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# International Comparison of Tax and Social Security Policies

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**Summary**

Among the agendas a nation faces in fiscal policy decision making, the most important and at the same time the most difficult are:

A. What the ideal size of the public sector in its Net National Income (NNI) should be.

B. What means the nation should select in raising revenues for the public sector:

(1) First, what combination should be sought among:

a) tax revenues;
b) public bond issuance; and
c) social security contributions.

(2) Second, what sort of taxes should be selected as the main sources of revenue.

The answers to these questions are:

A. This question is of utmost importance as there is a certain recognition, not without statistical evidence, that the size of the public sector has an impact on the level of economic activities in the private sector and thus on the economy as a whole.

The amount of tax and social security contributions that the voters show their willingness to pay by democratic voting determines the size of the public sector, no matter how banal this may sound.

B. It should be noted, however, that when the problems of financing by the issuance of public bonds and the financing methods of social security systems of a long-term nature are taken into consideration, answering this question becomes very complicated.

(1) Raising revenues by tax, public bond issuance or social security contributions is a problem of a very complicated nature. The reasons for this are as follows:

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a) Public debt can cause the problem of fair burden sharing among generations;

b) "Unfunded" pension schemes are basically the same as financing by public debt; and

c) The adverse selection problem makes the introduction of mandatory participation inevitable, which allows the income redistribution element to sneak into the determination of the premiums to be contributed and benefits to be paid.

(2) As regards tax revenues, once-heralded income taxation is now becoming more and more dysfunctional due to the combination of (a) various forms of legally separate entity systems that can retain income, and (b) the globalization of the economy together with the existence of tax havens.

The general trend seems to be headed towards dependence upon indirect taxation of a general scope, i.e., VAT/GST (Value Added Tax/General Sales Tax).

Due to the regressive nature of VAT/GST, the integration of the tax system and the restructuring of the social security system in order to solve this problem of fair income redistribution, is an urgent problem to be investigated.

These conclusions lead us to a simultaneous equations model.

All the answers pertaining to the VAT scheme, the individual income tax structure, financing by public debt and the restructuring of the social security system have to be acquired simultaneously.

The theories of public economics seem to have not yet been successful in providing theoretical frameworks for this complicated problem.

## I. Size of the Public Sector in the NNI

### 1. Theoretical Analysis

(1) Theoretically, the three rationales for the existence of the public sector are as follows:

A. Resource allocation;
B. Income redistribution; and
C. Counter-cyclical stabilization.

(2) As for A, it is an undisputed conclusion that the market mechanism, in its perfect form, leads to optimal resource allocation, judging by the standards of Pareto optimality.

It has been made clear, however, that Pareto optimality is not really a matter of optimality, but just a matter of efficiency. Thus, Pareto optimality has been renamed Pareto efficiency. Therefore, the market mechanism leads not to optimal resource allocation but only to efficient resource allocation.

Another problem with the market mechanism is that there are certain types of goods and services, for which the market mechanism cannot produce Pareto efficient resource allocation, and there are cases where even a market per se does not exist.

These are cases of market failure. In these market failure cases, the public sector has to shoulder the responsibility of providing the goods and services.

The problem remains, however, as to what goods and services are to be supplied by the public sector and to what amount or to what extent. Scientific analysis fails to offer a conclusion since providing public goods and services is a matter of not only efficiency, but also optimality reflecting the underlying value judgment of society, unless the optimality is defined well enough to be operational.

(3) As for B, the market mechanism cannot lead to a fair and thus desirable income redistribution situation, either.

It is easy to realize that to what extent income should be redistributed among individuals belongs to the area of value judgment. Scientific analysis can be of help only after the criteria of judging fairness or equity in this context of B, is defined.

It should be noted that there is a problem of trade-off between equity and efficiency.

(4) Theoretically, if a social welfare function were to be found, which reflects the notion of optimality and the underlying value judgment of society, the answer to the question of maximizing optimality could be achieved.

Various theories in relation to such social welfare function thus far are essentially based upon a fragile hypothesis that a social welfare function can be conceived, by assuming that the “utility” of every individual can be compared with others’ and can be aggregated one way or another.

Certain types of criteria for judging “fairness” have been proposed such as the Bentham criterion. The Bentham criterion has a straightforward assumption that individual utility can be aggregated. Ordinary textbooks on welfare economics would not accept this hypothesis as plausible.

Another criterion worth mentioning is the Rawls criterion. This has found some supporting arguments, but still it is too broad to be operational.

(5) Social choice theory is an attempt to give an answer, which states that the conclusion can be acquired by democratic voting.

Nobel prize-winning scholar Kenneth Arrow, however, proved as shown in his “Social Choice and Individual Values” (1951), that the democratic voting system cannot necessarily reach a logically consistent social welfare function (Arrow’s Impossibility Theorem).

Therefore, the answer to the overall question of maximizing social welfare, by way of introducing the public sector into an economy, cannot be an exact science.

(6) Still, it is practically meaningless to insist that it is impossible to determine what kind of mix of tax system, public bond issuance and social security system should be considered ideal, because of the lack of firm theoretical frameworks.

It may be practical to assume that (a) income is an indicator of the welfare of every individual, (b) the Gini coefficient is the best indicator of income redistribution or equity, and (c) income redistribution can be determined during the course of the democratic political process. The arguments below assume these propositions, which at least help to clarify certain entanglements of the current theoretical frameworks on taxation and social security systems.

**2. Historical Perspective**

(1) Historically, the size of the public sector has shown a marked tendency of growing larger.

(2) There are various explanations for this phenomenon.
One of the most essential of them is that the evolution from a night watchman state to a welfare state is an inevitable product of the modern society.

(3) At times of economic stagnation, Keynesian economic policy advocates compel governments to increase their expenditures to bolster the economy.
In the modern day economy, as there are a number of voters who enjoy preferential treatment by government expenditures, once the government expenditures grow, it is hard for a democratic government to reduce such expenditures, even after the economy bounces back.

(4) James Buchanan and other scholars warned of this kind of moral hazard caused by Keynesian policy, and they accentuated that overly well-protected labor forces have a tendency to become inefficient, and contribute to the ultimate cause of the loss of the competitiveness of a national economy. They insist that a big government spells an inefficient economy.

Reaganomics/Thatcherism was an answer to this problem. Ronald Reagan and Margaret Thatcher reduced the size of the public sector and sliced the benefits off from the “tax eaters” rather successfully.

This new policy gear-change was theorized in various forms and supported new policy trends at the same time: supply side economics, monetarism (Milton Freedman), and the rational expectation approach (Robert Lucas/Thomas Sargent) are typical cases among others.

The Taylor rule proposed by John Taylor, though it is not about fiscal policy but about monetary policy, is one of the most extreme in banning discretionary macroeconomic policy decision making.

(5) Keynesian policies continue to be resurrected whenever a national economy or global economy faces crises, such as right now.

**3. International Comparison**

(1) Chart 1 tells us many things.

The best indicator for the optimal size of the public sector in an economy is normally considered to be the national burden ratio, which is the sum of taxes and social security contributions paid divided by the NNI.

