

## The Missing Footprint of the Robots

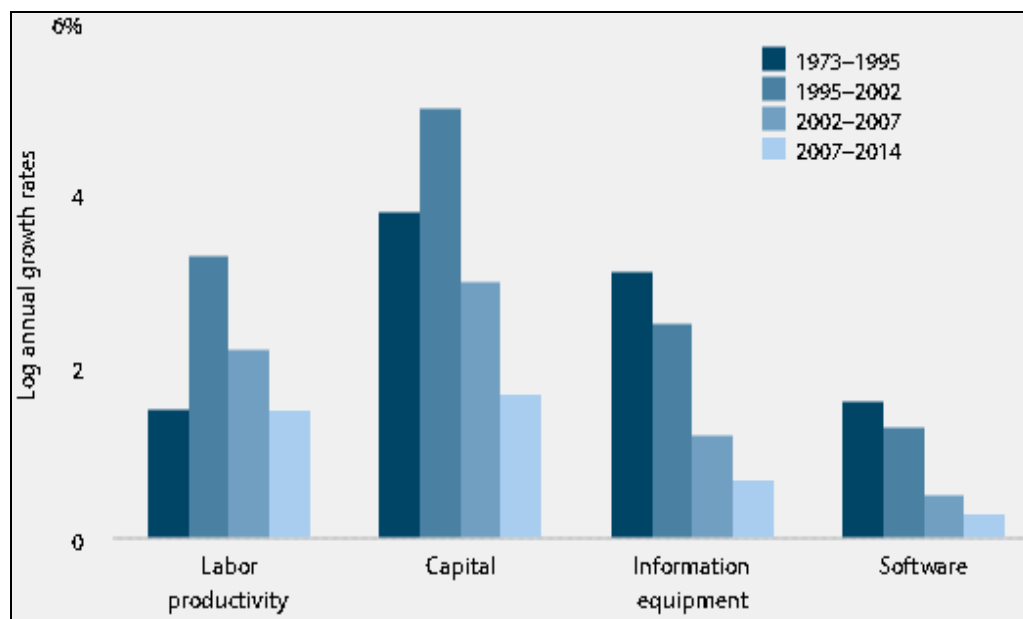
Lawrence Mishel, May 13, 2015

Robots are everywhere in the news but they do not seem to leave a footprint in the data. The focus on robots eroding jobs and creating a jobless and unequal future is a story about capital replacing human labor. Of course, this process has been ongoing for many decades. The current robot story is that employers are increasingly using machinery, computers or software instead of workers. Perhaps surprisingly to some, the data on investments and productivity cast doubt on any accelerated robot activity: the growth of labor productivity, capital investment and, particularly, investment in information equipment and software has strongly decelerated in the 2000s.

The graph below shows that productivity and all types of capital investment accelerated during the late 1990s tech boom relative to the earlier 1973–1995 period. In the 2000s, however, productivity and capital investments were much slower in the recovery from 2002–2007 and decelerated further during the great recession years from 2007–2014. For instance, information equipment investment grew at a 1.2 percent annual rate over 2002–2007, roughly half the 2.5 percent rate of the 1995–2002 period, and grew even more slowly (0.7 percent) after 2007. If technology were rapidly transforming our workplaces we would expect to see exactly the opposite—a surge in the use of information equipment and software in the production of goods and services. That is what occurred in the late 1990s and it is not happening now. Perhaps we should give the robot scare a rest.

### **Growth of labor productivity, capital, information equipment and software, 1973–2014**

	1973–1995	1995–2002	2002–2007	2007–2014
Labor productivity	1.5	3.3	2.2	1.5
Capital	3.8	5.0	3.0	1.7
Information equipment	3.1	2.5	1.2	0.7
Software	1.6	1.3	0.5	0.3



%. Source: EPI analysis of Fernald (2014) data, San Francisco Federal Reserve Board