VAT AND INFLATION: ANALYZING THE RELATIONSHIP

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ABSTRACT

In economic theory the price movement at a general level is one of the essential issues that can significantly affect on economic flows. The aim of this paper is to show that there is a significant difference in the average price level in the countries of the region, where the value added tax rates are analyzed at the same time. The subject of the paper is manifested by the reflection of the inflation rate and value added tax rate in seven countries in the region from 2008.

Selected countries are Serbia, Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro and Slovenia. Based on the graph, it was found that in the years when there was a growth of value added tax, the inflation rate was declined which means there is no positive impact of tax form on inflation ie. there is a reduction of the inflation rate. Also, bearing in mind fact that inflation rate is not primarily caused by the movement of value added tax rate, authors have focused on determining the difference between average inflation rate in observed countries. Using ANOVA and Tuckey's HSD test, it is determined a statistically significant difference between all countries in the group, while in the case of Serbia, it can notice there is a statistically significant difference between other countries in the region, except for Montenegro, where there is no statistical significance.

Keywords -*VAT, inflation, relation, statistical, economic*

INTRODUCTION

An oft-voiced concern in countries introducing value-added tax is that the introduction of the tax would set in motion a spiral in which tax, prices and wages would feed on each other -- that is, VAT would be inflationary.

If the inflationary impact is taken to mean a sustained increase in the rate of inflation, then the concern would be conceptually misguided. The introduction of VAT, or any tax for that matter, can never, by itself, lead to a sustained increase in the rate of change in the price level.

Such a change in the inflation rate can only be produced by an expansionary monetary policy under all circumstances. If, however, the term is interpreted as an increase in the price level (or a one-period increase in the inflation rate), then whether VAT is inflationary in this sense would depend on a number of factors.

Consider, some examples of VAT in other countries. After VAT was first introduced, a survey was conducted by Alan S Tait on its impact in several countries on the basis of International Monetary Fund data, which shows that VAT is never introduced in isolation. [1,2,3]

There are a number of variables influencing price change, and therefore, it is difficult to empirically assess the effect of VAT on prices. The impact of VAT on prices, therefore, cannot be strictly segregated from the general trend in inflation. First, the taxes that have been replaced are also relevant. They could be a wholesale sales tax of the cascading type, a simpler VAT, a multistage ring system, a cascade production tax and so on.

Second, the design to yield equal or higher revenue also makes a difference.

Third, other concurrent changes such as rise in oil or steel prices in international and internal markets, increase in utility rates, changes in wage levels, administrative changes such as tighter monetary policy, price control, monitoring of prices and so on, make due impact on the price rise.

According to the survey, in 22 countries, no major impact on the consumer price index was identified. In another eight, the introduction of VAT was associated with a highly defined once and for all shift in the consumer price index; only in one of these cases it could be said to have accelerated the rate of increase of the consumer price index. In seven other cases, although the shift was permanent there was no acceleration in the rate of change in prices attributable to VAT.

Therefore, in 29 cases (22 plus seven) -- 83 per cent of the total sample -- the introduction of VAT did not alter the rate of price change. Price control measures can be used effectively to dampen the potential price-wage acceleration of inflation after the introduction of VAT -- some good examples are Austria, France, Korea, Norway and the Netherlands. Perhaps the most important conclusion of the survey is that there seems to be nothing inherently inflationary about the use of VAT. In 33 out of 41 cases reviewed -- over 80 per cent -- (the "shift" cases and the "little or no effect" cases), VAT was not a contributory factor to inflation. There is another empirical study on the Netherlands on the issue of price rise. The Central Planning Bureau in the Netherlands calculated the price effect of VAT from 1969 to 1980. [4,5,6]

While VAT was introduced in the country in 1970, the study goes up to 1980 and the trend in price rise due to VAT can clearly be seen as insignificant, or none at all. In Indonesia, there were widespread apprehensions of substantial price rise before VAT was introduced in April 1985. However, in practice nothing like that happened. In fact, price indexes for consumer products fell slightly in the first week after adoption of VAT, and domestic inflation for the subsequent year was well below that for the previous year. It is evident from the discussion that inflation had not surfaced in the countries under the study, which cover a cross section of countries from the world over, because of VAT alone.

There may be a minor one-shot increase or once and for all impact to begin with under certain circumstances due to replacing other taxes and consequent adjustments by the traders and also because the overall number of tax payers would increase, but the crucial question is whether this one-time increase would lead to further price escalation. There would be offsetting price effects because of the elimination of the cascading tax. The media has reported that some sellers of consumer durable goods have said that the 12.5 per cent rate is higher than the previous one. They are suppressing the fact that now the manufacturers shall be getting input credit for the sales tax paid on the raw materials and machinery.