(2) The amount of outstanding long-term public debt may have to be taken into consideration for the purpose of comparison, since even if the national burden ratio is exactly the same, the difference of the outstanding long-term public debt may make a big difference. Consider the huge amount of outstanding debt in Japan, for example (Chart 2).

For the purpose of international comparison, one tentatively proposed solution is to add the amount of outstanding long-term public debt to the numerator of the national burden ratio ("potential national burden ratio"). The problem remains, however, with regard to how the fair burden sharing among the generations should be calculated and by what standards.

The current generation does not necessarily have to shoulder the burden of servicing all the outstanding public debt considering generational accounting. This will be discussed in II.1. below.

(3) Long-term outstanding public debt aside, Sweden is considered to be on one extreme end of the spectrum, where the taxpayers are willing to shoulder the almost surreal burden of 70% of their income. Swedish voters are still comfortable with this burden as they feel well-protected by their nation's social security system, and are willing to pay this large sum of money.

On the other hand, in some countries of a particular cultural background in Europe it is well known that the taxpayers regard tax avoidance or tax evasion as not such a bad thing but as something like a sport.

(4) Eurozone countries are in considerably better shape due to the 3% limit on budget deficits and other fiscal disciplines mandatory in joining the Eurozone.

**4. Conclusion**

(1) It is impossible to find a formula to determine the optimal size of the public sector in an economy, because it is not an exact science but based upon value judgment.

All the historical and geographical observations lead us to the conclusion that the current, widespread situation of the national burden ratio is a product of the history, culture and even *Ethos* of each nation, and the solution will be found only by the democratic political process and can be observed only on an ex post basis.

(2) The questions remain largely due to the problem of fair burden sharing among the generations. It seems that theories of public economics so far show little interest in these questions.

The next section will focus on the complicated nature of financing the public sector while taking the expenditure side into consideration at the same time.

**II. Revenue Resource Selection**

**1. Financing by Public Bonds**

(1) Governments issue public bonds.

This is in a sense natural, since if a public expenditure during the current year benefits future generations, it is rational to split the burden of the expenditure among the beneficiary generations (generational accounting).

(2) Generational accounting aside, there have been heated arguments over whether financing by public debt results in shifting the burden to future generations or not.

The Ricardo-Barro equivalence theorem tells us that the burden will not be shifted from the current generation to future generations if certain conditions are met.

Such conditions are, however, considered to be too rigorous to be realistic and therefore the majority conclusion seems to be that the burden of servicing public debt should be transferred to future generations.

(3) As was discussed previously, the size of the public sector has shown a marked tendency of growing larger, and financing by public bonds make this expansion of expenditures easier.

Theoretically, if the Domar condition is to be met, the public debt to nominal GDP ratio will converge, and thus, irrespective of the level of the outstanding public debt, servicing such public debt may be manageable.

The Domar condition is that the nominal GDP growth rate exceeds the nominal long-term interest rate.

Obviously, there is no guarantee that this condition can be fulfilled, as neither of the variables can be controlled by policy measures or at least guaranteed to be controllable.

(4) One of the fiscal policy targets of certain countries, such as Japan, is to achieve a primary balance surplus (Chart 3).

The primary balance is one of the fiscal condition indicators to check whether a government's expenditures, minus interest payments and debt servicing, are financed by revenues other than those from the issuance of public bonds.

(5) A completely different problem arises when the role that public bonds play in the capital markets of an economy is to be taken into account.

Japan's capital markets started to grow rapidly thanks to the Fukuda Senior administration when it started issuing "debt financing public bonds" in large amounts in 1965.

When the Thatcher administration successfully marked budget surpluses for a few consecutive years, the gilt-edged market suffered.

## 2. Financing Welfare Benefits

(1) When welfare benefits are to be discussed, the benefits should be divided into two categories:

a) Benefits financed by tax as one form of public expenditure
b) Benefits supported by an insurance mechanism

A typical example of the former category is public assistance, such as Supplemental Security Income (SSI) in the United States.

Health insurance, annuity insurance (pension plans), employment insurance, at-home care insurance (introduced in Japan of late) etc., fall under the latter category.

Whether a social security benefit is to be financed by a) or b) depends upon how the overall social security system is established.
Even SSI can be structured as insurance.

(2) Benefits financed by tax as one form of public expenditure seem to raise no additional problems, but when we pay attention to refundable tax credit or negative income tax, such as Earned Income Tax Credit (EITC) in the United States, Working Tax Credit in the United Kingdom or Working Income Tax Benefit in Canada, it should be noted that these systems are a form of the integration of taxation and social security benefits.

One of the most important features of the refundable tax credit system is that it can eliminate the marginal tax rate of 100% when a social security beneficiary starts working and earning income on their own.

(3) Attention should be paid to the benefits supported by an insurance mechanism.

So far as the benefits are financed by insurance premiums in line with the ordinary private insurance mechanism, the principal problem is so-called adverse selection.

Adverse selection is a situation where only those who are highly exposed to the insured events buy an insurance policy, and the insurer cannot make ends meet.

In order to avoid such situation, compulsory participation and the payment of insurance premiums should be a legal obligation.

Medicare and Medicaid in the United States are examples, where a large number of citizens are left uninsured.

Thus, collecting premiums can be either in the form of straightforward but obligatory insurance premiums or in the form of taxation.

Basically these two measures are equivalent, unless the taxation is progressively structured and the tax revenue is earmarked.

(4) Public pension plans (annuity insurance) have their own serious problems because of their long-term nature.

If the benefits paid in the future to the current work force generation are paid from funds accumulated by the same current work force generation, it is just a straightforward insurance system (funded system).

However, if the insurance benefits paid to retired generations are financed by the premiums contributed by the current work force generation (unfunded system), the situation is totally different. The latter type of financing mechanism is essentially the same as financing by public debt.

The problem of fair burden sharing among the generations now arises. It should be carefully calculated, especially when the financing of a public pension plan has to be changed, due to a shortage of funds, from a funded scheme to an unfunded scheme or even to a system supported by ordinary (not earmarked) public expenditure.

Moreover, as the contributions and benefits are calculated over a long period of time, the discount factor should be taken into consideration to compare the numbers, i.e., all the contributions and benefits now and in the future should be compared after they are recalculated into their present value.

This point can be overlooked quite easily in the process of changing a social security system, in particular in countries in urgent need caused by a shortage of funds, such as Japan and the United States.

(5) It should be pointed out that the implicit but true nature of this argument is closely related to whether income redistribution should be achieved through a pension plan or not, i.e., whether the contributions to be paid should be progressively structured or not, and/or whether the pension beneficiaries receive should reflect the amount of contributions the beneficiaries have accumulated or be basically equal among them.

Discussing the structure of a public pension plan without considering the aspect of income redistribution is pointless.

(6) In conclusion, even if a social security system is designed in the form of pure insurance, due to the adverse selection problem, the income redistribution effect sneaks into the system.

Moreover, when a social security system is in the form of insurance of a long-term nature, such as in the case of pension plans in particular, the element of income redistribution plays an even more important role, and the fair burden sharing should be carefully considered among the different income classes of one generation and among the different generations at the same time.

As this fair burden sharing calculation includes the expenditure side, the financing of the public sector and the expenditure level determination should be taken into consideration and calculated at the same time as simultaneous equations.

