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Many older people face a much higher inflation rate than do the young.

DURING a recent clear-out at The Economist, we came upon a dusty file marked "Expenses: December 1900". One item is a claim form from a journalist on this paper back from a trip to America a century ago. We cannot swear it is genuine, but then neither perhaps could he: curious things do happen even at the upmarket end of what in those days was known as Fleet Street. It is fascinating, anyway. Besides the usual hotel room, lengthy telephone calls (yes, even in 1900) and, of course, a hefty bar bill, our late colleague seems to have claimed shamelessly for a spending spree on various personal items. How have the prices changed over those 100 years?

The obvious answer is that everything has risen hugely. The obvious answer would be wrong. Since 1900 average consumer prices in America have indeed risen 20-fold, an average of about 3% a year. But the variations are large. Our colleague's hotel room in New York cost him $8 a night in 1900; the same hotel would charge $600 today, a 75-fold leap. At the other extreme, he made a three-minute telephone call to Chicago (to a lady, we suspect, from other evidence, and plainly not his wife; for the latter, he evidently brought back—and charged to this paper—a 49-cent souvenir from Niagara Falls). His call cost $5.45; today's cost is about five cents, a 99% fall.

Over time, general inflation tends to mask changes in individual prices. Strip out the general rise, and variations are clearer (see chart 1). Thus the cost of a hotel room has risen since 1900 by around 300% in real terms; a telephone call is 99.9% cheaper. The chart also reveals some broader trends.

The consumer-price indexes homepage at the US Bureau of Labour Statistics keeps tabs on rising prices and has an inflation reckoner that can calculate prices in today's terms back to 1913. The Economist's "Big Mac Index", which tallies international burger prices, shows that an American Big Mac now costs a whopping (no pun intended) nine cents more ($2.51 versus $2.42) than at the index's 1997 debut. Those were the days: the 1908 Model-T cost just $850.
First, goods or services that have benefited from large productivity gains, thanks to technological improvements and mass production, have seen large price falls in real terms. Telephone calls are the most striking example. But electricity, bicycles, cars, even eggs (thanks to battery hens) also have fallen. In 1900 a car, then hand-made, cost over $1,000. Henry Ford's original Model-T, introduced in 1908, cost $850, but by 1924 only $265: he was using an assembly line, and, in virtuous circle, was also selling far more cars. Over the century, the real price of a car fell by 50%.

Second, for many goods, the figures overstate the true increase in unit price, because they do not take account of improvements in quality. Potatoes, beer and salt are very much what they were in 1900; bicycles are better, but not vastly so; cars are enormously more comfortable, reliable and faster.

The chart also overstates price rises in another way. Many goods that are popular today—television sets, say—did not exist 100 years ago. Nor the way of achieving some non-material goods. In 1900, the Edison phonograph already existed. But anyone wanting the real sound of music at home—we can’t price our ex-colleague’s visits to honky-tonk bars, possibly listed as “concert with Vanderbilts”—had to buy an instrument (and then pay for his daughters to be taught how to play it). Over the past century, the price of a Steinway grand piano has increased by 160% in real terms. But the true cost of his pleasure to our music-lover has tumbled: he buys a compact-disc player instead of a piano, paying less than 1% of the price of a modern Steinway.

In many labour-intensive services, offering little scope for productivity gains, prices have soared, in real terms: most notably, hotel rooms, theatre seats, and the cost of employing a butler or housekeeper (assuming their pay rose in line with average earnings). Households have responded by substituting goods, such as washing machines and vacuum cleaners, for domestic servants.

Some goods that have seen their brand name and image strengthened have also seen fat price rises. Levi 501s, which were once sold as workmen’s clothes, are now a fashion item—and in real terms cost 160% more than in 1900. The real price of The Economist has risen by one-third for an American paying the dollar price. In 1900, it cost the equivalent of three Hershey bars; today, the trade-off is eight chocolate bars for one Economist—a tough decision.
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The digital decade

Over the century, there were huge changes in relative prices. What about the past decade? After the era of double-digit inflation in the 1970s and early 1980s, average consumer-price inflation in the developed world has fallen to around 2%, which broadly matches central bankers’ definition of “price stability”. For individual prices, these days we have no phoney expense claims, perish the thought, to help us. But other records reveal wide variations even over the past decade. Chart 2 shows some changes in the United States; in nominal terms this time. Over the decade, average American consumer prices have increased by 29%, an annual rate of 2.6%. But the price of a packet of cigarettes has surged by 109%, thanks to higher taxes. In contrast, thanks to the electronic revolution, many goods from mobile phones to video-cassette recorders are now at least 60% cheaper. And the services they offer are cheaper still. The cost of an international phone call or an Internet connection has plunged. The price of a personal computer is down only 40%—but it is far more powerful. So the cost of a unit of computer processing power has fallen by 99% over the decade. In contrast, the prices of services such as medical care, a hotel stay and domestic help have continued to rise sharply.

