

"An Algorithmic Contribution to a Sraffian Measurement of Technological Progress"

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In this paper we propose a measure of technological progress which is based on the information embedded in standard input–output tables. Well known duality properties enables one to establish a connection between the quantities necessary as inputs and the associated output and some auxiliary prices (like the *wage-profit* curves). Properly tailored wage-profit frontiers may provide a basis for the measurement of technological progress. But the computation of these *wage-profit* frontiers is not trivial.

A brute force algorithm for the computation of the wage-profit frontiers has high combinatorial complexity that would make its precise computation intractable.

But thanks to an efficient algorithm that we have been able to devise we can now compute it. We consider this to be an important and original contribution. Here we present and apply this algorithm. Due to this improvement we can now use these wage-profit frontiers as benchmarks against which to measure technological progress: two new indices have been defined.

One of the two indices, the one generating a ranking between a given set of economic regions, is independent of the of the chosen *numéraire*. *This too is an important and robust feature.*

These new tools have been applied to the OECD input–output data 1970–2005. Given the availability of this new tools the results are presented here for the first time.