As Rodrik (2013) demonstrated, productivity levels in (formal) manufacturing industries of developing countries tend to move closer to those in high-income economies, even when economy-wide productivity levels show no such tendency. This has raised the question whether manufacturing is special – as argued by Rodrik – and whether other industries share this same feature. The existing literature is not yet able to provide convincing answers to this question. The analysis of productivity in services by Kinfemichael and Mahbub Morshed (2019) is plagued by measurement concerns, in particular the lack of industry-specific price data to compare output across countries and over time. Clear conclusions are also hard to draw because a complete accounting of which industries contribute towards productivity convergence and which to constant productivity differences or divergence is required to account for the lack of productivity convergence for the economy as a whole. The method introduced by Inklaar and Diewert (2016) provides a methodological framework suited to analysing these questions. In this paper we will apply and extend their method to a range of countries comparable in scope to that used by Rodrik (2013). This will yield estimates of relative prices of industry output and intermediate inputs, relative levels of production factors and relative (total factor) productivity, which can be used to assess the degree of convergence at the industry level and contributions of individual industries to aggregate (non-)convergence.