



E.F. Schumacher
Small is
Beautiful
Economics as if
People Mattered

Chapter 12

Social and Economic Problems Calling for the
Development of Intermediate Technology

A Lonergan Institute Seminar

St Anselm's Abbey

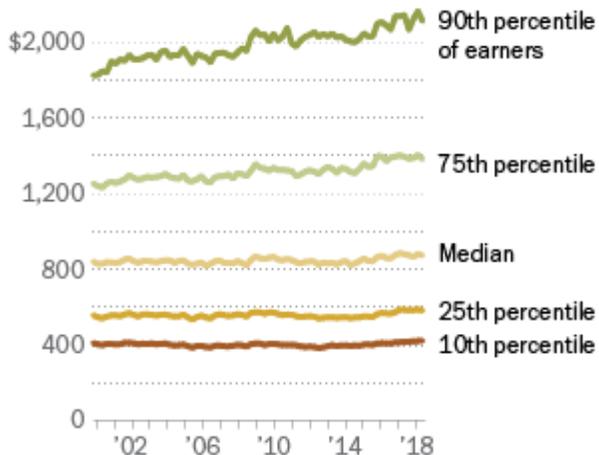


What Do We Think?

Is technology the driving force behind rising inequity in the United States and around the world? Are the rich getting richer while the poor get poorer?

Wage increases in the U.S. rise to the top earners

Usual weekly earnings of employed, full-time wage and salary workers, not seasonally adjusted, in constant 2018 dollars

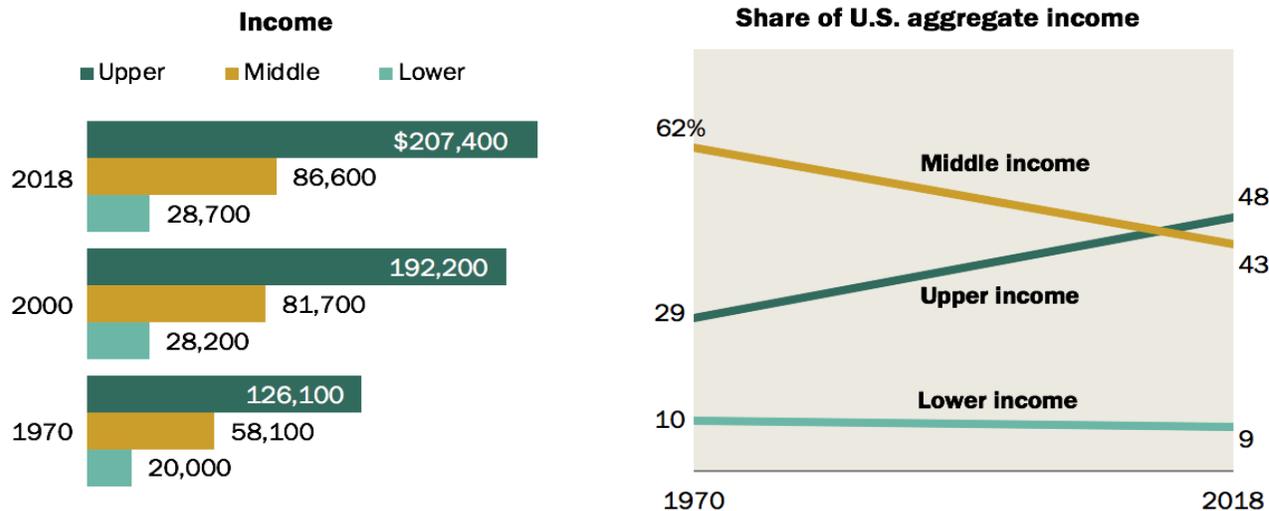


Source: U.S. Bureau of Labor Statistics.

