Reply to Referee Report 1dp 2014-17 on MS 1181

Dear anonymous Reviewer,
Thank you very much for your constructive Review. In the following, I will respond to the comments made.

Comments: *This paper proposes the implementation of a corrective tax in order to overcome tacit collusion in retail gasoline markets by applying a complex and dynamic tax system instead of other regulatory or competition policy measures.*

Reply: The paper does propose the implementation of a corrective tax to hinder tacit collusion. It is supposed to bring a new approach to the table. Naturally, something new might sometimes appear unusual or complex at first glance. However, there are some interesting issues to be noted about this proposed tax regime which, in the following, form most of the reply to the comments made in the review report:

Comments: *Although the adapted taxation system introduced by M.A. Adelmann may be an interesting tool to prevent collusion among oil exporting countries it is, in my opinion, completely unsuitable to prevent tacit collusion in retail gasoline markets. The authors ignore important institutional facts of retail gasoline markets and therefore draw wrong conclusions.*
At first, such a tax would require too much information as to be implemented in local and regional retail markets. Even if only a common national market would exist the application of the tax would fail just because of the lack of information.
Cost as well as demand structures have to be known to implement an adequate tax – which is of course not known by regulatory authorities at any point in time. However, even if this information would be available it would be much easier to regulate prices directly. The application of a tax system is not only much more complicated but obviously also costly. Moreover, also the frequency and heterogeneity of price changes make an implementation of the tax impossible.

Reply: Firstly**,** similar to the case of VAT (value-added-tax) regimes, the information problem is passed onto the economic agent that actually holds all the necessary information, i.e. the supplier of the gasoline wholesale market.
Secondly, the proposed tax regime is actually not very complex. Regulation authorities do not calculate the actual tax rates of each gasoline retailer, they just tell him what the tax regime looks like, e.g. per unit tax payable equals retail price minus per unit cost of supply.
And in today's automated, computer-based world, the actual implementation of such a tax regime appears quite inexpensive, as gasoline retailers surely do not calculate VAT by hand either. Therefore, implementing the proposed dynamic tax regime might simply mean adding a few lines of code to some accounting or cashier software that is already used.
Regulation authorities could then simply have the underlying data sent to them periodically. The data can be evaluated automatically, i.e. software-based, and regulation authorities can then pick out and focus on or prosecute irregularities such as positive tax rates, falsely calculated tax rates or inflated wholesale prices which result in tax evasion.
The latter already brings up the third point that makes this proposed regulatory scheme not just a new and innovative approach with respect to economic regulatory theory but also with respect to costs associated with implementing regulatory instruments as regulation authorities can focus rather on actual violations than on costly monitoring.
In addition, gasoline retailer, for the most part, also only need to make sure that their accounting/ cashier software works correctly and then have to decide whether they want to engage in unit cost pricing or collect taxes for the government instead of cartel profits.

Comments: *Secondly, a tax would lead not only to high cost of regulation but also to much higher gasoline prices. Supposed that an optimal tax could be derived this would result in an enormous increase in tax revenues and a likewise immense decrease in consumer surplus. Therefore redistribution would be necessary if consumers should be made better off instead of worse off.*

Reply: In my opinion, this is not the case and I have elaborated on the reasons in in the points made above as well as my paper itself. I.e., as the equilibrium tax rate is zero, there is no market distortion with respect to consumer surplus, which is another interesting and innovative aspect of the proposed tax regime.

Comments: *Thirdly, the authors claim that other regulatory interventions (as implemented on Western Australia, Austria or Luxembourg) have not led to satisfactory results. This is, of course, not true as at least Luxembourg applies price regulation which always leads to satisfactory results (from the regulatory bodies' point of view) as prices are simply set to welfare maximizing levels – always provided that required information is available.*

Reply: As it is in many fields of economic research, opinions on the effectiveness and performance of implemented regulatory or other types of policy measures oftentimes tend to be mixed. If opinions with respect to the Austrian, the Luxembourg or the Australian regulatory scheme had been uniformly favorable within the scientific community, I certainly would not have opposed to any of those regimes. However, Haucap and Müller (2012) are maybe some of the most prominent experts in the field that state that, with respect to regulatory measures implemented in the gasoline retail market,

[…] theoretical predictions about the impact of these measures are mixed and empirical studies rare […]

and, furthermore, their findings show that

[…] two of the suggested rules rather decrease consumer welfare: The Austrian rule which only allows one price increase per day (while price cuts are always possible) and the Luxembourg rule which introduces a maximum markup for retailers. While no rule tends to induce lower retail prices, the Western Australian rule which allows at most one daily price change (no matter whether up or down) does at least not harm consumers."

Comments

Fourthly, collusion in retail gasoline markets is not so much a problem of prosecution by competition authorities but a problem of prove. If information on cost prices and demand would be available a collusion could easily been proved and prevented.

Reply: In my opinion, the proposed tax regime uses an alternative approach to tackle the well-known problem of proving tacit collusion by simply making it unprofitable. I have also intuitively elaborated on the feasibility of the proposed approach in my paper as well as in my points made above.

Conclusion: In my reply as well as in my paper, I have discussed intuitive ideas regarding the question of feasibility of implementation taking into account relevant market characteristics such as information asymmetry or frequent price fluctuations. Moreover, if the proposed tax regime were to be implemented I doubt that there would be much incentive left for such a high frequency of price changes, but of course, that is just an intuitive notion. Furthermore, the issue of mixed opinions on the performance of different regulatory measures that have already been implemented is also dealt with. Effects on consumer surplus are discussed in my paper as well as in my comments made above.

Overall, the review has brought up some interesting and valuable points with respect to real-life feasibility of the proposed approach which, however, appear manageable.

Thank you again for your effort and work!
Sincerely,
The author

References

Haucap, J., Müller, H.C. (2012). The Effects of Gasoline Price Regulations: Experimental Evidence, DICE Discussion Paper, No. 47, ISBN 978-3-86304-046-8. URL: http://www.dice.hhu.de/fileadmin/redaktion/Fakultaeten/Wirtschaftswissenschaftliche_Fakultaet/DICE/Discussion_Paper/047_Haucap_Mueller_2.pdf