The post-scarcity paradox

The world's developed economies are now capable of producing huge amounts of material wealth with the aid of a relatively small percentage of the population and are moving at an accelerating pace towards a state of post scarcity a state in which a wide range of economic goods and services are available in abundant supply and at extremely low cost

In the early days of industrialisation most goods and services were expensive relative to average earnings and were produced by the working class for consumption by the middle and upper classes.

However huge strides in productivity growth have led to greatly reduced costs of production. At the same time, rises in real wages have placed a wide range of goods within reach of ordinary working people starting with such things as basic furnishings and going on to white goods, television sets and cars.

This shift from scarcity to abundance has been progressing for many years. It was first pointed to in America before the second world war, notably in Stuart Chase's *The Economy of Abundance.*

The recent growth of a supply of cheap labour resulting from the rapid industrialisation of Asian countries has had a very substantial additional impact on the supply of manufactured goods at very low cost.

A consequence of the development of post scarcity conditions in recent years has been the shift in emphasis from managing production to managing consumption. The problems of production are now less pressing than the problems of consumption, distribution and the creation and management of demand

Henry Ford's great vision was not so much of mass production. He saw this merely as a means to the end of mass consumption; hence the model T. He looked forward to the day when every American worker would own an automobile.

"*I hold that it is better to sell a large number of cars at a reasonably small profit…I hold this because it enables a larger number of people to buy and enjoy the use of a car and because it gives a larger number of men employment at good wages. Those are the two aims I have in life***."**
Henry Ford

The reduced costs have been achieved despite the fact that the supply of most things involves massive expenditure on distribution. As well as wholesalers' and retailers' mark ups there are the costs of building brand identity, advertising, marketing, packaging and promotion and the costs of physical movement of goods. For most goods today the costs of distribution far outweigh the costs of production.

Examples of things that are abundant and hence command low prices or, indeed, are given away include:

Manufactured goods such as clothing, furniture, watches mobile telephones
Newspapers, magazines, books
Much software – particularly open source software.
Foreign package holidays
Air travel
Fast food

Just as manufacturing continues to exist in a mainly service economy, so elements of scarcity will continue to exist in a mainly post scarcity economy.

Things that will remain scarce and hence command relatively high prices include:

Services of highly educated, skilled, talented people – lawyers, brain surgeons, hedge fund managers, CEOs of global corporations, world-class entertainers and sports players.
A meal at a fashionable 'celebrity' restaurant
What Hirsch, in *The Social Limits to Growth*, calls 'positional goods' such as a place at a world-class university or a private parking lot in a major city.

Companies, either individually or acting in concert, engage in a variety of practices to create a degree of artificial scarcity with the aim of maintaining prices. These include restriction of production, (for example in diamond mining, agriculture, and oil extraction), branding, (particularly in relation to fashion goods), and patents, (most noticeably in software and pharmaceuticals.)... Some things remain relatively expensive artificially because of taxes imposed by governments – Scotch whisky, for example.

The future development of post scarcity

We are in the very early stages of a new era that has the potential to be one of even greater of abundance. By the middle of the century, molecular manufacturing may well have become a reality. The Nanotechnology Glossary[3] defines molecular manufacturing as "the automated building of products from the bottom up, molecule by molecule, with atomic precision. This will make products that are extremely lightweight, flexible, durable, and potentially very 'smart'."

The coupling of molecular manufacturing with appropriate programming tools will bring about a revolution we might call "personal manufacturing." Such personal nanofactories (PNs) already have been envisioned and are likely to be similar in look and ease of use to a printer or microwave oven. 3D printers, which can produce 3d objects in colour, are

already in use. They cost now about $20,000 dollars. If mass-produced they s could sell for about £1,000 each.

The advent of PNs should bring the cost of most non-food necessities to near zero. Much of the raw material for most objects we commonly use can be found in air and dirt, with a few fortified materials thrown in. If we build things from the molecules up (and conversely, break things down into their component molecules for reuse), materials cost will nearly disappear.

Meanwhile, computing power—information management—continues to expand exponentially even as its cost drops precipitously. Furthermore, as true artificial intelligence (AI) approaches, computers will become self-programming, and information cost may drop even more dramatically. It's already happening. Today, most of our products contain greater and greater information content (technology) at lesser and lesser cost.

The paradox

The paradox is that in those countries which are foremost in creating post-scarcity conditions, millions still exist in poverty. These include those of working age who for one reason or another are unemployed, those who exist on minimum wage levels, and the elderly who depend on state benefits. The modern developed economy has the capacity to produce goods faster than it can generate incomes to consume them. This gap between the supply of goods and services and the ability to consume them is increasingly filled by consumer credit offered at high rates of interest, the long term effect of which is to reduce consumers' incomes still further.

There is a growing gap in living standards between these groups and those on higher incomes which is dangerously socially divisive and will become more so.

Some years ago an American car manufacturer introduced a new assembly line largely manned by robots. Showing a Union leader around the company's chairman said " Do you know what I like about these robots? They will never ask for a pay rise and they will never go on strike." "Yes" replied the Union leader "But how many cars will they buy?"

This anecdote illustrates the point that in the modern advanced economy we can dispense with producers but not with consumers. The main engine of the growth is a high level of demand rather than a high level of output.

The gap between rich and poor in the developed world is, of course, greatly magnified on the global scene.

C. K. Pralahad has argued that the business community's contribution to the relief of poverty cannot succeed if it is based on philanthropy or corporate social responsibility (CSR) policies . The involvement of the major global companies is crucial to eradicating poverty, he believes, but 'bottom of the pyramid (BOP) markets must "become integral to the success of the firm in order to command senior management attention and sustained resource allocation."

He argues that r that there are huge potential profits to be made from serving the 4 billion-5 billion people on under $2 a day—an economic opportunity he values globally at $13 trillion a year. The win for the poor of being served by big business includes, he says, being empowered by choice and being freed from having to pay the currently widespread "poverty penalty". In shanty towns near Mumbai, for example, the poor pay a premium on everything from rice to credit—often five to 25 times what the rich pay for the same services. Driving down these premiums can make serving the BOP more profitable than serving the top, he argues, and points to a growing number of leading firms—from Unilever in India to Cemex in Mexico and Casas Bahia in Brazil—that are profiting by doing precisely that.

If they are to exploit these markets, companies must thoroughly re-engineer products and the way they are delivered to the consumer to reflect the very different economics of BOP markets: The emphasis must shift from lean production to lean consumption. Most staple products can be made cheaply enough to be within the reach of people in poor countries. The real challenge is to reduce or eliminate most of the costs of distribution. Products will have to be made available in affordable units - most sales of shampoo in India, for example, are of single sachets. Distribution networks may need to be rethought, for example, by involving local entrepreneurs from among the poor. Packaging must be reduced to basic essentials. Affordable credit facilities need to be more widely available.

The study of economics arose in the context of scarcity and focused on the allocation of scarce resources. Adam Smith, the founder of the 'dismal science' nevertheless pointed to the power of productivity in his famous example of the division of labour in the manufacturing of pins. From that date on the world has been moving at an exponential rate to an economy of abundance. Our economic and financial institutions, however, are rooted in conditions of scarcity. Even more important is the fact that the mindsets of our business and government policy-makers are also locked in the past.