

## Price and revenue effect of Japan's VAT reform

Topic: Input-output and prices

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Twenties years have passed since Japanese government introduced VAT (value-added tax) in 1989 after 10 years of debate. During those two decades, the VAT rate was raised the current 5% in 1997(4% for the central tax and 1% for the local tax) from the initial 3% to and the taxation coverage of venders has been enlarged. Now the VAT is the third largest tax scheme whose annual revenue for the central government is approximately \10 trillion or \$100 million in 2008 after the personal income tax (\15 trillion) and the corporate income tax (\10 trillion). On the other hand, the government deficit in Japan is huge and the outstanding balance of the government bond is now reaching \1,000 trillion which is twice as large as the current nominal GDP. Under such situation, VAT reform is one of the hot financial issues in Japanese Diet as well as gasoline (energy) tax and pension fund reform.

There are two focuses of the discussion on VAT reform. One is elimination of so-called "Tax profit" which is unique phenomenon in Japanese VAT. Because of a preferential measure for micro venders, a certain amount of VAT paid by consumers to venders is not paid to the tax authority by the venders. In order to avoid "Tax profit", the current "Account Method" ought to be switched to "Invoice Method" which is used commonly in EU countries. The other is introduction of "plural tax rates". Since VAT is counter- progressive in terms of income of consumers, introduction of reduced tax rates for daily necessities like foods would be necessary so that rising VAT rate may be accepted by consumers.

The first purpose of this research is to present a VAT simulation model in the I-O framework. Even-though Japanese government says the current Account Method VAT is in principle same as EU's Invoice Method VAT, the VAT simulation model in the I-O framework is substantially different especially in case "plural tax rate system" is introduced. And the second purpose is to implement some simulation analyses based on the I-O model. We calculate theoretical tax revenue and price effects for two methods of VAT taking Japan's regime switch in the mind. And we calculate theoretical tax revenue and price effects when "plural tax rate system" is introduced where agricultural products and foods, for example, are exempt or reduced tax rates are applied to such commodities. Incidentally, exemption and zero-tax rate are theoretically different. When the VAT system switched from Account method to Invoice method and VAT rate is raised in Japan, the difference between exemption and zero-tax rate is significant. We take the difference of exemption and zero-tax rate in daily necessities into account when we simulate the theoretical tax revenue and price effects.