Integration of the tax system and the social security system is now a clear and present necessity.

**3. Integration of Tax System and Social Security System**

(1) Theories on income redistribution by taxation have been produced in abundance.

(2) Despite the majority understanding that income redistribution is the policy object achieved by tax policies, the problems in general about them are that the scope of these theories only covers the individuals who are wealthy enough to pay tax or who are above the lowest taxable limit.

The individuals who are below the lowest taxable limit are usually not considered in these taxation theories.

Or, more precisely, the frameworks of the arguments are usually constructed in such a way as being incapable of taking the individuals below the lowest taxable limit into consideration, or assuming every individual is a taxpayer.

(3) There are a few exceptions.

One exception is a refundable tax credit system, which is a first step towards the integration of taxation and social security.

The refundable tax credit system is well designed since, in ordinary situations of public assistance, if a beneficiary starts working and earns income, the same amount will be withdrawn from public assistance benefits, which means the beneficiary is being taxed by the marginal tax rate of 100%.

The refundable tax credit system avoids this kind of work disincentive.

It is, however, only a partial solution in that it is restricted to the area of public assistance.

(4) Another exception is the Swedish public pension scheme, which has been attracting the attention of social security system experts.

This Swedish system is a combination of pension benefits reflecting income and the minimum level guarantee by public assistance financed by tax revenue.

This, however, is basically a funded system pension scheme and thus seems to be incapable of avoiding the problems in relation to the defects of a funded system in general, meaning the problems of fair burden sharing among generations are hidden and untouched.

(5) The public economics theories thus far have been incapable of providing a theoretical framework for the integration of the tax system and the social security system, the main reason for which is that the theories disregard the income redistribution element of insurance-style social security systems of a long-term nature when they try to treat the tax system and the social security system at the same time.

## III. Tax System

### 1. Individual Income Tax

(1) Individual income tax was introduced in the United Kingdom in 1799.

(2) At one time, and probably even now, income is considered to be the best indicator of a taxpayer’s ability to pay tax.

Until not so long ago, economists specialized in welfare economics or public economics thought that individual income tax was the best tax system and that individual income tax was the only tax governments should levy (“single income taxation theory”), except for taxation on assets that supplements income taxation.

(3) A theoretically ideal tax, however, cannot be an ideal tax, if it cannot be implemented properly.

Tax authorities of advanced economies are struggling to prevent tax evasion and tax avoidance. This is not necessarily limited to individual or corporate income tax but is mainly in relation to individual and corporate income tax.

There are several reasons why individual income tax has become more and more difficult to implement nowadays:

a) Legally separate entity systems that can retain income
b) The globalization of the economy together with the existence of tax havens

With a) and b) combined, taxpayers with a large amount of income are capable of making sure that their income is not subjected to the high effective tax rate of income taxation of their home country.

Thus, even though the individual income tax rate structure is progressive, when a taxpayer's income reaches a certain level, they can avoid income taxation by making part of their income taxable outside their home country in a zero or low rate tax jurisdiction.

In this way, the individual income tax structure of the modern world suddenly becomes effectively regressive once passing a certain threshold.

(5) Another reason is an inevitable situation sometimes referred to as the "incompleteness of tax laws."

Tax laws and regulations can never be exhaustively complete, meaning there is preferential treatment for various reasons and loopholes, in particular in the United States.

Hence, the Internal Revenue Code introduced "Alternative Minimum Tax" (AMT).

Taxpayers can utilize various techniques to avoid taxation. Stanley Surrey coined a new technical term, "tax expenditure." His intention was to clarify that there is a concept of a "normative tax structure," and all the preferential tax measures to achieve certain policy objectives are deviations from that normative tax structure, and should be called tax expenditures.

The policy objectives that a preferential tax treatment is intended to achieve, even if appropriate, should be achieved by direct subsidies, according to Professor Surrey. This is because the tax expenditures are likely to produce a windfall profit for the taxpayers outside of the scope of the policy objectives as an unintentional side effect.

(6) From a totally different perspective, the "dual income tax" system found in Nordic countries is one way of responding to the globalization of the economy, and is of great interest.

The dual income tax system divides income into two categories:

a) Asset income
b) Earned income

It is widely recognized that, as assets such as financial assets and real estate produce asset income, taxpayers with asset income are supposed to be wealthier than taxpayers without asset income or with only earned income, and thus asset income is an indicator of a greater ability to pay tax.

However, the assets, notably capital, that produce asset income can be easily and quickly removed from a high tax jurisdiction.

Thus, in order to prevent such "capital flight," asset income is separated from other income and is subjected to a low and flat rate of, for example, 20%, whereas earned income is subjected to an ordinary and traditional progressive rate structure.

It should be noted that the traditional concept of "comprehensive income taxation" is abandoned here.

**2. Corporate Income Tax**

(1) Before discussing corporate income tax, it should be fully recognized that, from a welfare economics standpoint, corporate income tax is nothing other than individual income tax withheld and collected before the income in question reaches the individual taxpayers.

This is because the concept of utility is conceivable for individuals and individuals only. On the other hand, the concept of utility cannot be conceivable for corporations or any other legally separate entities.

All profits earned or retained belong to the individuals who own a corporation or other form of entity, however complicated the calculation of such may be.

The German income tax system was constructed upon this theoretically correct concept and eliminated double taxation by a perfect "imputation system."

The European Court of Justice (ECJ), however, ruled in 2001 that such imputation system is illegal according to the equal treatment clause of the EC Treaty.

Germany had to change its corporate and individual income tax system into a completely different one effective from 2008 for corporate taxpayers, and from 2009 for individual taxpayers.

As for the US corporate income tax system, its basic premise is that corporations are taxed as if a corporation is an independent taxpayer.

Japan's corporate income tax system is somewhere in between the purely non-double taxation model of Germany before the ECJ ruling and the US double taxation model.

(2) Irrespective of whether a corporate taxpayer is independent from its owners or not, corporate income tax has become more and more difficult to collect.

The reasons for this are:

a) Legally separate entity systems that can retain income
b) The globalization of the economy together with the existence of tax havens
c) The so-called "harmful tax competition"

a) and b) are the same as in the case of individual income tax as mentioned above.

c) is tentatively treated as an independent factor here, but it can be considered to be a part of b).

When Ireland reduced its effective corporate income tax rates in a desperate attempt to escape from its chronic economic stagnation, this new policy drew attention and alarmed the governments of advanced economies.

This episode ended up in a report of the OECD Committee on Fiscal Affairs (CFA) titled "Harmful Tax Competition" in 1998. Ensuing progress reports were issued in 2000 and 2001.

(3) Governments are still trying to lower their corporate income tax rates in an attempt to strengthen the competitiveness of their economies, due to the circumstances of rapidly growing cross-border transactions of goods and services, laborers, capital, information, and technology (see Chart 4).

Japan's portion of corporate income tax revenue in its NNI is extraordinarily high at 7%. This ratio is almost double that of other advanced economies.

