Lower VAT can Tackle Tax Evasion

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The article is based on the study titled,
"The Effect of the VAT rate on Tax Evasion: Evidence from the Restaurant Industry in Greece"

The complete study is available, here: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2585147

In industries, where tax enforcement is challenging, the increase of tax rates does not necessarily correspond to an increase in public revenues. The reason is that these firms tend to "adjust" the magnitude of tax evasion to new policies. The increase of the VAT rate in the restaurant industry in September 2011 increased evasion by at least 9%, while the reduction of the rate in August 2011 reduced sales under-reporting by at least 9.6%. Taking into account the effect of the additional reported sales on direct taxes, the final fiscal outcome of the VAT rate reduction becomes minimal.

Over the past years, one of the most important problems related to the negotiations for the Greek Program is the lack of reliability of the proposed measures. Especially when it comes to tax reforms, initial predictions for the impact of new tax measures typically fall short from the realized outcomes. The main reason for this discrepancy is the failure to take into account the fact that, in an environment that facilitates evasion, the phenomenon has the tendency to "adjust" to new policies.

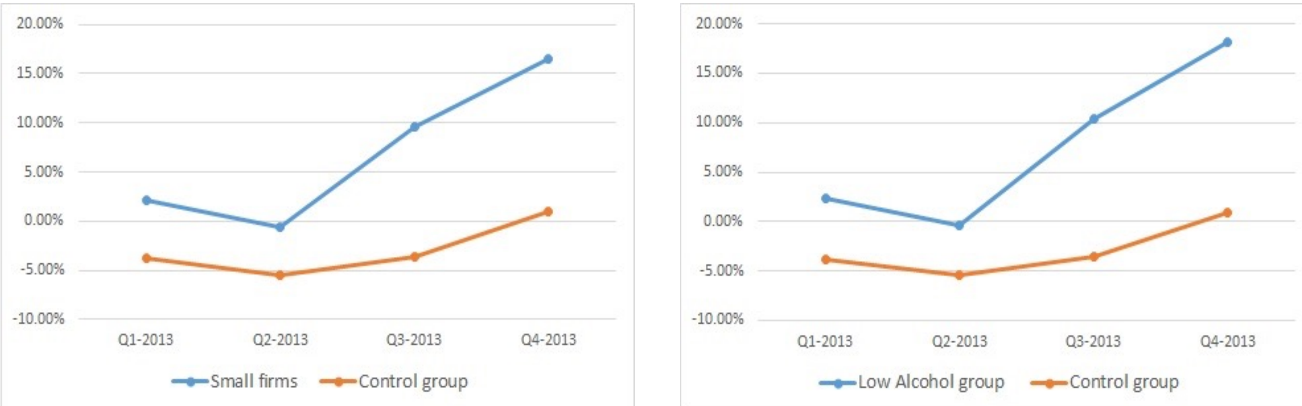
The restaurant industry constitutes an excellent example; the base VAT sales rate for restaurant services was initially increased to 23% (September 2011), and subsequently reduced to 13% (August 2013). Initial predictions for the impact of both rate changes to public revenues could not be further from reality. More specifically, the increase of the rate led to additional VAT revenues of only 140 mil. euros, instead of the forecasted 1 billion euros for the first year of implementation (troika's predictions). Similarly, the reduction of the rate caused a decrease in VAT revenues of only 69.8 mil. euros; less than half of the expected decrease (160 mil. euros). These significant differences between predicted and realized values show that forecasts based on simple multiplications of new rates on the existing tax base, without factoring the effect of the new measures on tax evasion, are doomed to fail.

The examination of the recent VAT rate changes in the restaurant industry shows that the rate increase is accompanied by a significant increase in evasion, while the rate reduction leads to a significant decrease in sales under-reporting. The findings can explain the failure of initial forecasts regarding the outcomes of the corresponding measures. Additionally, if we factor the effect of the change in reported sales on direct taxes, the final fiscal outcome becomes minimal.

The study employs a difference-in-difference methodology, using large fast-food restaurants as the control sample, due to their high reliance on paper-trail that limits their ability to under-report sales. We proxy changes on under-reporting by changes on the Sales (to Inputs) ratio, instead of just changes of reported sales, in order to control for growth effects. In this context, a sharp change of reported sales per euro of inputs, that coincides with a change in the VAT rate, is consistent with a change in tax evasion. Then we examine different treatment groups; small and large firms, and firms with different dependance on alcoholic sales, the VAT rate of which remained unchanged throughout our sample period at 23%.

The empiric results show that the VAT rate reduction from 23% to 13% in August 2013 led to a significant reduction of tax evasion in the industry by at least 9.6% during the last quarter of the year. The change was particularly pronounced for small firms (10.2%) and firms with low dependence on alcoholic sales (11.3%), which constitute the vast majority of the population in the sector (see Graph 1). These dynamics emerge as a result of (i) the lower motive to under-report sales (because of the lower rate) and (ii) the active effort by firms to maintain a reasonable level of VAT revenues that would not signal evading activity to tax authorities.

