Indirect Tax is a Money Illusion

Kazuto Tominaga*

12 June 2019

Abstract

An indirect tax imposed on a seller of a product assumes "shifting of tax burden" from the seller to the buyer, while the amount of burden each entity bears is said to be unknown before economic analysis. Since taxation is a restriction on property rights, the amount of tax burden, or property appropriated by the government, should be definite. This paper shows that such "tax shift" is a money illusion; when one pays the consideration for the same product, the amount of money has the same purchasing power that buys the product, regardless of whether there is a tax or not. This leads to the conclusion that the seller bears the whole burden of the "indirect" tax. At the same time, price rise must also be a kind of burden to the buyer. This suggests that there exist two kinds of tax burden notions so far used without distinction both in legal and economic discourses.

1 Introduction

When a tax is designed as an indirect tax, "shifting of tax burden"[1, Sec. B, Chap. 14] is often assumed in its legislative implementation. For example, the Japanese consumption tax, which is a general multi-tiered value-added tax (VAT), is designed to be an indirect tax, and its law takes into account the shifting of tax burden as legal fiction. This is the reason that the taxation system induces tax refund due to export exemption.

But the amount of tax shift, however, is said to be determined by economic analysis, so it is unclear whether the designed tax is direct or indirect in reality. Since taxation is a restriction on property rights, the amount of tax burden borne by an individual — that is, property appropriated by the government — should be definite to every last cent.

This paper attempts to clarify who bears an indirect tax of what amount.

2 Indirect Taxes

An indirect tax is a tax which is imposed on a seller but paid by the buyer by means of price rise [2, Chap. 9]. For example, if a seller who is obliged to pay 10 JPY tax for selling one product raises the price by 10 JPY, the buyer is regarded to bear the burden of the tax, since the buyer pays the extra 10 JPY.

If the price rise is less than tax amount, the tax burden is regarded to be shared by the seller and the buyer. If the tax amount is 10 JPY and the price rise is 8 JPY, the seller bears 2 JPY as tax burden and the buyer bears 8 JPY.

3 Money Illusion

The misconception that money is always fixed in value, which the general public tends to have, is called a money illusion[3, Sec. 11, Chap. 2].

An example is as follows. Someone's income was 2 million JPY per year and the price index was 1. One year later, the income becomes 4 million JPY and the price index becomes 2. The income has doubled in nominal terms, but has stayed the same in real terms. In other words, the purchasing power of the income has not changed. Considering this as income increase is a money illusion; it is caused by judging the value of money by its face value.

4 Indirect Tax is a Money Illusion

Suppose a seller who used to sell a product for 100 JPY is now imposed 10 JPY tax for it and has raised the price by 10 JPY to have it 110 JPY. When a buyer buys this product, the seller gets 110 JPY and pays 10 JPY to the government. The buyer is said to have borne 10 JPY indirect tax burden.

Let us compare the amounts of money paid by the buyer. On the no-tax trade, he (or she; here we use "he") paid 100 JPY. On the under-tax trade, he paid 110 JPY. Looking at the face values of money, he looks to have paid the extra 10 JPY under the tax.

But the price change of a product means the change of purchasing power (i.e., real value) of money. On the both trades, the buyer pays the exact amount of money that purchases the product. So the two different face values of money have the same purchasing power, and their real values relative to the product are the same.

This means that, on the under-tax trade, the buyer pays money that has exactly the same real value as he paid on the no-tax trade, and therefore no extra payment is made. The whole 110 JPY is the consideration for the product and does not include any tax amount. If it appeared to be an extra payment, it must have been caused by considering that 100 JPY under the tax had the same real value (purchasing power) as 100 JPY under the no-tax condition did *because they were the same in face value* and that 100 JPY under the tax could buy the product without the "extra" 10 JPY. This is a money illusion.

On any market trade, the buyer pays money at the product price, so there never is extra payment whatever price rise has occurred by tax imposition.

The seller always receives the amount of money which purchases the product whatever price rise has occurred, and pays the imposed tax amount. So the whole tax amount is paid by the seller regardless of price change.

* Kano InfoNet, Japan

5 Collateral Evidence or Consequences

The discussion seems to be supported by the following observations.

■ Scenario #1

Suppose 10 JPY tax is imposed on selling a product. The price of product was 100 JPY under no-tax, and it becomes 110 JPY under the tax. A buyer buys a product and pays 110 JPY to the seller. According to the indirect tax theory, the buyer pays 10 JPY tax. But if the buyer immediately sells the product at the market, he will get back 110 JPY, which is the same amount of money as what he had before. Therefore the buyer's idea that he lost 10 JPY when he bought the product, which is equivalent to considering the product at his hand is worth 100 JPY, is a money illusion caused by a misconception that he bought the product using only the purchasing power of 100 JPY out of the whole consideration. The fact is that the product at his hand is worth 110 JPY (i.e., bought by the purchasing power of 110 JPY; so he can get it back) under the tax, not 100 JPY.