Price changes also differ greatly in different markets. The cost of a business-class flight between New York and London has jumped by 87%; yet an economy-class ticket has fallen by 8%. In Manhattan the cost of buying an apartment has jumped by more than 50% over the decade, well ahead of inflation—and of house prices in many a dump town where no one much wants to live and which, unlike Manhattan, can expand sideways anyway.

Those who have a penchant for eating out in fashionable and expensive restaurants, are paying more for their pleasure. But anyone who enjoys fast food has fared well: a Big Mac and a Coca-Cola have both risen by much less than general inflation since 1990. The price of The Economist has broadly matched inflation. In contrast, another fount of knowledge, the Encyclopaedia Britannica, has roughly halved in price; indeed, since its online version is now free, its price has, in effect, fallen by 100% to anyone on the net.

Some do better than others

One consequence of wide changes in relative prices is that individuals may face widely differing inflation rates, if their spending differs much from the national average. Older people, for instance, are likely to spend more on medical care and domestic services, such as those of gardeners and cleaners, that have risen sharply in price. Younger people are likely to spend more on new products, such as mobile phones or computers, which tend to fall rapidly in price during their early years. The young are also more likely to seek out low prices on the net.

Take George, a 60-year-old, who smokes, drinks whisky and wears suits. He drives a car, and likes to travel business class and to stay in luxury hotels. He employs a cleaner and a gardener. He pays a hefty premium for medical insurance, and has to meet his son’s college fees. His average inflation rate for such discretionary spending—including, excluding housing, food and...
heating—over the past ten years would have been 4% (if one calculates a crude arithmetical average of the different items).

George has one advantage: his suits have not changed in price over the past decade and his wife's dresses now cost 30% less. In contrast, the flashy sneakers that her nephew Ben favours have risen a little in price, and his Levi 501s by a hefty 65%. But Ben prefers beer or Coke to spirits, eats Big Macs, rides a bike, is inseparable from his mobile phone, laptop computer and the Internet. And he doesn't mind flying economy class. The price of his gym membership, however, has jumped by more than half over the decade. Adding it all up, his average inflation rate for discretionary spending has been minus 1%. These inflation rates are crude, as unweighted averages of just a few selected items must be. But in general many older people do indeed face higher inflation than the young.

Come the revolution
As our comparisons show, even if general inflation remains low, relative prices can shift significantly over as short a time as a decade, let alone a century, thanks to productivity gains brought by technological improvements, or to changes in demand; or, very often, both. And by historical standards, that has been especially true in recent years.

Falls in the prices of new technology are nothing new: every technological revolution from steam and railways to electricity and cars has enjoyed large cost savings. Electricity prices fell by an average of 6% a year in real terms between 1890 and 1920. Car prices—after a (fairly heroic, but fair) adjustment for quality improvements—declined by 11% a year, in real terms, in the first quarter of the 20th century. But recent price plunges have been much bigger than in those earlier revolutions (see chart 3). Over the past 30 years the price of computer processing power has declined by an annual average of 30% in real terms; telecoms prices have been plunging at a similar pace over the past decade.

Information processing and telecoms witness vividly to the effect of sharp price falls. People and firms have taken up the new technology rapidly (so pushing its cost down still further); in the case of the Internet, even more rapidly than with previous technologies. As information-technology folk like to boast, if the motor industry had developed at the same pace as their own, by now consumers could be paying just $25 for a car that would travel at 500 miles an hour and did 1,000 miles to the gallon.

Be fair though. As General Motors has hit back, your car would also crash twice a day, you would need to buy a new one every time they repainted the lines on the road, and the airbag system would ask "Are you sure?" before inflating on impact.

Comparisons of the changes in prices of different technologies in different ages should therefore be handled with care. As indeed, in future, will be all expense claims from journalists at The Economist—whether from last week or 100 years ago.