

Accordingly, in cross-country comparisons, rather than observing an overall *inverse* relationship between the abundance of physical or human capital and the returns to it (diminishing returns), we tend to observe a *positive* relationship (increasing returns).

The very same logic explains why industrial production is tightly concentrated in large urban centres where a greater range of complementary human and physical capital can be found. In modern jargon, we speak of “agglomeration” and “clustering”.³

Evidence for both decreasing returns and increasing returns can be found in various contexts; the complex patterns as regards returns to capital witnessed in the world reflect the interplay of these forces.

Increasing returns implies divergence of incomes. The more specialized and refined skills and the most advanced forms of capital that embody the cutting edge of technology will tend to be both comparatively scarce (being new and/or expensive to acquire) and to require association with a wide range of complementary skills and capital to earn maximum returns. Regional concentration of such skills and capital follows logically and since these skills and capital command higher returns, regional concentration of income is implied.

³ There is an important analogy in this story to innovation. New ideas usually arise by connecting existing ideas; as an obvious example, the combination of the internal combustion engine and the horse-drawn carriage yielded the automobile. The richer the existing range of ideas (or alternatively of technologies or products) the greater the scope for new ideas to be found. And here the math is interesting: insofar as new ideas are created by combination or recombination of existing ideas, for each new idea conceived, a whole new range of possibilities arises from the possible combination of it with those already existing. The potential field of new ideas expands combinatorially; combinatorial expansion dominates exponential growth the way that exponential growth dominates linear growth. Thus, even if most potential combinations are sterile, the math implies a powerful acceleration of technological growth, and that certainly accords with the observed historical acceleration of technological innovation. By the same token, innovation will tend to be disproportionately concentrated in areas that are rich in existing ideas—i.e., where there are concentrated populations of highly knowledgeable individuals.