The seller, on the other hand, gets 110 JPY and pays 10 JPY tax to the government. He has now 100 JPY, but he cannot purchase the same product at the market with that money. The seller's idea that he has got the same value of money under the tax — that is, he does not bear any tax burden — is an illusion; the purchasing power of 100 JPY under the tax is less than that under no-tax. □

■ Scenario #2

Let us consider a general multi-tiered VAT of 10 % flat rate. Suppose the introduction of the tax has caused 10 % rise of every product price. According to the indirect tax theory, every seller shifts his tax burden to the buyer in this under-tax situation, for his post-tax income is the same as that under no-tax. But it is a money illusion; the real value of the income has diminished. The price index under the tax is 1.1 with the base time of the index being under no-tax. If a seller's income at no-tax was 10,000 JPY and his post-tax income under the tax is also 10,000 JPY, the real value of the under-tax income is $10,000/1.1 \simeq 9,091$ JPY.

To make the seller's income the same as that under no-tax, it should be 11,000 JPY (since $11,000/1.1 = 10,000$), which is his pre-tax income. This means that his tax payment is the very diminution of his income, or he bears the tax burden. □

■ Scenario #3

Let us get back to the 10 JPY tax on a product. Suppose there is only one kind of product in the economy, and there are one seller and ten buyers. The seller has ten products in stock and no money, and each buyer possesses 110 JPY. Under the no-tax condition, the price of the product was 100 JPY. The asset value of the seller was 1,000 JPY, and that of each buyer was 110 JPY.

Assume that the introduction of the tax has raised the price to 110 JPY. Now the nominal asset value of the seller is 1,100 JPY, and that of each buyer is 110 JPY, but the price index increased by 10 %. The real asset value (with the base time being the no-tax time) of the seller is 1,000 JPY and that of each buyer is 100 JPY. The price rise diminished each buyer's real asset value.

One buyer purchases a product from the seller. The buyer now has the product; his asset value is 110 JPY (nominal) or 100 JPY (real). In whichever term, his asset value is the same as that just before he bought the product. The seller sold the product to get 110 JPY and pays 10 JPY tax to the government. Since the nominal value of the product is 110 JPY and he gets 100 JPY post-tax income, his nominal asset value is now 1,090 JPY, which is 10 JPY (equaling the tax amount) less than what he had just before the trade, while the government's asset value has increased 10 JPY.

Therefore, if one regards the decrease of buyer's asset value as his burden caused by the taxation, it occurs at the time of price change, not at purchase. The total asset loss of the buyers is unrelated to tax revenue. In contrast, the seller's asset value loss is caused by the tax payment, and the lost value becomes the government's value gain. In this sense, the tax is borne by the seller, not by the buyer. □

6 Conclusion

The discussion demonstrated (we believe) that the concept of indirect tax — the seller makes the buyer pay the tax by price rise — is a money illusion. Fisher wrote:

> *To shake ourselves free of these illusions it would help greatly if, for the phrase "a general rise in prices," we should substitute the phrase, "a fall in the purchasing power of the dollar."* [3, Sec. 11, Chap. 2]

Likewise for so-called indirect taxes: a rise of product price is a fall of the purchasing power of money relative to the product.

It seems there are two kinds of burdens caused by taxation. One is the transfer of value from a private economic entity to the government; this kind of burden is borne by who is obliged to pay the tax. The other is an increased payment on a trade due to price rise; this kind may erode the asset value or the real income of buyer, but does not generate tax revenue by itself. The former kind is related to the restriction on property rights, so must be dealt in terms of legal rights and duties. The latter is caused by price change, which is envisaged in market economy. From the viewpoint of rights and duties, the seller is imposed a tax duty, while the buyer purchases a product at the market under no obligation. Though the latter should be also a kind of economic burden caused by the tax, it seems such burden should not be compensated by the government according to the principles of free economy.

It seems these two kinds of burden notions are so far used without distinction both in legal and economic discourses. But the distinction is crucial from the viewpoint of property rights, which is part of human rights; therefore we deem that legal systems must distinguish them.

References

[1] Richard A. Musgrave and Peggy B. Musgrave. *Public Finance in Theory and Practice*. McGraw Hill, Chennai, India, 5th ed. edition, 1989.

[2] David Ricardo. *On the Principles of the Political Economy and Taxation*. John Murray, 1817.

[3] Irving Fisher. *Stabilizing the Dollar*. The Macmillan Company, New York, 1920.