Growth Rate versus Level of Real GDP per Person for a Broad Group of Countries

The horizontal axis shows real GDP per person in 1960 in 2000 U.S. dollars on a proportionate scale for 112 countries. The vertical axis shows the growth rate of real GDP per person for each country from 1960 to 2000. The red line is the straight line that provides a best fit to the relation between the growth rate of real GDP per person (the variable on the vertical axis) and the level of real GDP per person (on the horizontal axis). Although this line slopes upward, the slope is—in a statistical sense—negligibly different from zero. Hence, the growth rate is virtually unrelated to the level of real GDP per person. Thus, this broad group of countries does not display convergence.
The horizontal axis shows real GDP per person in 1960 in 2000 U.S. dollars on a proportionate scale for 18 of the 20 founding members of the OECD (excluding Germany and Turkey).
Growth Rate versus Level of Income per Person for U.S. States, 1880-2000

The horizontal axis shows real personal income per person in 1982-84 U.S. dollars on a proportionate scale for 47 U.S. states. The two-letter abbreviation identifies the state. (Alaska, the District of Columbia, Hawaii, and Oklahoma are excluded.) The vertical axis shows the growth rate of real personal income per person for each state from 1880 to 2000. The solid line is the straight line that provides a best fit to the relation between the growth rate of income per person (the variable on the vertical axis) and the level of income per person (on the horizontal axis). The line has a clear negative slope—therefore, a lower level of income per person in 1880 matches up with a higher growth rate of income per person from 1880 to 2000. Thus, the U.S. states exhibit convergence.
Growth Rate versus Level of Real GDP per Person: Conditional Convergence for a Broad Group of Countries

The horizontal axis shows real GDP per person in 2000 U.S. dollars on a proportionate scale. The data are for 71 countries in 1965, 85 countries in 1975, and 82 countries in 1985. (The sample was based on the availability of data—86 countries appear at least once.) The vertical axis shows the corresponding growth rates of real GDP per person—for 1965-75, 1975-85, and 1985-95. Each of the growth rates filters out (and, therefore, holds constant) the estimated effects of the variables discussed in the text. The red line is the straight line that provides a best fit to the relation between the growth rate of real GDP per person (the variable on the vertical axis) and the level of real GDP per person (on the horizontal axis). The line has a clear negative slope. Therefore, once we hold constant the other variables, a lower level of real GDP per person matches up with a higher growth rate of real GDP per person. This relation is called conditional convergence.