The Welfare Effects of a Gross Receipts Tax

Caroline Weber, University of Washington

Abstract

Economists often advise against gross receipts taxes (GRT) because, in theory, they incentivize inefficiently high levels of vertical integration. However, in the absence of empirical evidence of the magnitude of the welfare costs from a GRT, more and more jurisdictions are adopting such taxes. We quantify these effects for the first time using data from the Washington state cannabis industry, which has two distinct advantages: (1) we are able to track the entire vertical supply chain at a daily frequency -- normally an insurmountable obstacle -- and (2) there was a 25`% GRT imposed on cannabis firms for one year that was subsequently replaced by an excise tax at retail, creating a clean natural experiment.

We find the short-run elasticity of vertical integration with respect to the intermediate good after-tax price is -0.15 and the long-run elasticity is more than twice as large. We find the main welfare cost of a GRT relative to an excise (or sales) tax is its additional reduction in output. Production increases by 23 percent in response to the elimination of the GRT and these increases are concentrated among firms that engage in the non-vertical market. Small firms with limited capacity to produce their own intermediate goods are particularly harmed by the GRT.