This phenomenon is explained in such a way as follows:

a) As a matter of corporate culture indigenous to Japan, management in companies in general do not think of tax as part of the costs a company should have to pay and thus should be reduced as much as possible. There are observations that Japan's corporate culture shows a tendency to regard the corporate income tax they pay as a mark of their contribution to the nation and something that corporate income tax payers should be proud of;

b) A totally different observation is that corporate income tax is generally considered, subconsciously, as one form of indirect tax in the sense that corporate income tax does not directly cause individuals pain; and

c) Japan's Corporate Income Tax Law stipulates that the taxable income calculation method is quite closely connected to the income calculation of a company's financial statements.

This is in contrast to other countries such as the United States, where the taxable income calculation method is almost totally independent from the income calculation of a company's financial statements, meaning there is a comparatively large amount of room for utilizing various preferential tax measures and loopholes to alleviate the burden of corporate income tax.

This will no longer be the case in the very near future, due to the introduction of US business school-style education and the international convergence of accounting standards.

(4) Almost all the governments of advanced economies (including China) include in their tax codes such anti-avoidance schemes as follows:

a) Transfer pricing
b) Anti-tax haven rules
c) Thin capitalization

In the United States, notably, AMT is in the Internal Revenue Code. All the anti-tax avoidance measures mentioned here speak for themselves as to how important cross-border transactions, which can be the essential means to serious tax evasion or avoidance, can be.

(5) Another matter of importance is HIA.

The Bush administration tried to recall the retained income accumulated abroad by US companies' subsidiaries by legislating the American Jobs Creation Act of 2004 (AJCA), and the Homeland Investment Act (HIA), a part of the AJCA, which has been deemed successful with the benefit of hindsight.

Such exemption scheme concerning dividend income from foreign subsidiaries was introduced in Japan and in the United Kingdom effective from April 2009.

It should be noted that, whereas HIA was a one-time attempt in the United States, Japan's and the United Kingdom's will be permanent.

What this difference will cause is a matter of great interest.

Article 25 of the OECD Model Tax Convention sets out two ways for eliminating double taxation on cross-border transactions:

a) Exempt method (for territorial method jurisdictions)
b) Credit method (for worldwide method jurisdictions)

Japan, the United Kingdom and the United States belong to worldwide income taxation method jurisdictions.

HIA and other similar exemption schemes concerning dividend income from foreign subsidiaries are a partial introduction of a territorial method in worldwide method jurisdictions.

(6) Common Consolidated Corporate Tax Base (CCCTB) is too interesting an idea to be overlooked.

This was originally proposed in 1992 by a committee called the Ruding Committee, which was chaired by former Dutch finance minister Dr. H. Onno Ruding. The EU's ultimate goal was, as far as its economic policy is concerned, to establish a single market.

Eurozone member countries have handed over their rights to issue currency and monetary policy decision-making power to the European Central Bank (ECB), a drastic change in the notion of sovereignty.

Still, these governments continue to fail in accomplishing the goal of tax harmonization, which is now considered to be one of the most serious obstacles to the transition to a single market.

These governments have been unsuccessful even in having one harmonized VAT standard rate, which means that reaching an agreement with regard to CCCTB is a very far away goal.

From this, it can be interpreted that taxation has roots so deeply embedded in the concept of national sovereignty that even when countries hand over their sovereign right of issuing currency, they are unwilling to let go of their taxation rights.

**3. Inheritance Tax/Estate Tax and other Taxes on Assets**

(1) As these tax items with regard to assets cannot be a mainstay of revenue raising for the public sector, this discussion paper is going to skip them except for a few short comments below.

(2) There are jurisdictions where no such tax is levied such as Canada.

(3) The United States' estate tax and gift tax are going to expire shortly in accordance with the Internal Revenue Code (IRC), but it is widely understood that the Obama administration will change the IRC so as not to let estate tax and gift tax, which supplement estate tax, expire.

(4) Japan was supposed to overhaul its entire inheritance tax and gift tax system effective from fiscal 2009 (beginning from April this year).
Political turmoil preventing, nothing certain can be said for its future prospects, but it was announced that the overhaul is now planned to become effective from fiscal 2012.

**4. VAT/GST**

(1) Academically, VAT and "expenditure tax" are equal.
However, it is not worthwhile examining this argument, as expenditure tax can never be properly implemented due to the cost in acquiring necessary information in relation to the taxpayers' savings, which is sine qua non for calculating expenditures.

This discussion paper refrains from dealing with indirect taxation on individual items and the Ramsey rules discussion that inevitably ensues, as this subject is too far from the practical argument on the subject of revenue-raising in an economy.

(2) VAT was first introduced in France.

There are various forms of multi-stage accumulated sales tax or cascade tax. VAT is a multi-stage consumption tax without tax accumulation, meaning no double or multiple taxation, and as such it is a consumption tax of the most refined kind.
Because of this, it is supposed to be the basis of harmonized taxation in the EU.

(3) Its fundamental problem, however, is that it is of a regressive nature, i.e., the poorer a taxpayer becomes, the higher percentage of income has to be paid as VAT.

(4) At one time, it was conceived that, whereas VAT is a pillar of revenue-raising taxation, its regressive nature can be mitigated by progressive individual income tax and tax on assets.

Due to the defects of individual income tax explained above, it is not a very well-supported idea.

(5) Another way to mitigate the regressive nature of VAT is to introduce reduced rates, exemptions, or even zero rate (which means a refund of VAT paid at one stage prior in the supply chain), for basic goods and services. This kind of multi-tax rate system is the cause of turmoil in the EU. Together with unequal standard rates (see Chart 5), a wide variety of differences in non-taxable goods and services and various reduced rates, many schemes to avoid VAT taxation in cross-border transactions have been created.

The loss of tax revenue due to tax avoidance has become one of the most important problems of the EU member countries. The situation is so aggravated that it is now considered to be the driving force of the VAT harmonization project in the EU.

VAT avoidance schemes aside, this kind of mitigation by reducing the rates for basic goods and services cannot completely eliminate the inherent regressive nature of the VAT structure.

(6) Canada made it clear that its Working Income Tax Benefit has been introduced to tackle the problem of the regressive nature of its GST.

(7) A problem the United States faces is the constraint laid down by the 16th Amendment of its constitution.

State-level sales tax is a primitive form of single-stage tax on consumption. What should also be pointed out is the Anglo-Saxon preference for direct tax pain, which a hypothetical explanation would assume dates back to the consuetude of the democratic decision-making system and the trial by jury system of the Angle and Saxon Germanic tribes before the Migration Period.

There is a fund in the US Treasury called the "Conscience Fund," to which taxpayers who have avoided or evaded taxes contribute every year anonymously out of conscientious pain.

## IV. Concluding Remarks

### 1. Basis of the Framework

(1) As income taxation becomes more and more difficult to implement properly, the governments of advanced economies will have to shift their main revenue resources to broad-based VAT/GST-style indirect taxation to secure revenue and at the same time maintain the competitiveness of their economies.

(2) The problem of regressive taxation arises from this, which governments should mitigate or rectify by reconstructing not only their tax systems but also their social security systems.

(3) This means that a proper framework for an integrated tax system and social security system should be carefully studied.

A refundable tax credit system or negative income tax is a good example for this direction. Nevertheless, it seems it is still a partial solution and cannot be a decisive or overall solution.

