Are the prices right? Deflation procedures and an input-output productivity measure

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The debate about deflation procedures and productivity measures is not new in Economics. In fact, it is not new even in the field of Input-Output Analysis. But when a NBER Working Paper attributes the recent slow growth in manufacturing productivity to mismeasurement in deflators and alleges to use an input-output framework to estimate the correct measure for productivity growth, one should pay attention. This plea from Atalay et al. (2025) is gathering some recognition and it is done by contrasting consumer-facing and producer-facing price indices under the presumption that consumer price indices can measure quality improvements more comprehensively, observing that consumer price indices for computers and electronic products indicate less inflation than their producer and import counterparts. Then, if the same consumer price index would be applied for the deflation of the rest of the gross output, a productivity measure should be larger. It is fortunate for input-output practitioners that now we have both the technique and the database that is needed to test that claim. This paper uses the World Input-Output Database (WIOD) for both the long-run version for the period 1965-2000 and 25 countries and the 2016 release for the period 2000-2014 covering 43 countries. This dataset has two essential features for the present study: (i) it contains an estimation for the rest of the world; and (ii) it is estimated both at current prices and at previous year prices. The proposed productivity measure is based on the dominant eigenvalue of the technical coefficients matrix for the world as a whole, as it possess some desirable characteristics: (i) it is not open for criticisms about the impact of imported inputs and exchange rates; (ii) it is insensitive to relative price changes and, for the matter of world tables, to exchange rates changes; (iii) it is the perfect fit to comparing productivity changes that would occur if the same deflator was used for final demand and for intermediate consumption -- as the measure would be the same at current prices and at prices so obtained by double deflation -- and productivity changes with final demand and intermediate consumption at previous year prices -- as long as these series are not obtained by double deflation. For this last point maybe some explanation is needed: as the proposed measure is a ratio (at specific proportions) between final demand and total output and considering that household consumption is by far the largest component of final demand, the idea that a double deflation procedure would be equivalent to use a consumer price index to deflate the intermediate consumption is somehow attained. In a weak version for the same requirement, since the same deflator is used for intermediate consumption and final demand, the design for the test remains perfectly valid. For the period 2000-2014, the results indicate that the productivity index computed from the data at current prices is barely discernible from an index computed from the data at previous year prices, both pointing to a fall in productivity. But, for the period 1965-2000, the measure computed at previous year prices show a much larger productivity growth, comprising a period of rapid growth until the early eighties, then a fall and a recovery by the end of the decade, closing the entire period at a level almost 95% higher than in the begining of the series. In contrast, the productivity measure computed from data at current prices ends the series close to 12% higher, so that a crescent abyss between the two series can be spotted. In both cases, the thesis sketched by Atalay et al. (2025) is not confirmed when the World Input-Output Database is used. In the first case, by the mere observation of an indistinguishable behavior between the series obtained with or without a deflation procedure. And, in the second case, by the opposite result advanced by the authors: the productivity growth computed from the data at previous year prices is much larger than from the data at current prices, implying that the deflators applied to intermediate consumption were much higher than the ones applied to the final demand for the period 1965-2000.