PEW RESEARCH CENTER

The gaps in income between upper-income and middle- and lower-income households are rising, and the share held by middle-income households is falling

Median household income, in 2018 dollars, and share of U.S. aggregate household income, by income tier



Note: Households are assigned to income tiers based on their size-adjusted income. Incomes are scaled to reflect a three-person household. Revisions to the Current Population Survey affect the comparison of income data from 2014 onwards. See Methodology for details.

Source: Pew Research Center analysis of the Current Population Survey, Annual Social and Economic Supplements (IPUMS).

"Most Americans Say There Is Too Much Economic Inequality in the U.S., but Fewer Than Half Call It a Top Priority"

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From Schumacher, Chapter 12

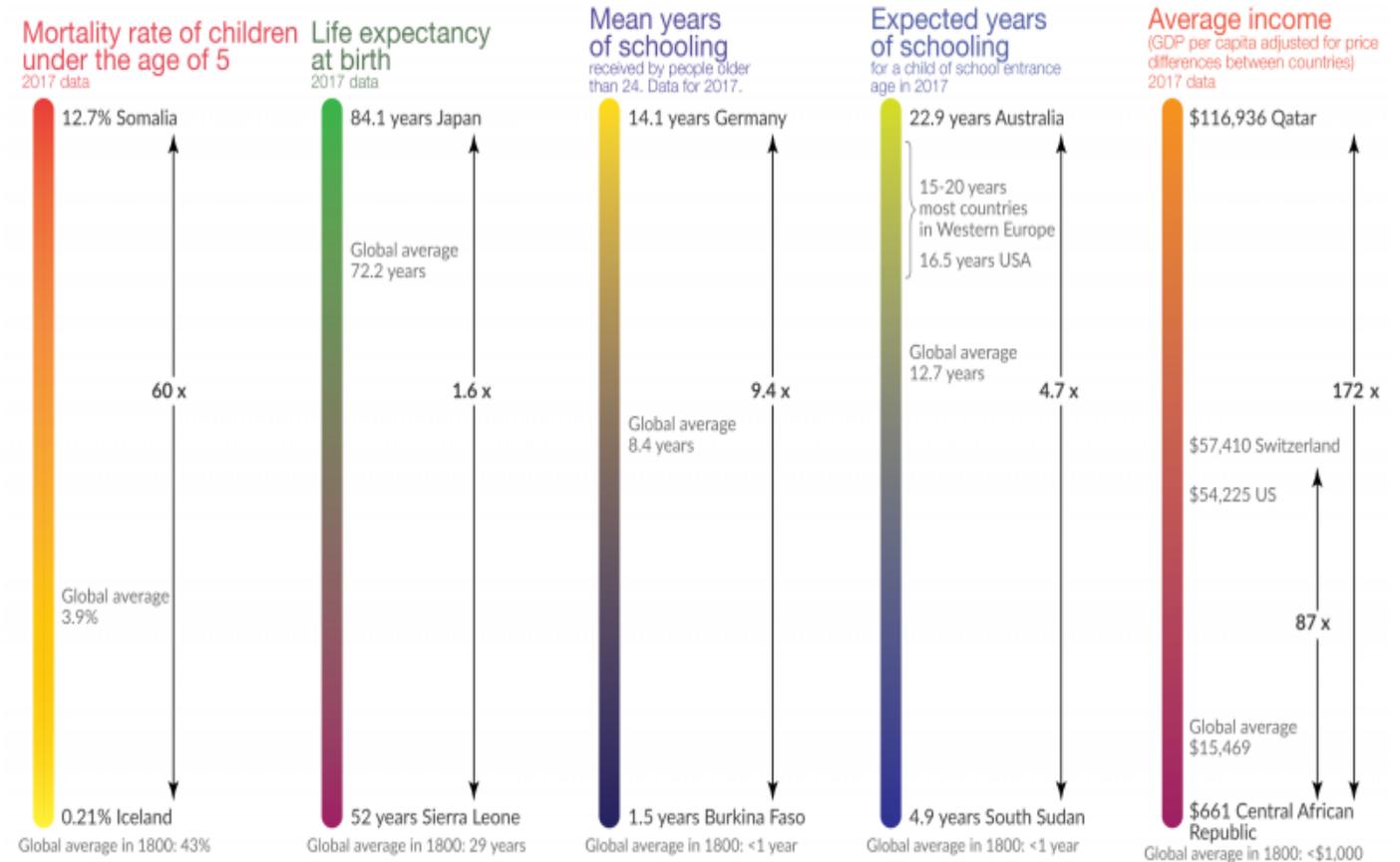
"In many places in the world today the poor are getting poorer while the rich are getting richer, and the established processes of foreign aid and development planning appear to be unable to overcome this tendency. In fact, they often seem to promote it, for it is always easier to help those who can help themselves than to help the helpless. Nearly all the so-called developing countries have a modern sector where the patterns of living and working are similar to those of the developed countries, but they also have a non-modern sector, accounting for the vast majority of the total population, where the patterns of living and working are not only profoundly unsatisfactory but also in a process of accelerating decay."