### 2. Factors Required to Be Taken into Consideration for the Future

The theoretical framework for the future would, ideally, have to take six factors into consideration:

1) The main tax item for revenue-raising for the public sector should be VAT.

2) Corporate income tax revenue cannot be high enough, considering the competitiveness of the economy.

3) The idea that the inherent regressive nature of VAT should be mitigated by progressive individual income tax should be abandoned, as its progressivity is becoming an illusion. It should be noted, in particular, that it cannot reach the individuals below the lowest taxable limit, with the marked exception of refundable tax credit systems.

4) Now that income redistribution cannot be achieved by a tax system only, both the tax system and the social security system have to be restructured in combination with each other. Public economics has not yet produced theories that are adequate enough frameworks for this problem.

5) Public sector financing by public debt in general, including insurance-style but unfunded pension plans, causes the problem of fair burden sharing among the generations.

6) It is necessary to understand that a certain part of a social security system can be designed as an insurance system, while the remaining parts are structured to be paid from ordinary tax revenue.

Even if a social security system is designed in the form of insurance, due to the adverse selection problem, the income redistribution effect sneaks into the system.

Moreover, when a social security system is in the form of insurance of a long-term nature, such as in the case of a pension plan, the element of income redistribution plays an even more important role, and the fair burden sharing should be carefully considered both among the different income classes of one generation and among the different generations at the same time.

As this fair burden sharing calculation includes the expenditure side, the financing of the public sector and the expenditure level determination should be taken into consideration and calculated at the same time as simultaneous equations.

The integration of the tax system and the social security system is now a clear and present necessity.

This is a simultaneous equations model.

All the answers to the VAT scheme, the individual income tax structure, financing by public debt, and restructuring the social security system have to be acquired simultaneously.

Chart 1

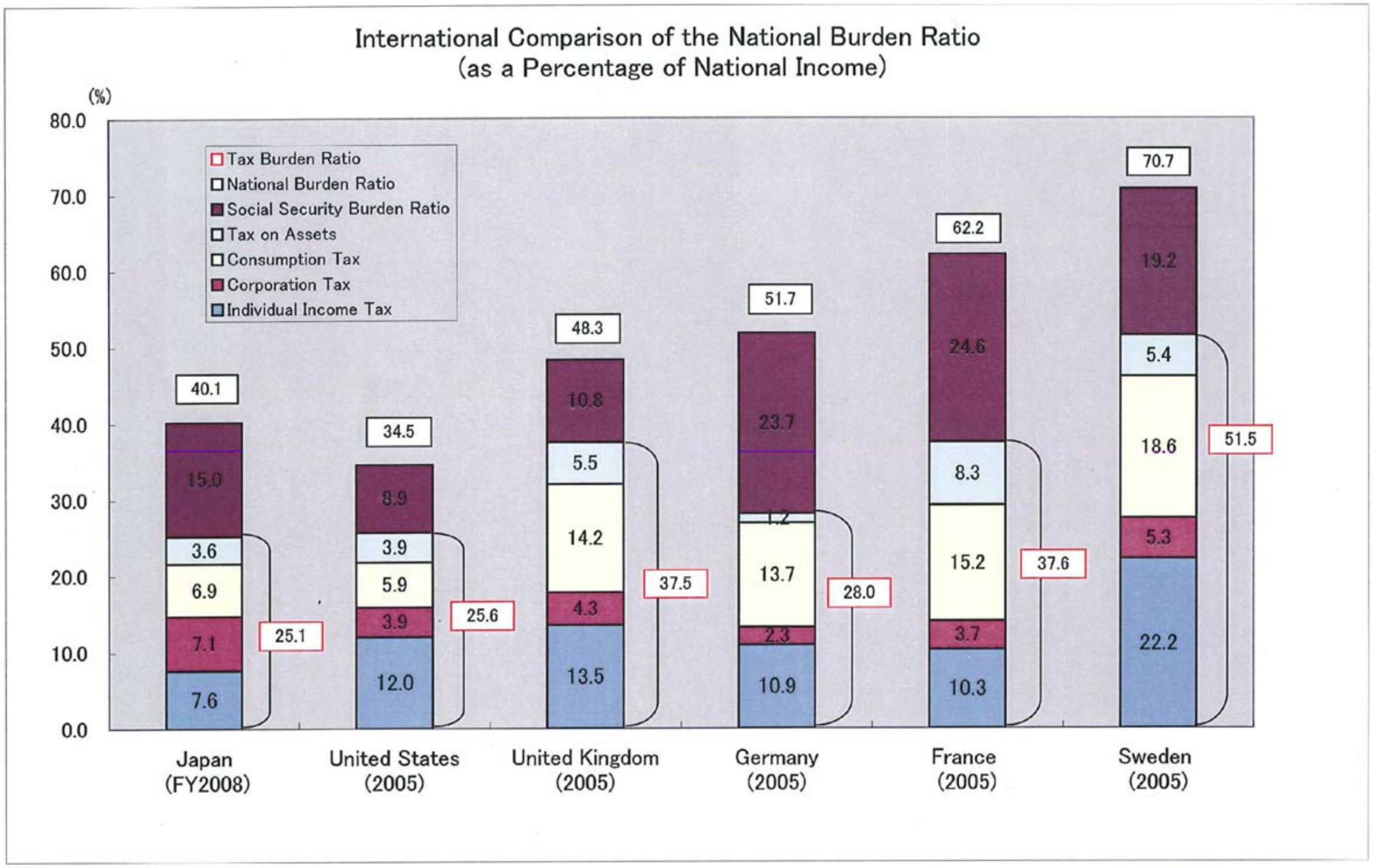
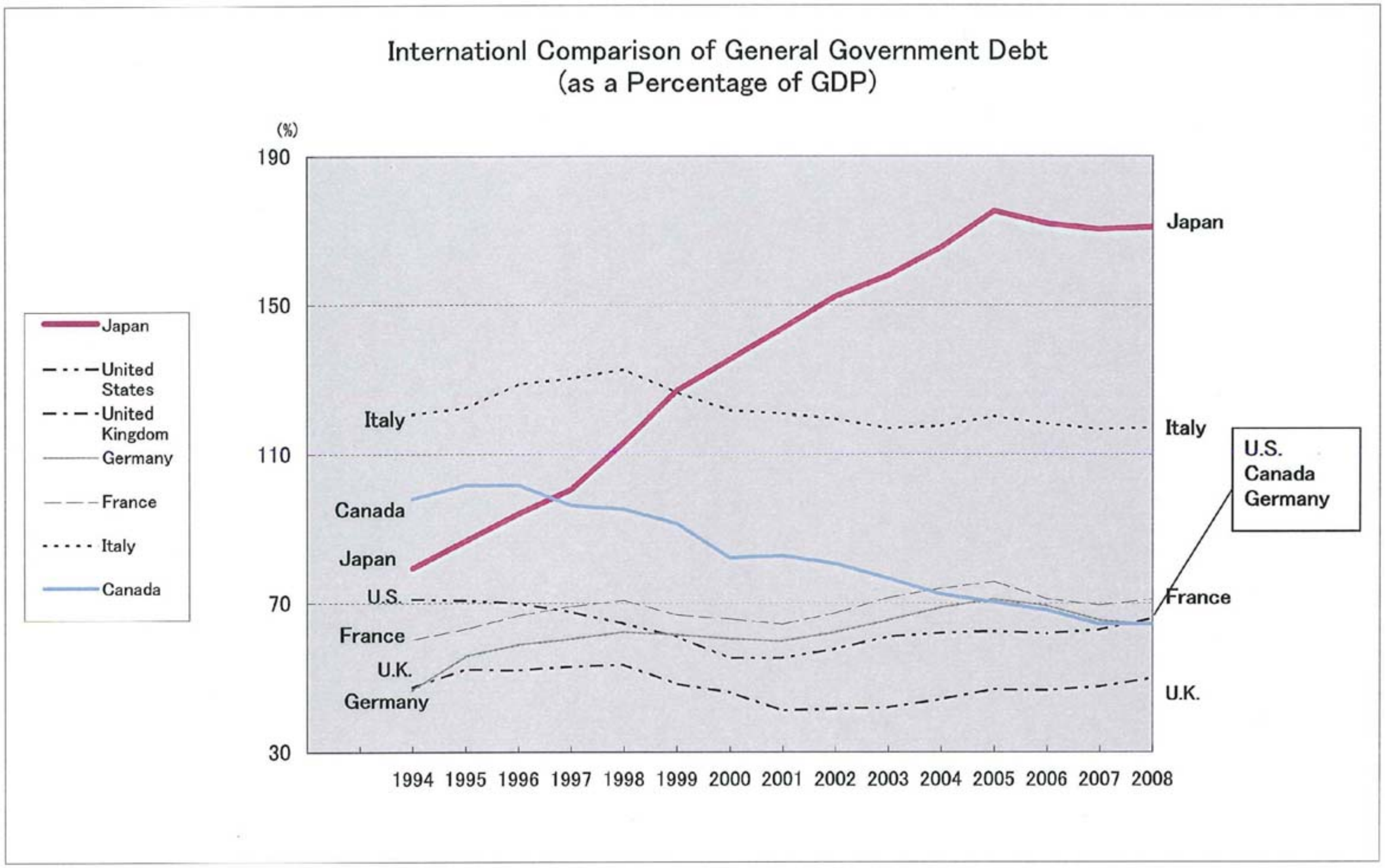