Moreover, 4 per cent is lower than most of the existing rates. So, the overall VAT rate will prove to be the same as the effective rate prevailing before. The net price effect of VAT would be nil. If the VAT is an equal- yield tax, and that is how it has been designed to be in India, there would not be any effect on the overall price change, although there may be changes in relative prices. [7,8,9]

The tax being revenue neutral, the aggregate demand is unchanged and so there would be no impact on the aggregate price level. There is unanimity among the economists all over the world that there seems to be nothing inherently inflationary about the use of VAT. Thus, this brings us to another aspect related to VAT administration, that is, the potentially inflationary effect can be constrained by government policies to inform the public and traders about the expected effect of VAT on prices, the use of price controls, monitoring of prices, offsetting adjustment in other taxes and generous provisions to ensure full credit for previously paid taxes on inputs.

DISCUSSION

The US has been considering introducing a National Consumption Tax federally. This would be in addition to the states’ sales taxes. Since a consumption tax would be an added cost to the consumer, it would be expected that inflation would be increased. This paper uses graphs and statistical methods to ascertain whether inflation in the UK and Canada was affected by the introduction or change in rate of the Value Added Tax (or Goods and Services Tax). It was found that the introduction of a VAT in the UK showed no significant effect on the rate of change of CPI, whereas the introduction of GST in Canada did have a significant increase in the rate of CPI. It was also found that when the tax rates were changed substantially, inflation was affected; however, modest changes in the tax rate did not affect inflation.

The proposed substantial increase in indirect taxes, such as the value-added tax (VAT), for the next fiscal year is a cause for concern amid persistent inflation. Despite the implementation of contractionary monetary policy, there are no signs of inflation cooling down. Recent reports indicate that the finance ministry and the National Board of Revenue (NBR) are gearing up to boost revenue from VAT and supplementary duties on goods and services from the upcoming fiscal year. [10,11,12]

A recent NBR report NBR says it proposes to collect an additional Tk 94 billion in VAT during the fiscal year 2011. Another news report reveals the finance ministry aims to generate approximately 51 per cent more revenue from VAT and supplementary duties next fiscal year compared to the target set in the revised budget for the current fiscal year. As a result of these proposed VAT tax hikes in the coming fiscal years, it is feared the hardship of low and middle-income earners will worsen.

The NBR has already slapped 15 per cent VAT on metro rail ticket prices, effective from next fiscal year. This will make metro rides costlier. Moreover, the way the tax department went after private universities to collect income tax by freezing many of the universities' bank accounts just before Eid-ul-Fitr raised many disapproving eyebrows. While it was claimed that tax was only being imposed on the income of private universities, it is highly likely that the universities would pass it on students, making education costlier. It is also anticipated that VAT concessions and exemptions for local industries would be reduced in the coming fiscal years. Consequently, any increase in production costs will invariably result in higher product prices by consumers.

Undoubtedly, there is a pressing need to ramp up revenue collection to fund the ever-expanding national budget and reduce dependency on foreign loans to meet fiscal deficits. Tax collection is the primary means of generating public revenue. However, unlike many countries where direct taxes, such as income tax, constitute the primary source of government revenue, Bangladesh heavily relies on indirect taxation like VAT. In the last fiscal year, indirect tax collection accounted for 66 per cent of the total tax revenue.

Revenue collection through increasing VAT, however, is regressive as it typically applies uniformly to goods and services, regardless of the income level of the consumers. Since lower-income individuals spend a larger portion of their income on essential goods and services, such as food and utilities, an increase in VAT can disproportionately affect them. This means that lower-income individuals may end up actually paying a higher percentage of their income in taxes compared to higher-income individuals, making VAT increases regressive in nature. [13,14,15]

On the other hand, a progressive tax system is where the tax burden increases as income levels rise. Those with higher incomes pay a larger percentage of their income in taxes compared with those with lower incomes. This approach distributes the tax burden more equitably by placing a greater financial responsibility on those who are more financially capable. In a word, while progressive taxes aim to promote fairness by taxing the wealthy more, regressive taxes do the opposite by placing a heavier burden on those who can least afford it.