2017 Data

Global inequality in living conditions

between the world's worst-off and best-off countries

Our World
in Data



Data source: all data for 2017 is taken from various UN publications. Historical estimates for 1800 are from OECD - How was life? and Our World in Data. This is a visualization from OurWorldinData.org, where you find data and research on the world's largest problems.

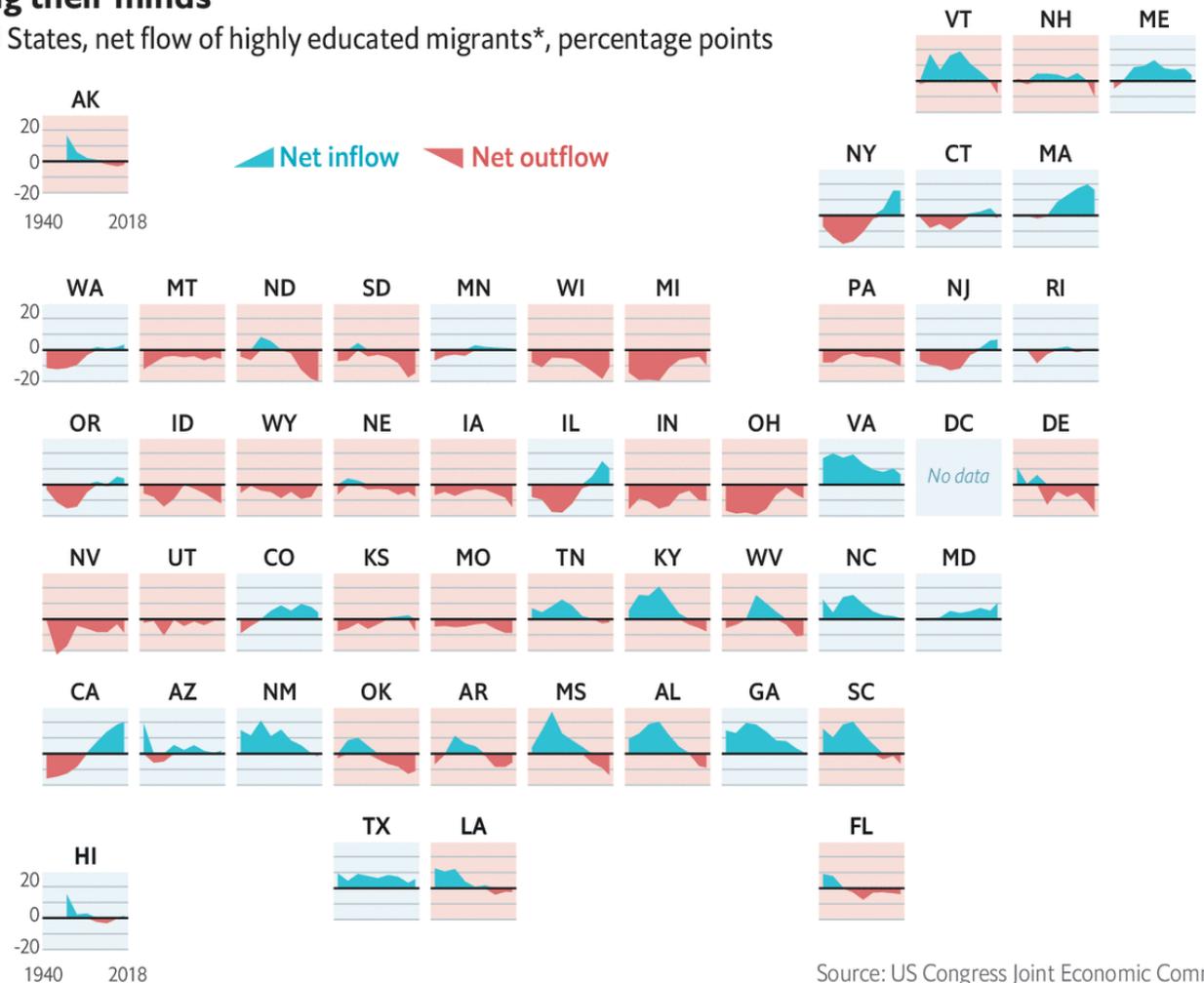
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From Schumacher, Chapter 12