International Comparison of the National Burden Ratio
(as a Percentage of National Income)
(%)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Tax Burden Ratio
National Burden Ratio
Social Security Burden Ratio
Tax on Assets
Consumption Tax
Corporation Tax
Individual Income Tax
40.1
15.0
3.6
6.9
7.1
7.6
25.1
34.5
8.9
3.9
5.9
3.9
12.0
25.6
48.3
10.8
5.5
14.2
4.3
13.5
37.5
51.7
23.7
1.2
13.7
2.3
10.9
28.0
62.2
24.6
8.3
15.2
3.7
10.3
37.6
70.7
19.2
5.4
18.6
5.3
22.2
51.5
Japan (FY2008)
United States (2005)
United Kingdom (2005)
Germany (2005)
France (2005)
Sweden (2005)

Chart 2


Internationl Comparison of General Government Debt
(as a Percentage of GDP)
(%)
190
150
110
70
30
Japan
United States
United Kingdom
Germany
France
Italy
Canada
Italy
Canada
Japan
U.S.
France
U.K.
Germany
Japan
Italy
U.S.
Canada
Germany
France
U.K.
1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

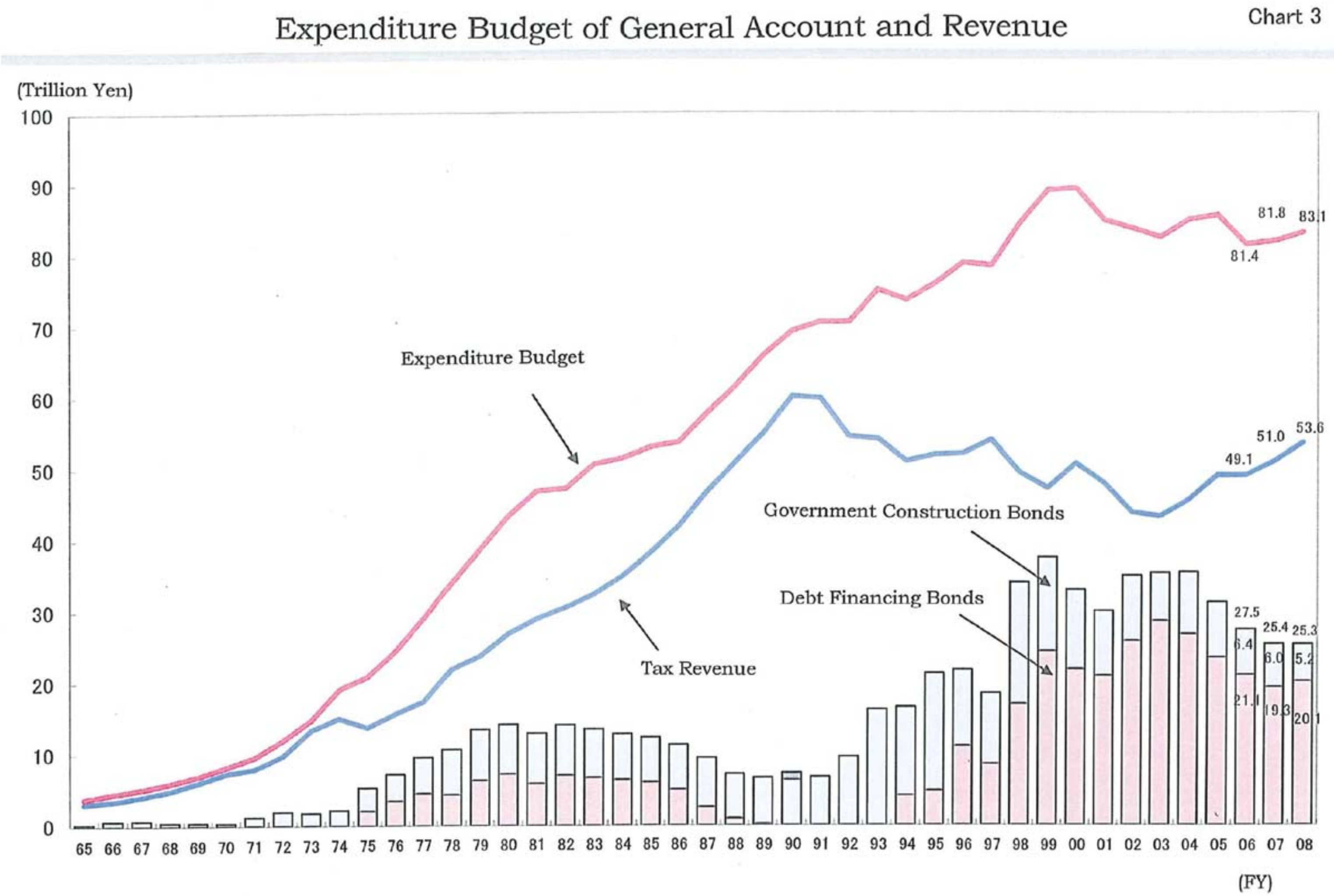

Expenditure Budget of General Account and Revenue
Chart 3
(Trillion Yen)
Expenditure Budget
Tax Revenue
Government Construction Bonds
Debt Financing Bonds
81.8
83.1
81.4
51.0
53.6
49.1
27.5
25.4
25.3
6.0
5.2
21.1
19.3
20.1
(FY)

