

## **Revisiting Factor proportions in the Indian Economy – A Semi-Input-Output Approach with focus on tradable sectors**

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Literature on factor productivity is essentially based on measurement of factor intensity for sectors of the economy. However, the measurement of factor intensities is restricted to their direct use within the sector ignoring the crucial fact that factors are also embedded in upstream sectors. Therefore, an underestimation of the factor intensities across sectors of the economy cannot be ruled out if evaluated using direct factor contents only. An a priori external influence on demand (through exports) and investment (through FDI), is expected to shape the allocation of production. It will be insightful to see structural coherence of factor endowments with output, exports and FDI, separately for each tradable sector of the economy. Likewise for factor intensities, tradable are also studied in isolation for their interaction with the non-tradables. The use of Semi Input-Output (SIO) modelling, however, permits to account for their interaction.

This paper has two objectives for studying the tradables using an SIO approach and the KLEMS data from the RBI. First, to assess the extent of underestimation of the factor intensities upon the additional accounting for indirect factor intensities. Second, to study the structural coherence of factor intensities with output, exports and FDI.

The factor proportions (K-to-L) show a significant underestimation of the factor intensity for the economy in comparison to when accessed with direct proportions only. Taking into account of the complementarities generated by the tradable sectors on the non-tradable sectors, the average K-to-L ratio for the tradable sector appreciates notably from 2.7 to 3.9 upon accounting of the linkage effects. Although the output and export distributions are largely aligned with factor endowments; the distribution of FDI is skewed towards sectors with high capital proportions. From a policy perspective, FDI is unlikely to be solution to the employment generation problem without re-orienting and enhancing the existing skills.

### Keywords

factor proportions; tradables; capital-to-labour ratio; semi-input-output; linkages; india