“The problem may therefore be stated quite simply thus: what can be done to bring health to economic life outside the big cities, in the small towns and villages which still contain - in most cases - eighty to ninety per cent of the total population? As long as the development effort is concentrated mainly on the big cities, where it is easiest to establish new industries, to staff them with managers and men, and to find finance and markets to keep them going, the competition from these industries will further disrupt and destroy nonagricultural production in the rest of the country, will cause additional unemployment outside, and will further accelerate the migration of destitute people into towns that cannot absorb them. The process of mutual poisoning' will not be halted.”

Losing their minds

United States, net flow of highly educated migrants*, percentage points



Source: US Congress Joint Economic Committee
*Those aged 31-40 in the top third for educational attainment and income

Small-town USA Lags Behind the Big City

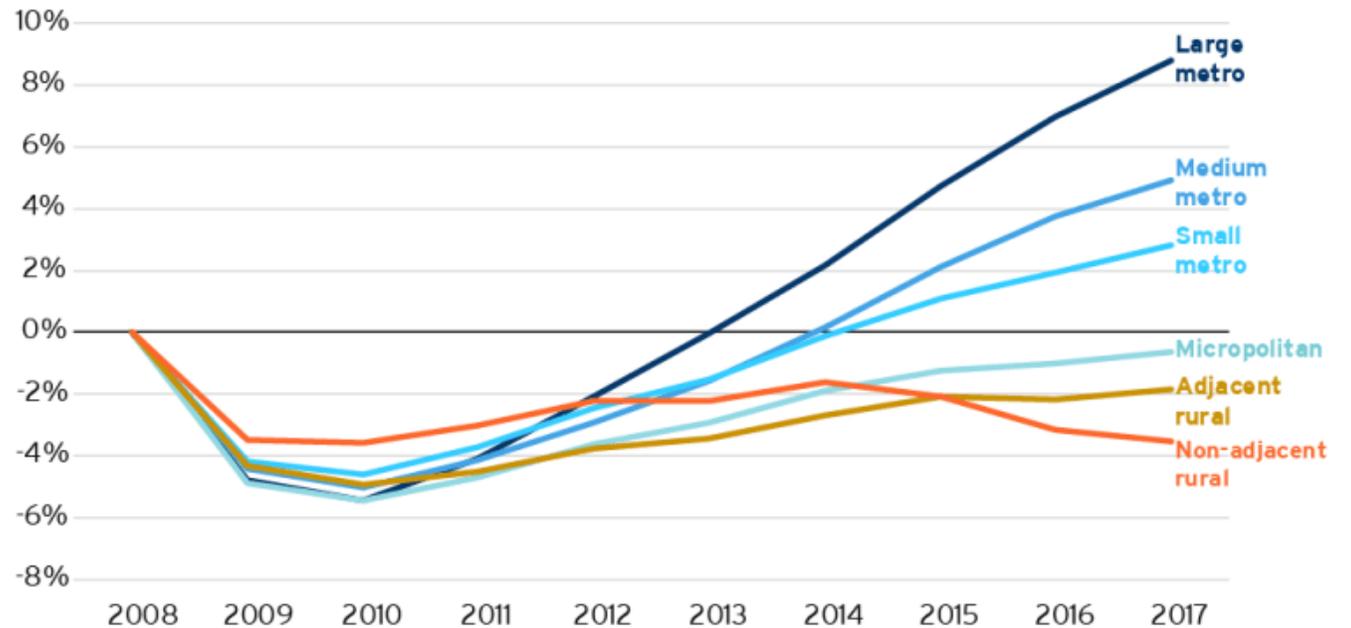
- “The yawning gap between city and country is most glaring in what’s known as the labor force participation rate. That is, the percentage of the working-age population that either has a job or is looking for one.
- Let’s start with urbanites. The percentage of prime-aged (25-54-year-old) residents who were working or looking for work climbed to 83% at the end of 2018 and finally topped the pre-recession average.
- By contrast, the participation rate for prime-aged rural Americans has recovered more slowly and is still under 80%. The rate had fallen to as low as 78.5% in the wake of the recession.”

Source: <https://www.marketwatch.com/story/small-town-usa-falls-further-behind-urban-america-in-job-opportunities-after-recession-2019-02-22>

FIGURE 1

Isolated rural communities have experienced declining employment

Employment growth since 2008 by community type, United States



Source: Brookings analysis of Emsi data

What Typical Looks like in the U.S

About 46 million Americans live in the nation's rural counties, 175 million in its suburbs and small metros and about 98 million in its urban core counties.

Source: PEW Research Center, 2018

