

Estimates of Intangible Investment by Industry and Productivity Growth in Japan

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We estimate intangible investment by industry following the categorization method of Corrado, Hulten and Sichel (2009). The number of industries estimated is 92 based on the JSIC 2-digit industry classification. The estimation period is from 1980 to 2008. The intangible investment/GVA ratio in the manufacturing sector is high due to their aggressive R&D investment. In particular, the intangible investment/GVA ratios in the chemical and machinery industries were over 10% in the late 2000s. On the other hand, in the service sector, the investment/GVA ratio is lower than that of other advanced countries due to its slow growth in the 2000s. Therefore, the contribution of intangible assets to economic growth in the service sector is small. Using our estimates, we also examine whether intangible assets play a complementary role in the contribution of ICT assets to productivity growth by estimating a production function including intangible assets.