Chart 4 (1)

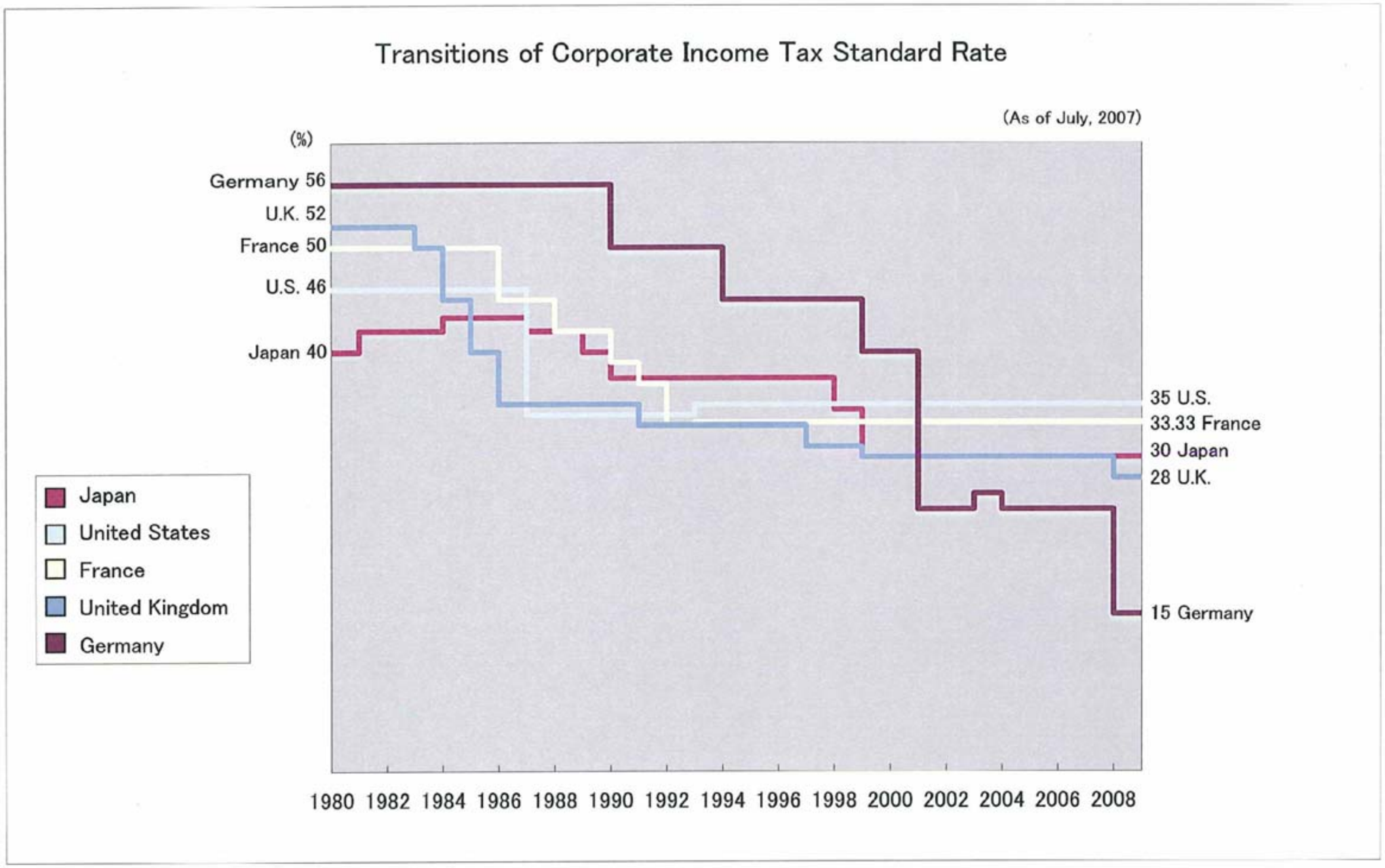

Transitions of Corporate Income Tax Standard Rate
(As of July, 2007)
(%)
Germany 56
U.K. 52
France 50
U.S. 46
Japan 40
35 U.S.
33.33 France
30 Japan
28 U.K.
15 Germany
Japan
United States
France
United Kingdom
Germany
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

Chart 4 (2)