What is a typical urban county?



There is so much variability among counties that no single one is perfectly typical, but **Franklin County, Ohio**, is a good example.

The county seat is Columbus, the state capital. Like urban counties overall, it is growing, though its current population of 1.2 million is somewhat larger than the median urban county. The population is about two-thirds non-Hispanic white, a higher share than for urban counties overall, but as with other urban counties, the white share has declined. Franklin County has a similar share of adults ages 65 and older (11%) and the same share of people in poverty (17%) as the typical urban county. As did urban counties overall, it gained prime-age workers since 2000.

Named for Benjamin Franklin, the county is home to Ohio State University (and its Buckeyes sports teams). The county has voted Democratic in presidential elections since 1996. The corporate headquarters for Nationwide Insurance and Limited Brands are located in Columbus. The region also has the highest number of refugee arrivals in Ohio, and one of the largest populations of Somali refugees in the country.

What is a typical suburban county?



Hunt County, Texas, has many characteristics of the typical suburban or small metro county. It belongs to the Dallas-Fort Worth metropolitan area. Its growing population of about 89,000 includes – as is true of most suburbs – a declining share who are non-Hispanic white (73%).

As with other suburbs, the older-adult population is rising; 15% of residents are ages 65 and older. The number of people in poverty, 19% of the total population, also went up since 2000. The number of employed residents ages 25 to 54 ticked down, as is true of the typical suburb.

Named for Texas political figure Memucan Hunt, it became a county in 1846. Greenville is the county seat and the largest town. In its early days, the county economy depended on cotton farming, but now education, manufacturing and agribusiness are more important. Most workers are employed at jobs within the county, but about a third work outside the county, including in Dallas. In recent decades, the county mainly has voted for Republican presidential candidates.

