

## **Productivity Trends from 1890 to 2012 in Advanced Countries**

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### **Abstract**

In order to examine innovation diffusion and convergence processes, we study productivity trends, trend breaks and levels for 13 advanced countries over 1890-2012. We highlight two productivity waves, a big one following the second industrial revolution and a small one following the ICT revolution. The first big wave was staggered across countries, hitting the US first in the interwar years and the rest of the world after World War II. It came long after the actual innovation could be implemented, emphasizing a long diffusion process. The productivity leader changed during the period under study, the Australian and UK leadership becoming a US one during the first part of the 20th century and, for very particular reasons, also a Norwegian, Dutch and French one at least for some years at the end of the 20th century. The convergence process has been erratic, halted by inappropriate institutions, technology shocks and financial crises, but above all by wars, which led to major productivity level leaps, downwards for countries experiencing war on their soil, upwards for other countries. Productivity trend breaks are detected following wars, global financial crises, global supply shocks (such as the oil price shocks) and major policy changes (such as structural reforms in Canada or Sweden). The upward trend break for the US in the mid-1990s is confirmed, as well as the downward trend break for the Euro Area in the same period. The downward trend break observed as early as the mid-2000s for the US leads one to question the future contribution of the ICT revolution to productivity enhancement.