income Tax in Japan

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1971~83: 19 brackets ( 10 ~ 75% )

1984~86: 15 brackets (10.5 ~ 70%)

1987: 12 brackets ( 10.5 ~ 60% )

1988: 6 brackets ( 10 ~ 60% )

1989~98: 5 brackets ( 10 ~ 50% )

1999 ~ 2006: 4 brackets ( 10 ~ 37% )

2007~ : 6 brackets (5~40%)

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Source: National Tax Agency (Kokuzei-chou), ed., *Kokuzei-chou Toukei Nenpou-sho (The Statistical Yearbook of the National Tax Agency)* (Tokyo: Zaidan Houjin Ookura Zaimu Kyokai), 1971-2005 editions, and the website of the Japanese Ministry of Finance <http://www.mof.go.jp/jouhou/syuzei/syuzei04.htm>

Next, we would like to confirm these trends from another perspective. Tables 2 and 3 show the share of taxpayers for whom each marginal tax rate applied in 1988 and 2003, and as can be seen from these tables, the 1999 income tax reform caused the share of taxpayers for whom the 10% marginal tax rate applies to increase sharply from 60.8% to 69.7% and caused the share of taxpayers for whom the 20% marginal tax rate applies to decrease sharply from 28.4% to 21.7%, as a result of which the lowest marginal tax rate applied to a full 70% of taxpayers. This corroborates the trend toward a less non-linear, less progressive, and less equitable income tax.

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Table 2: The Share of Taxpayers for Whom Each Marginal Tax Rate Applies (1998)

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Marginal Tax Rate	Share of Taxpayers
10%	60.8%
20%	28.4%
30%	6.5%
40%	2.3%
50%	2.0%

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Source: National Tax Agency (Kokuzei-chou), ed., *Kokuzei-chou Toukei Nenpou-sho (The Statistical Yearbook of the National Tax Agency)* (Tokyo: Zaidan Houjin Ookura Zaimu Kyokai), 1998 edition.

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Table 3: The Share of Taxpayers for Whom Each Marginal Tax Rate Applies (2003)

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Marginal Tax Rate	Share of Taxpayers
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10%	69.7%
20%	21.7%
30%	5.1%
37%	3.4%

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Source: National Tax Agency (Kokuzei-chou), ed., *Kokuzei-chou Toukei Nenpou-sho (The Statistical Yearbook of the National Tax Agency)* (Tokyo: Zaidan Houjin Ookura Zaimu Kyoukai), 2003 edition.

Moreover, Japan's income tax is inequitable in another sense as well. There is widespread evasion of income taxes by the self-employed and farmers, but salaried workers are unable to evade income taxes because such taxes are automatically deducted from their paychecks. This leads to substantial inter-occupational inequities.

Many years ago, Ishi (1981) found that salaried workers pay taxes on 91% of their income, the self-employed on 71% of their income, and farmers on 21% of their income. More recently, Ohta, et al. (2003) found that inter-occupational inequities are now much less, with salaried workers paying taxes on 102% of their income, the self-employed on 95% of their income, and farmers on 81% of their income, but even if we believe these figures, substantial inter-occupational inequities still remain.

### 3.2.3. Conclusion

Assuming that labor supply is more price-inelastic than saving, the gradual abolition of various tax breaks for saving (capital income) has lowered the efficiency of Japan's

income tax, and the reduction in progressivity has reduced the equity thereof. Thus, Japan's recent income tax reforms have reduced the efficiency as well as the equity of the income tax, and thus one cannot say that they were desirable from an optimal taxation standpoint. Moreover, inter-occupational inequities appear to have been reduced but not eliminated entirely.

### **3.3. The Use of Personal Taxes as an Instrument of Countercyclical Policy**

Lastly, we would like to describe and evaluate the Japanese government's use of personal taxes as an instrument of countercyclical policy.