What is a typical rural county?



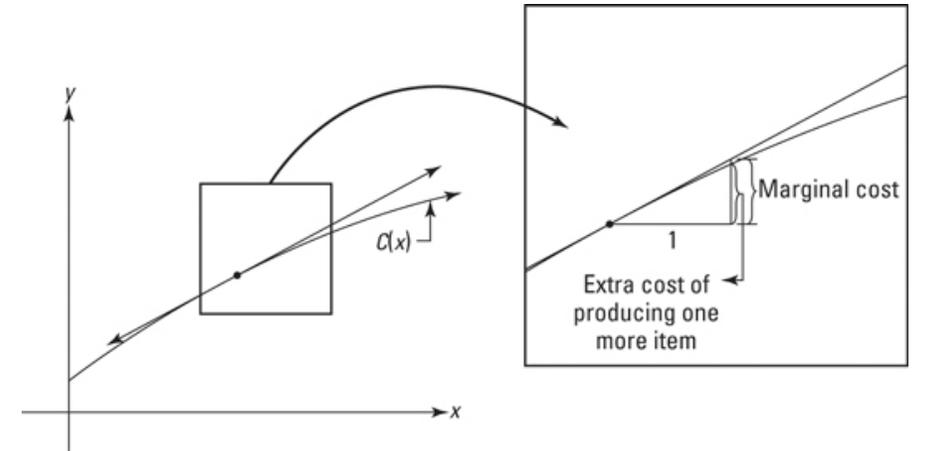
Potter County, Pennsylvania, looks like a typical rural county in many ways. Its population of about 17,000 has declined since 2000, as did the majority of rural counties. The share of non-Hispanic whites in the total population is high – 97% – and barely changed since 2000.

As with other rural counties, older adults are a growing part of the population – 22% are at least 65 years old. About 14% of residents are poor, a small increase from 2000. The number of employed adults of prime working age (25 to 54) fell by more than 1,100 since 2000.

The county was named for James Potter, a Pennsylvania political figure who was born in Ireland. Its presidential votes in recent decades have gone to Republicans. The county is among those affected by a boom in drilling for shale natural gas. According to a U.S. Department of Agriculture county typology, Potter's economy is mainly recreation-based. Its attractions include Cherry Springs State Park, which is noted for stargazing.

