


Efficient Labor Reallocation and Productivity Growth



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Differences in income across countries are largely accounted for by productivity variations. The overall productivity growth is attributed to both the productive efficiency of individual firms or industries and the allocative efficiency between them. The former relates to innovation and technological catch-up to the frontier technology of advanced countries, while the latter is associated with reallocation of factors of production from less productive sectors to higher productive sectors and improving within-sector allocative efficiency of production resources between firms. One of the well-established argument on productivity is that differences in the allocative efficiency account for a large fraction of variations in productivity across countries. That is, alleviating distortions in resource allocation can improve productivity even if there is no technological improvement.

The world has experienced a moderately decreasing trend in productivity growth over the last decades, and this was deepened by the global financial crisis. Korea also has experienced a decline in the growth rate of its labor productivity from around 8 percent in 1990 to 1.7 percent in 2015. This slowing pace was evident even before the crisis. However, as

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economic and policy uncertainty have increased and recovery of aggregate demand has been protracted after the crisis, firms are not willing to invest in high-risk projects which can lead to innovative technological progress and thus the productivity growth has been exceptionally weak since the financial crisis. In addition, a slowdown in innovation and technological diffusion, aging populations, and the deepening decline in the growth of human and physical capital have also been pointed out as the culprits of the recent productivity slowdown.

Historically, Korea recorded rapid economic growth as it experienced the movement of labor, from low-productivity agriculture and informal sectors to high-productivity manufacturing and modern sectors, and also significant technological improvement. The average productivity as of 2015, based on the firm-level database of the Survey of Business Activities (SBA) provided by Statistics Korea, is 14.11 for agriculture, fishing, and mining, 14.54 for manufacturing, and 13.98 for services. The small productivity gap between sectors implies that Korea is at the stage of high level economic development. However, it appears that the service sector still records relatively lower productivity than manufacturing. Recently, as Korean manufacturing firms face significant challenges from global trade slowdown, enhanced competition from emerging markets, and excess capacity in some industries such as steel and petrochemical industries, some large firms are regulated and workers dismissed from the regulated firms move to service sectors with low productivity. That is, the reallocation of labor implies growth-reducing restructuring.

According to the decomposition method proposed by McMillan and Rodrik (2014), economy-wide productivity growth can be decomposed into intra-sector efficiency improvement associated with technology change, capital accumulation, and efficient management, and inter-sector efficiency changes associated with labor reallocation across sectors. When applying the decomposition method to Korean data, it shows that overall productivity growth is mainly contributed by internal productivity increases while inter-sectoral changes instead make a negative contribution to the aggregate productivity growth. That is, high-productivity manufacturing sectors have been reduced in favor of relatively low-productivity service sectors and this is offset by rapid within-industry productivity growth.

However, this is not a special case for Korea, but has been predominantly observed in most advanced countries. In the case of OECD countries, the labor share has increased and reached about 6 times the labor share in the manufacturing sector as of 2016. The growth of the service sector is accompanied by a shift in consumer preferences, capital-intensive manufacturing, globalization, etc. For example, the demand for services increases as income rises, and development of the global value chain moves some parts of the manufacturing to

other countries, and workers dismissed in manufacturing sectors move to service sectors. Therefore, productivity growth in the service sector is more important to boost aggregate productivity rather than preventing employment movement to service sectors. It can be achieved by investing in tangibles such as automation and ICT and nontangibles including, for example, business processes and organization structures. Also, as stringent product market regulations are associated with lower TFP growth in service sectors, reducing various regulations, entry barriers, and administrative burdens would facilitate productivity growth in service sectors.

In addition, the decomposition method can be modified to decompose industry-level productivity change into internal restructuring of technological improvement of firms and external restructuring of reallocation of resources across firms. The decomposition analysis for the manufacturing and service sectors shows that both sectors have experienced increases in overall productivity and that internal and external restructuring positively contribute to aggregate productivity growth. However, in the case of the manufacturing sector, the contributions of the internal and external restructuring to productivity growth are 55 percent and 45 percent of the productivity growth. On the other hand, for the service sector, the internal contribution to productivity growth is about twice the external contribution, accounting for about 66 percent and 33 percent, respectively. This implies that there is much room for productivity improvement in the service sector by achieving efficient reallocation of labor.

The small contribution of external restructuring to productivity growth in the service sector might be due to stringent product market regulations or preferential policies and subsidies depending on the size of the firms which allow unproductive firms to stay in the market. Therefore, it will be necessary to alleviate various regulations which impede the movement of production factors between firms. Also, preferential policies based on productivity and potential would facilitate the reallocation of production factors enhancing productivity. For example, as young firms struggle with financial constraints due to their lack of financial history, despite possessing modern and innovative technology, while some unproductive firms stay in the market due to size-based preferential policies although they are below the average productivity of the industries, providing preferential financial subsidies or benefits based on the productivity or potential of recipients would foster efficient reallocation of resources.

To summarize, productivity growth in the service sector would foster economy-wide productivity and this can be achieved by mitigating the misallocation of resources in Korea's service sectors. Accordingly, it will be necessary to relaxing regulations and output-price rigidities to

increase allocative efficiency as well as spillovers of ICT and upgrades to operational structures to boost economy-wide productivity and that of service itself. **KIEP**