The Japanese government relied primarily on temporary income tax cuts to stimulate consumption and hence the economy as a whole during the decade-long recession of the 1990s, but theory predicts that income tax cuts will not be effective unless they are permanent and permanent income tax cuts would have been too costly to the government in terms of foregone tax revenue. Thus, the Japanese government would have been better off temporarily reducing or abolishing the consumption tax instead of lowering income taxes as a way of stimulating the economy.

As noted by one of the co-authors of this paper (see Horioka (2002)), such a policy would have had at least four advantages.

First, it would have been effective. Lowering or abolishing the general consumption tax for a fixed period of time and then raising it gradually would have stimulated consumption and hence the economy as a whole because consumers would have accelerated purchases of consumption goods, especially non-perishable goods, in order to

take advantage of temporarily lower consumption taxes.

Second, it would not have cost the government very much in foregone tax revenue. According to the permanent income hypothesis, a temporary income tax cut would not have much impact on consumption because it would not have much impact on permanent income. In order to be effective in stimulating consumption, the income tax cut would have to be permanent so that it increases permanent income, but a permanent income tax cut would lead to a massive loss of tax revenue. By contrast, a consumption tax cut would be more effective if it were temporary because only a temporary consumption tax cut would induce consumer to accelerate their purchases of consumption goods, and moreover, a temporary consumption tax cut would have the added advantage of not costing the government very much in terms of foregone tax revenue.

Third, it would have been effective as a means of ending price deflation. Lowering or abolishing the general consumption tax for a fixed period of time and then raising it gradually would generate inflation, and if the inflation that is generated causes inflationary expectations to take root, inflation will continue even after the gradual increases in the consumption tax rate end. Thus, if all goes well, the same fiscal policy would simultaneously stimulate consumption and end price deflation.

Fourth, it would have been equitable. Since the propensity to consume generally declines with income, low-income consumers would have received a disproportionate share of the benefits of the temporary consumption tax reduction or abolition. Thus, the temporary consumption tax reduction or abolition would have the added benefit of increasing equity.

Thus, a policy of temporarily reducing or abolishing the consumption tax would have been far preferable to the temporarily income tax cuts used by the Japanese government, and thus we are forced to conclude that the Japanese government used the wrong policy instrument in order to stimulate the economy during the 1990s.

### **3.4. Overall Evaluation**

Reforms of personal taxes in Japan since the 1980s have been a dismal failure, reducing both efficiency and equity and failing to provide a badly needed stimulus to the economy during the prolonged recession of the 1990s.

## **4. Policy Recommendations**

In the foregoing sections, we conducted a theoretical analysis of personal taxes from the viewpoints of efficiency and equity and described and evaluated the past and present structures of personal taxes in Japan. In this section, we make some policy recommendations based on the findings of the foregoing sections. We strive to simultaneously achieve the three goals of efficiency, equity, and fiscal reconstruction.

Regarding the structure of the consumption tax,

(1) We recommend implementing Corlett and Hague's (1953) rule by raising the tax rate of the consumption tax on complements of leisure.

(2) We recommend raising the tax rate of the consumption tax but keeping the tax rate on food and other necessities unchanged.

(3) We recommend making the imputed rent on owner-occupied housing, which is

currently exempt from the consumption tax, subject to the consumption tax.

Regarding the structure of the income tax,

(4) We recommend alleviating the disincentive effects of the income tax on saving by re-introducing tax breaks on saving (capital income).

(5) We recommend increasing the progressivity of the income tax.

(6) We recommend stricter enforcement of the income tax (for example, by introducing a taxpayer identification number system, increasing the number of tax auditors, and increasing the proportion of tax returns that are audited)

We first explore the efficiency and equity implications of each of these recommendations and then explore their implications for fiscal reconstruction.

Recommendation (1) would enhance both the efficiency and equity of the consumption tax (the latter because complements of leisure tend to be luxury goods), recommendation (2) would enhance the equity of the consumption tax but would have an adverse impact on its efficiency (the latter because the compensated price elasticity of demand for necessities is presumably lower (in absolute value) than that for other goods),<sup>3</sup> and recommendation (3) would enhance both the efficiency and equity of the consumption tax (the former because a previously untaxed good would now be taxed and the latter because owner-occupied housing is a luxury good) (Fukushima (1999) makes the same proposal).