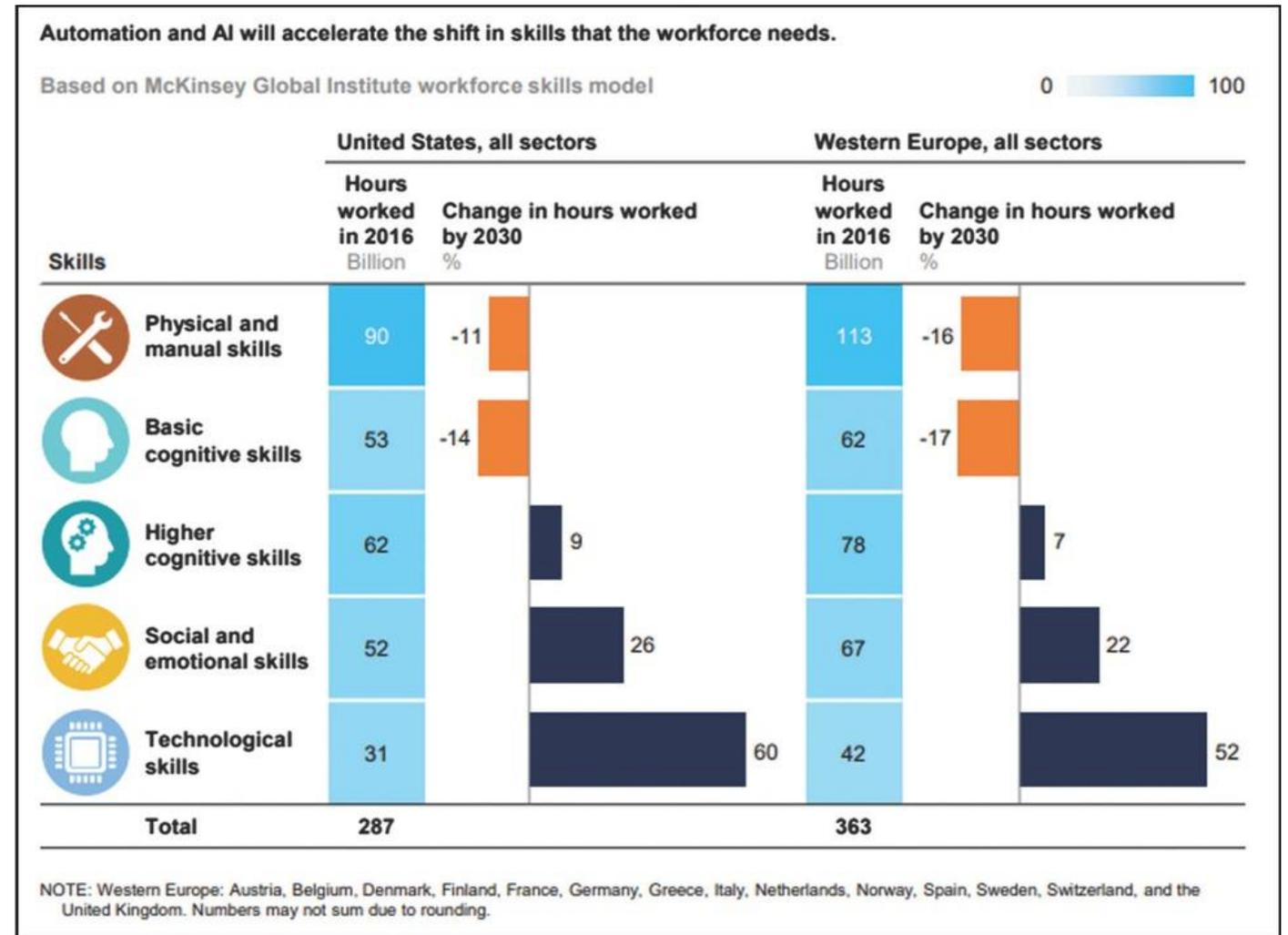
From Schumacher, Chapter 12

"In other words, the economic calculus which measures success in terms of output or income, without consideration of the number of jobs, is quite inappropriate in the conditions here under consideration, for it implies a static approach to the problem of development. The dynamic approach pays heed to the needs and reactions of people: their first need is to start work of some kind that brings some reward, however small; it is only when they experience that their time and labor is of value that they can become interested in making it more valuable. It is therefore more important that everybody should produce something than that a few people should each produce a great deal, and this remains true even if in some exceptional cases the total output under the former arrangement should be smaller than it would be under the latter arrangement. It will not remain smaller, because this is a dynamic situation capable of generating growth."



From Schumacher, Chapter 12

- “The task, then, is to bring into existence millions of new workplaces in the rural areas and small towns. That modern industry, as it has arisen in the developed countries, cannot possibly fulfil this task should be perfectly obvious. It has arisen in societies which are rich in capital and short of labor and therefore cannot possibly be appropriate for societies short of capital and rich in labor.”*



A new look at the declining labor share of income in the United States

Labor's share of national income—that is, the amount of GDP paid out in wages, salaries, and benefits—has been declining in developed and, to a lesser extent, emerging economies since the 1980s. The labor share of income in 35 advanced economies fell from around 54 percent in 1980 to 50.5 percent in 2014.