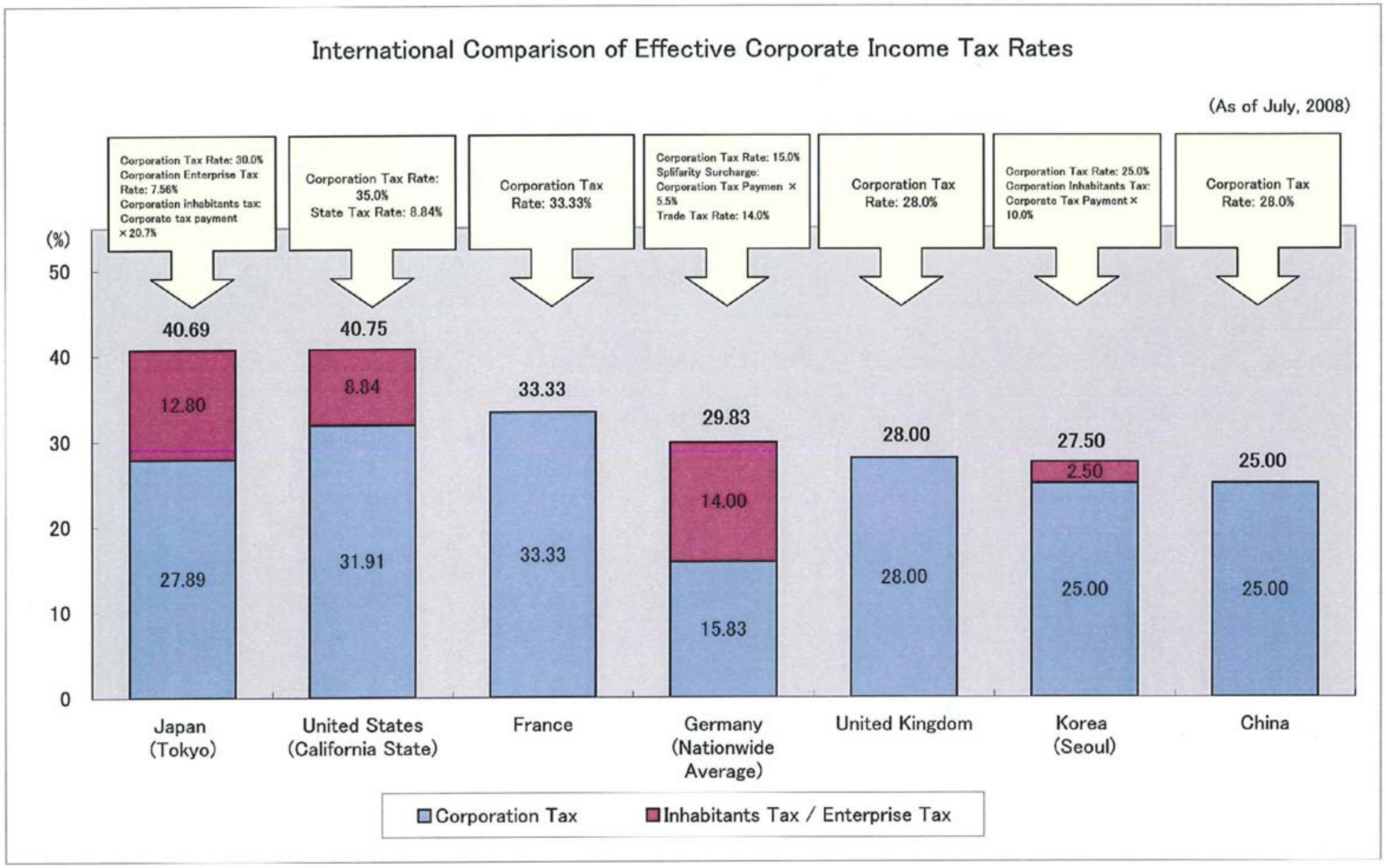
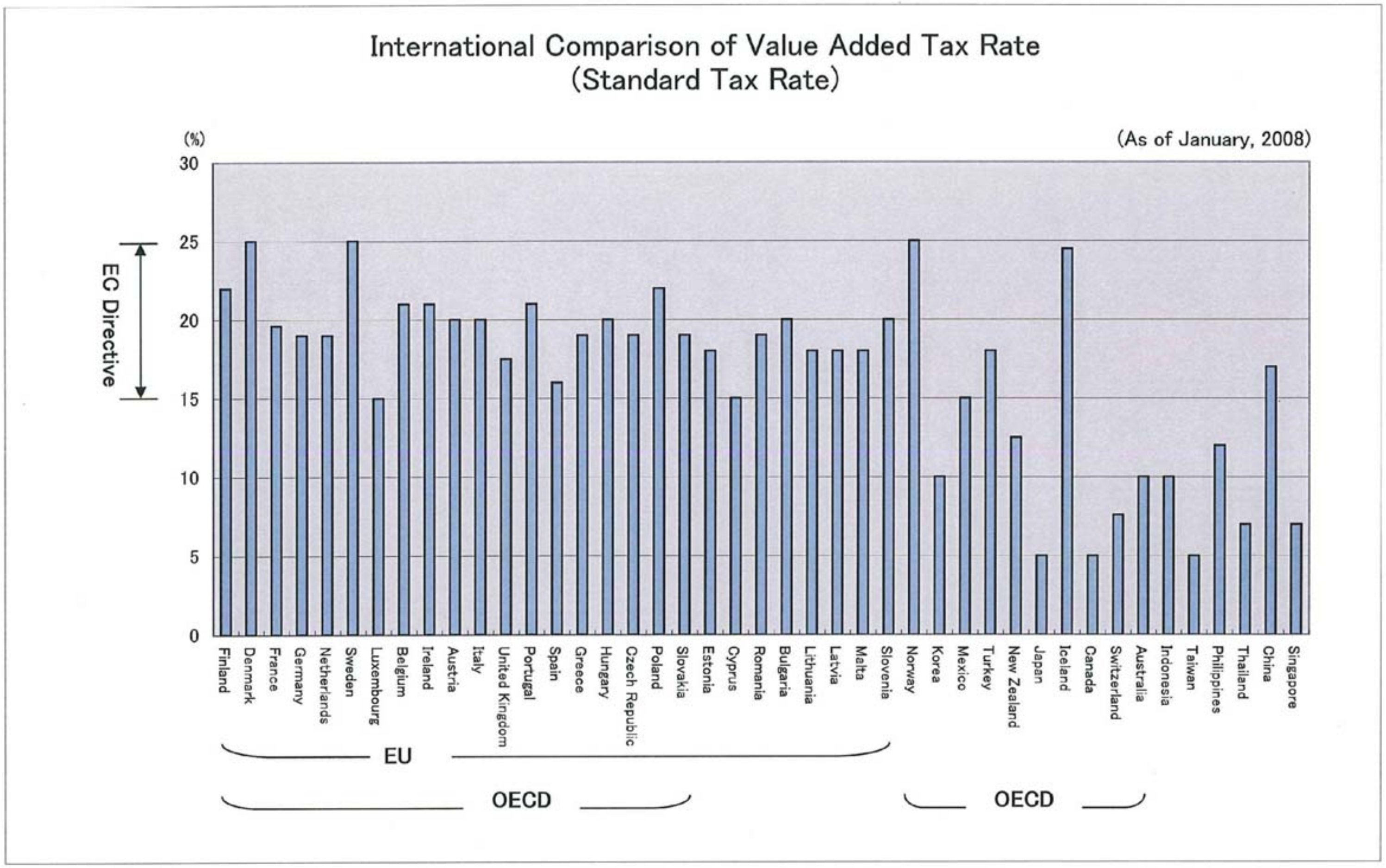

International Comparison of Effective Corporate Income Tax Rates
(As of July, 2008)
Corporation Tax Rate: 30.0%
Corporation Enterprise Tax Rate: 7.56%
Corporation inhabitants tax: Corporate tax payment × 20.7%
Corporation Tax Rate: 35.0%
State Tax Rate: 8.84%
Corporation Tax Rate: 33.33%
Corporation Tax Rate: 15.0%
Splifarity Surcharge: Corporation Tax Paymen × 5.5%
Trade Tax Rate: 14.0%
Corporation Tax Rate: 28.0%
Corporation Tax Rate: 25.0%
Corporation Inhabitants Tax: Corporate Tax Payment × 10.0%
Corporation Tax Rate: 28.0%
(%)
50
40
30
20
10
0
40.69
12.80
27.89
40.75
8.84
31.91
33.33
33.33
29.83
14.00
15.83
28.00
28.00
27.50
2.50
25.00
25.00
25.00
Japan (Tokyo)
United States (California State)
France
Germany (Nationwide Average)
United Kingdom
Korea (Seoul)
China
Corporation Tax
Inhabitants Tax / Enterprise Tax

Chart 5


International Comparison of Value Added Tax Rate
(Standard Tax Rate)
(%)
(As of January, 2008)
30
25
20
15
10
5
0
EC Directive
Finland
Denmark
France
Germany
Netherlands
Sweden
Luxembourg
Belgium
Ireland
Austria
Italy
United Kingdom
Portugal
Spain
Greece
Hungary
Czech Republic
Poland
Slovakia
Estonia
Cyprus
Romania
Bulgaria
Lithuania
Latvia
Malta
Slovenia
Norway
Korea
Mexico
Turkey
New Zealand
Japan
Iceland
Canada
Switzerland
Australia
Indonesia
Taiwan
Philippines
Thailand
China
Singapore
EU
OECD
OECD