Recommendation (4) would enhance the efficiency of the income tax but would, at the same time, have an adverse impact on equity (assuming that the share of capital income in total income increases with income). By contrast, recommendation (5) would

enhance the equity of the income tax but would, at the same time, have an adverse impact on efficiency to the extent that it discourages the labor supply of high-income individuals, but this effect would presumably be small since labor supply is believed to be relatively inelastic (see, for example, Ohtake, Takenaka and Yasui (2006)). Finally, recommendation (6) would enhance the equity of the income tax by increasing the tax payments of farmers, the self-employed, and others who have been more successful in evading income taxes than salaried workers but would, at the same time, have an adverse impact on efficiency to the extent that it discourages the labor supply of those from whom more taxes are collected. However, this effect would presumably be small since labor supply is believed to be relatively inelastic, as mentioned above.

Regarding the implications of our recommendations for fiscal reconstruction, all of our recommendations except for recommendation (4) would increase tax revenue, and thus our proposed reform package would, on balance, increase overall tax revenue, thereby reducing government deficits.

To sum up, we are proposing the achievement of fiscal reconstruction by selectively raising the tax rates of the consumption tax on complements of leisure and goods other than necessities, by making imputed rent on owner-occupied housing subject to the consumption tax, by increasing the progressivity of the income tax, and by stricter enforcement of the income tax (combined, of course, with cuts in government expenditures). By contrast, the Japanese government seems intent on achieving fiscal reconstruction primarily by raising the consumption tax across the board, and in March 2006, the Fiscal System Council (Zaisei Seido-tou Shingikai) released the results of its projections showing



that the consumption tax will have to be raised from the current 5% to a full 22% by 2015 if fiscal reconstruction is to be achieved by relying solely on hikes in the consumption tax.<sup>4</sup>

We are strongly opposed to this proposal because of the regressivity of the consumption tax, but if there is no way to avoid implementing the government's proposal, we feel that it is all the more necessary to enhance the efficiency and equity of the consumption tax by implementing recommendations (1), (2), and (3). Regarding recommendation (2), it is indeed fortunate that the Japanese government's Tax Advisory Council (Zeisei Chousa-kai) has indicated its willingness to consider introducing a lower tax rate on food when the consumption tax is increased despite possible implementational difficulties if there is sufficient public support for such a proposal.

We are confident that, if our policy recommendations are implemented, they will simultaneously make Japan's tax system more efficient as well as equitable, make possible the achievement of fiscal reconstruction, and revitalize Japan's economy.

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## References

Corlett, W. C., and Hague, D. C. (1953), "Complementarity and the Excess Burden of Taxation," *Review of Economic Studies*, vol. 21, no. 1, pp. 21-30.

Fukushima, Takashi (1999), "Kizoku Yachin Kazei ni yoru Kotei Shisan-zei Kaikaku (Property Tax Reform using Taxation of Imputed Rent)," in *21 Seiki ni Muketeno Juutaku Seisaku no Shiten (Perspectives on Housing Policy in the Twenty-First Century)* (Tokyo: Shadan Houjin Juutaku Seisan Dantai Rengoukai), pp. 29-34 (in Japanese).

Hatta, Tatsuo (2004a), "Zeishuu Seiyaku no Moto de no Buppin-zei Kaikaku (Reform of the Commodity Tax under Revenue Constraint)," in Kikuo Iwata, Yasushi Iwamoto, Yuuzoo Honda, and Akihiko Matsui, eds., *Gendai Keizai-gaku no Chooryuu (Trends in Contemporary Economics)* (Tokyo: Toyo Keizai Shinpousha), pp. 3-27 (in Japanese).

Hatta, Tatsuo (2004b), "A Theory of Commodity Tax Reform under Revenue Constraint," *Japanese Economic Review*, vol. 55, no. 1 (March), pp. 1-16.