Graph 1 – Percentage Change of Sales Ratio (Medians)



Similarly, the prior increase of the VAT rate caused an increase of sales under-reporting, reflected by the significant reduction of the Sales rate by at least 9%. In this case too the effect was more significant for small firms and firms with low percentage of alcoholic sales (12-13%).[1]

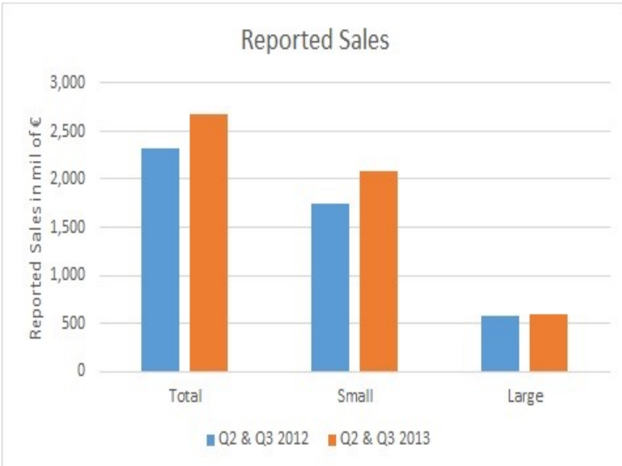
As mentioned before, these significant changes reflect an effort to avoid signaling evading activity to tax authorities. More specifically, firms actively and systematically attempt to maintain a reasonable ratio of VAT revenues to VAT credits (VAT ratio) that will not reveal evading activity (VAT ratio targeting). As a result VAT and Sales ratios essentially put limits on sales under-reporting. At the same time they can be valuable tools for tax enforcement, if used as a base for targeted audits. Indicatively, we note that, during the period of the increased VAT rate, a small percentage of firms (5%) *systematically* reports a negative VAT liability, while a more impressive 16% reports lower sales than inputs in every quarter. A serious effort to increase compliance in the industry should have these firms as a starting point.

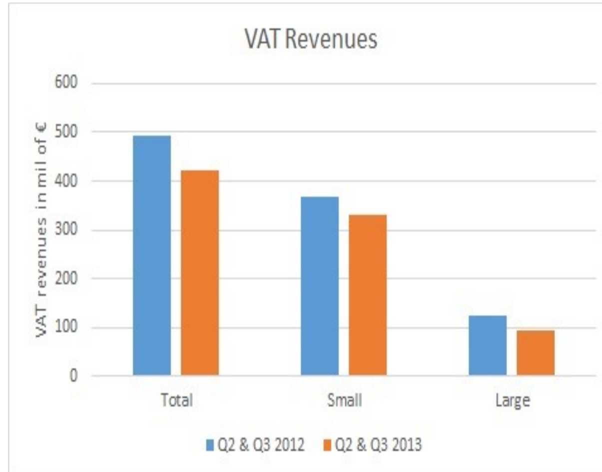
Focusing on industry aggregates, we notice that VAT revenues were reduced by only 69.8 million euros, instead of the predicted 160 million euros, during the second half of 2013 (after the rate reduction) as compared to the same period of the previous year. The lower than expected decrease in VAT revenues stems mainly from the fact that *small firms* only partially adjusted their VAT revenues downwards (-10.18%) as a response to the 30% decrease of the VAT rates, which results to a 19.2% increase of reported sales. In contrast, for large firms, that exhibit lower flexibility in sales under-reporting, the rate reduction is almost totally reflected on VAT revenues (-24.2%). Across the industry, because of the dominant role of small firms, the rate reduction is almost equally distributed between a

1 These results refer to quintile regression. Simple regression estimates are typically higher. The full tables of results are included in the paper (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2585147).

decrease in VAT revenues (-14.17%) and an increase in reported sales (+15.20%).

Graph 2 – Reported Sales & VAT Revenues (Industry Totals)





An important aspect of the reduction of sales under-reporting, that has not been factored in until now, is its effect on direct taxes. To the extent that this increase comes from the uncovering of “hidden” sales that do not involve additional production costs, we expect that it will be reflected on the firms’ annual results, at least partially. Since reported sales increased by 352 million euros in the second half of 2013, a fraction of this amount, given the 26% direct tax rate, can offset the losses in VAT revenues (69.8 million euros). Consequently, the final fiscal cost from the rate reduction becomes minimal.

Summing up, in industries with features that facilitate evasion (i.e. services), the increase of VAT rates does not necessarily lead to the increase of public revenues. It is possible that the change will result to an increase of under-reporting of the economic activity, affecting both indirect and direct taxes and fostering an environment of unfair competition against compliant firms. In contrast, reducing or keeping VAT rates at low levels can limit evading activity at a small fiscal cost. Additionally, such policies may benefit the industry, in terms of competitiveness and long-term growth prospects and reenforce tax morale.