The academic literature has put forward a range of reasons for the decline in labor's share of income, but it diverges on which factors and mechanisms matter most. For our analysis, we cluster the main drivers into the following five broad categories:

- 1) Capital deepening, substitution, and automation
- 2) "Superstar" effects and consolidation. Recent research has shown that [superstar firms](#) are reaping rising shares of profits and value added
- 3) Globalization and labor bargaining power. Increased trade competition from imports made in lower-cost countries and the threat of [offshoring](#) (exporting jobs to such countries) can put pressure on wages and employment
- 4) Higher depreciation, including due to a shift to more intangible capital. Production processes in recent decades have undergone changes, particularly toward a greater use of capital for assets in the form of [intangibles and intellectual property products \(IPP\)](#), such as patents, R&D, and software, which have faster depreciation cycles than buildings and machines
- 5) Higher depreciation, including due to a shift to more intangible capital. Production processes in recent decades have undergone changes, particularly toward a greater use of capital for assets in the form of [intangibles and intellectual property products \(IPP\)](#), such as patents, R&D, and software, which have faster depreciation cycles than buildings and machines

Source: <https://www.mckinsey.com/featured-insights/employment-and-growth/a-new-look-at-the-declining-labor-share-of-income-in-the-united-states#>

Automation	
Pros	Cons
<ul style="list-style-type: none">• More efficient production• Higher labour productivity and higher wages/profit.• Cheaper goods <u>increases</u> disposable income of consumers.• Avoids boring, repetitive jobs• Can enable a shorter working week• Can improve safety and remove risk of human error• Can give consumers greater choice of goods.	<ul style="list-style-type: none">• Some workers displaced – possible structural unemployment• Creates winners and losers – possible increase in inequality• Automation could increase monopoly power• Loss of human interaction – dealing with computers leads to lower quality of life.• Automated systems can show lack of empathy with events.

www.economicshelp.org

From Schumacher, Chapter 12

“The real task may be formulated in four propositions:

First, that workplaces have to be created in the areas where the people are living now, and not primarily in metropolitan areas into which they tend to migrate.

Second, that these workplaces must be, on average, cheap enough so that they can be created in large numbers without this calling for an unattainable level of capital formation and imports.

Third, that the production methods employed must be relatively simple, so that the demands for high skills are minimized, not only in the production process itself but also in matters of organization, raw material supply, financing, marketing, and so forth.

Fourth, that production should be mainly from local materials and mainly for local use. These four requirements-can be met only if there is a 'regional' approach to development and, second, if there is a conscious effort to develop and apply what might be called an 'intermediate technology'. These two conditions will now be considered in turn.”

Examples of Intermediate Technologies



An example of an intermediate technology is the treadle pump, which enables farmers to provide a greater amount of water to their plants more easily compared to watering by bucket, while requiring much less infrastructure than constructing irrigation dams and pipes.

Final Thoughts and Summary

From Schumacher:

"In summary we can conclude:

- 1) The 'dual economy' in the developing countries will remain for the foreseeable future. The modern sector will not be able to absorb the whole.
- 2) If the non-modern sector is not made the object of special development efforts, it will continue to disintegrate; this disintegration will continue to manifest itself in mass unemployment and mass migration into the metropolitan areas; and this will poison economic life in the modern sector as well.
- 3) The poor can be helped to help themselves, but only by making available to them a technology that recognizes the economic boundaries and limitations of poverty - an intermediate technology.
- 4) Action programs on a national and supranational basis are needed to develop intermediate technologies suitable for the promotion of full employment in developing countries."

Intermediate technology is thought of as simple and practical [tools](#), basic [machines](#), and [engineering](#) systems that economically disadvantaged farmers and other rural people can purchase or construct from resources that are available locally to improve their well-being. Designed to focus on people rather than machines, intermediate [technology](#) is considered to be more harmonious with the [environment](#) and with traditional ways of life. Today, the term is discussed as a subset of appropriate technology initiatives.

Source: <https://www.britannica.com/technology/intermediate-technology>



THE END



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