Therefore, heavier the pressure of indirect taxes, wider the inequality tends to be. Adverse impact of indirect tax may well be understood from a recent study entitled, 'assessing the Impact of Indirect Taxation on Poverty and Inequality: A Pseudo-Panel Data Analysis on Bangladesh and Global Insights from Cross-Country Panel

Regressions'. The study provides evidence to show that higher indirect tax burdens significantly contribute to increased rates of poverty and wider income inequality. Conducted jointly by the Research and Policy Integration for Development (RAPID) and the International Growth Centre (IGC), the study reveals that one percentage point increase in the indirect tax burden results in 0.42 percentage point rise in poverty and 0.1 percentage point increase in income inequality. Meanwhile, the Gini coefficient, a measure of inequality, rose from 0.458 in 2010 to 0.499 in 2011, indicating Bangladesh's alarming slide towards extreme inequality. [16,17,18]

To address the widening income inequality, stakeholders like the Consumer Association of Bangladesh (CAB) have been demanding more focus to be directed towards increasing direct taxes. Time and again, it has been pointed out that Bangladesh's tax-to-GDP ratio of around 8 or 9 per cent is the lowest globally. By contrast, Nepal boasts a 14 per cent ratio, while India maintains approximately 15-16 per cent. Notably, Nordic countries including Denmark, Finland, Iceland, Norway and Sweden have high tax-to-GDP ratios ranging from 60 to 70 per cent, which enable them to support welfare-centric government expenditures aimed at societal benefit and equity.

In spite of the country's dismal record of income tax collection, Bangladesh stands as one of the world's leading nations in generating super-rich individuals. Many of those who leverage their power to amass vast amounts of wealth through unscrupulous means often evade taxes. Moreover, over 60 per cent of the country' nearly one crore Tax Identification Number (TIN) holders did not submit their returns for the last fiscal.

This issue is further exacerbated by the concentration of tax contributors primarily in urban centers like Dhaka, leaving vast segments of rural businesses unaccounted for in tax collections.

The government, therefore, has ample scope to boost revenue collection from direct sources by checking tax evasion and broadening tax bases, rather than increasing the burden of indirect tax on the general people. It is time to correct revenue collection strategy by embracing progressive taxation, instead of pursuing regressive methods.

RESULTS

Our findings reveal a sharp and substantial drop in the relative price between treated and control items on the day of the policy implementation (first vertical dashed line). On impact, prices were, on average, 5.65% lower than on the pre-announcement day, corresponding to an almost complete pass-through of 99.8%. Moreover, this effect persisted over time. For most of the policy duration, the price gap between VAT cut food items and other food items remained constant, with only a slight narrowing observed in the final days of the policy.

On the reversal day (second vertical dashed line), the average price index of VAT-reduced products returned to the same level as other food products. Prices of the goods in the VAT cut basket increased by 6.07%, compared to the price level at the official announcement. These observations indicate a full, persistent, and symmetric transmission of the VAT cut policy into consumer prices, which is confirmed by the formal tests performed.

Furthermore, the estimated pass-through to consumer prices on the introduction of the VAT cut was homogeneous across various dimensions. There was no significant difference across food categories, brands (trademark vs. white label), source (domestic vs. imported), supermarket size or price levels before the VAT change.

To evaluate the effectiveness of the policy in reducing inflation, we approximate the policy's direct impact on aggregate inflation by combining the estimated price changes with each category's weight in the representative consumption basket. The introduction of this policy led to a mechanical decrease in the headline inflation rate by 0.68 percentage points.

We also discuss two features of the VAT cut's setting that could be relevant drivers of the result that departs from existing literature. First, the timing of its implementation coincided with a decrease in the prices of producer prices related to food products. Using weekly product-level price data in agricultural wholesale markets, we observe a clear deflationary trend. This fall in supermarkets' input costs may have facilitated the complete pass-through observed at the retail level, allowing supermarkets to keep their margins or even increase them. Second, the policy was highly salient to consumers: it received extensive media coverage over a long period, garnering significant public attention, and it was highly advertised through intensive labeling in stores. Its implementation was continuously monitored by the Portuguese Association for Consumer Protection and major newspapers. These mechanisms suggest that the effective policy communication and the timing of the intervention relative to input price dynamics shaped the policy's success. [17,18,19]

CONCLUSION

These findings shed light on the direct impact of VAT adjustments on prices, showing that a temporary change in the VAT rate on a set of products can be effective under certain conditions. It highlights the critical importance of timing, communication, market expectations, and institutional setting in maximizing the efficacy of public policies aimed at managing inflation.[20]

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