Horioka, Charles Yuji (2001), "Japan's Public Pension System in the Twenty-first Century," in Magnus Blomstrom, Byron Gangnes, and Sumner La Croix, eds., *Japan's New Economy: Continuity and Change in the Twenty-First Century* (New York: Oxford University Press Inc.), pp. 99-119.

Horioka, Charles Yuji (2002), "Zeisei de Kojin Shouhi Shigeki: Kai-isogi e to Yuudou, Keiki Kaifuku-go no Zouzei wo Kouyaku (Stimulate Personal Consumption using the Tax System: Encourage the Acceleration of Purchases, Promise a Tax Increase after the Economy Recovers)," Keizai Kyoushitsu (Economic Classroom) section, *Nihon Keizai Shinbun (Japan Economic Journal)*, January 18, p. 29 (in Japanese).

Ishi, Hiromitsu (1981), "Kazei Shotoku Hosoku-ritsu no Gyoushukan Kakusa: Kuroyon no Hitotsu no Suikei (Inter-occupational Differences in the Capture Rate of Taxable Income: One Estimate of 9-6-4)," *Kikan Gendai Keizai* (Spring) (in Japanese).

Murasawa, Tomohiro; Yuda, Michio; and Iwamoto, Yasushi (2005), "Shouhi-zei no Keigen Zeiritsu Tekiyou ni yoru Kouritsu to Kouhei no Toreedo-ofu (A Trade-off Between Efficiency and Equity in Adopting Differential Rates in the Consumption Tax), *Keizai Bunseki (Economic Analysis)*, no. 176 (June), pp. 19-41 (in Japanese).

Ohta, Hiroko; Tsubouchi, Hiroshi; and Tsuji, Takehiko (2003), "Shotoku-zei ni okeru Suihei-teki Kouhei-sei ni tsuite (On the Horizontal Equity of the Income Tax)," Discussion Paper 03-1, Director General for Economic Assessment and Policy Analysis, Cabinet Office, Government of Japan (in Japanese).

Ohtake, Fumio; Takenaka, Shinji; and Yasui, Kengo (2006), "Wage Elasticity of Labor Supply: A Survey-Based Experimental Approach," mimeo., Institute of Social and Economic

Research, Osaka University, Osaka, Japan.

Ramsey, F. P. (1927), "A Contribution to the Theory of Taxation," *Economic Journal*, vol. 37, no. 1 (March), pp. 47-61.

### Endnotes

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<sup>1</sup> We implicitly assume throughout that the consumer bears at least part of the burden of consumption taxes (i.e., that the imposition of a consumption tax induces suppliers to raise prices at least a little), but the incidence of consumption taxes will depend on the price elasticities of demand and supply, with the supplier bearing the burden of the tax if demand is more price-elastic than supply. We are indebted to Midori Wakabayashi for this point.

<sup>2</sup> If the life cycle model applies, individuals should save when they are young and working and dissave when they are old and retired. Thus, pre-retirement individuals should consume less than their incomes, and since higher income pre-retirement individuals should be able to afford to save more, the average propensity to consume should decline with income, making a uniform consumption tax regressive in the case of individuals in this category. By contrast, post-retirement individuals should consume more than their incomes, and since higher income post-retirement individuals should have more savings accumulated, the average propensity to consume should increase with income, making a uniform consumption tax progressive in the case of individuals in this category. If we look at the case of an individual over his/her entire lifespan, he/she should consume his/her entire lifetime income if he/she does not receive or leave any bequests, and thus a uniform consumption tax should be neither progressive nor regressive but neutral. However, since the income tax is progressive, even a neutral consumption tax will be more regressive than the income tax, and thus we will refer to a uniform consumption tax as being regressive throughout this paper.

<sup>3</sup> Murasawa, Yuda, and Iwamoto (2005) conduct a number of simulations showing that, in many cases, social welfare increases when a lower tax rate is imposed on necessities (defined as food at home and water supply) if the society places value on equality.

<sup>4</sup> By contrast, Minister of Internal Affairs and Communications Heizo Takenaka believes that the consumption tax rate will have to be raised to only 8% in the early 2010s, but his projection may be based on unrealistic assumptions.