



abstract

The Second Great Divergence: Artificial Intelligence and Basic Income

**T o m o h i r o I n o u e , S h u n s u k e S h i n a g a w a
a n d E i j i T s u z u k i**

We analyze how the development of artificial intelligence (AI) affects economic growth, employment, and income distribution based on theoretical models (the Solow model, the AK model, and monetary growth models). We demonstrate that the basic income (BI) is effective for addressing the economic problems that the development of AI brings.

Discussion about the effect of AI on economy requires a distinction between narrow AI and artificial general intelligence (AGI).

Technological unemployment will remain a local and temporal problem until the emergence of AGI, because a labor can move to a job advantageous to human if narrow AI displaces him.

After the emergence of AGI, laborers will starve without basic income, because all human labors will be displaced by AGI and the labor share will approach zero.

At that time, the “Cobb-Douglas economy” (which has two productive factors “capital” and “labor”) will change into the “AK economy” (which has only one productive factor “capital”). The rate of potential economic growth will continue to increase even if the technological change rate is constant in the AK economy.

The potential growth rate of the country introducing AGI will continue to increase, while the growth rate of the country without AGI will not. “The second great divergence” will occur between the former country and the latter country in the first half of the 21th century, as “the great divergence” (Pomeranz) occurred between a country introducing