

DRUG PRICING: A primer

In November, Tufts University published its latest analysis of drug research and claimed that it costs roughly \$2.5 billion to make a new drug.

The average time a drug takes from discovery to laboratory testing and clinical trials, is more than a decade, and the vast majority of targeted chemicals never make it to the market

The Tufts analysis allows for the costs of the failures as well as the successes. The figure was roundly attacked by health and anti-capitalist activists as being far too high, and in Washington DC the debate raged for days.

Drugs are not unique goods, but they are unusual, and the way they are produced and the costs of that production mean that there are always disagreements about how to price drugs.

The pricing of pharmaceutical drugs is not a simple function of supply and demand: production is highly regulated, which affects costs greatly; and ensuring access to some drugs is widely perceived as a moral issue.

Prices need to be higher in industrialised countries in order for pharmaceutical companies to recoup the costs of production, as well as to provide an incentive for further innovation.

The costs of research and development must be shared across the myriad drug markets, with the richer paying significantly more than the poor, and those in the middle contributing more than the poorest

The goal of distinguishing between markets when setting prices is ultimately to reconcile patents – which are necessary for innovation – with the affordability and accessibility of these drugs in poor countries.

In technical language, in order to recoup research costs, companies need to charge more in countries in which demand is more price inelastic and charge less in other countries. The various markets, however, need to be kept apart or the strategy will not work.

While it costs hundreds of millions of pounds to produce the first pill of a new drug, the marginal cost of producing additional pills is very low.

Therefore, a traditional pricing system that charges consumers the marginal cost of the drug would not take into account the high research and development costs that the firm incurred.

A system of competition regulation (or other government action under pressure from activists) that imposed pricing at marginal cost would simply mean that there would be no research and the supply of drugs would dry up. These problems are best dealt with when producers can charge different prices to different people.

people.
Simply put, those who are able and willing to pay more (normally the

wealthier) are charged a higher price, while those who can or will only pay less (normally the poorer) are charged a lower price.

If this strategy is successful, and those receiving the lower prices cannot resell to those willing to pay more, then the company will get higher profits than it would by setting a single price – and more poor people will receive drugs.

Studies show that this form of differential pricing leads to a more socially efficient outcome.

In the context of the pharmaceutical market, differential pricing allows pharmaceutical companies to produce more drugs than would be possible in a single-price system, thus giving patients in developing countries greater access to life-saving drugs.

Profits incentivise and finance more research and development. The pricing model ensures that middle- to high-income countries bear most of the research and development costs, while affording low-income countries greater access than otherwise would be the case to the safe, effective drugs they need.

However, such differential pricing of drugs has numerous opponents. Americans often believe they pay too much; and many health activists are still annoyed that the poor pay more than the marginal cost of production for HIV/AIDS medicines. But, both in theory and practice, differential pricing is both equitable and efficient.



STRETCHING the BUDGET: Should the state support the arts?



Those who wish to cut government arts funding are often branded "philistines". But there is a difference between appreciating the arts and believing that the state should support the arts.

Economic arguments in favour of state funding often revolve round "public good" or "externality" effects. In other words, it may be difficult to exclude those who do not contribute to the arts from the benefits they provide; or there may be social benefits from the arts leading them to be under-provided. But, did the arts thrive before 1946 when state funding took off?

In fact, England's rich cultural tradition developed free of government funding and it often had a commercial edge, suggesting that the arts can thrive in a market economy.

In the 16th century we had commercially successful and popular English theatre, including Shakespeare. Although Shakespeare had the patronage of the monarch, this was much more like the royal warrant that a shop might receive rather than financial support. Shakespeare was commercial.

Indeed, it is interesting to note that, even today, whilst the Royal

Shakespeare Company is 50 per cent funded by the state, the Globe theatre stages Shakespeare plays with no subsidy.

In 17th century Britain, the public concert developed and 18th century London was a hothouse of composers. The Hallé Orchestra, the Royal Albert Hall, Gilbert and Sullivan, and the Fitzwilliam are all great cultural creations from the era of subsidy-free culture. Elsewhere, Chopin, Bach and the Dutch masters all paid their own way.

There can be a thriving commercial arts scene without state funding. The economic arguments at best can be used to justify the position that certain types of arts might be "under-provided". But we should also consider that state provision of the arts might lead to problems.

Firstly, with state finance, we will often get the arts that the government wants and not the arts that the people want. This is especially problematic as culture is an important part of civil society which can be used for communicating all sorts of moral and political messages.

Secondly, arts funding can be captured by other interests – such as those leading big, high-profile projects centred on London or the

administrators of the funding bodies.

Much arts funding goes through the Arts Council. It has slimmed down its operation under much pressure from recent budget cuts but, until recently, the Arts Council spent about as much on administration as it did on arts in three of the nine main regions of England put together. 50 per cent of all funding went to London and the regions got the crumbs.

Furthermore, even after much resisted staff cuts, the Arts Council will have nearly one employee for every £1m given out in grants; in 2008 it had 50 press and communications staff – effectively all paid advocates of state funding.

State funding also crowds out private funding, which is pitifully low in the UK compared with the US.

The removal of user charges from museums not only removed an important source of revenue, but also has the effect of making museums less interested in their visitors and more interested in the bureaucracy that funds them. Few other European countries have totally removed admission charges from museums for good reason.

State funding can also raise costs. Performers are highly "inelastic" in their supply, just like footballers. When Sky TV pumps more money into football, footballers are paid more. The same happens to artists when the government pumps money into the arts: it can be the cost and not the supply that increases.

What might be the best solution? If there is to be state support for the arts at all, it is probably best provided at local level. This is less likely to lead to a monoculture in the arts and ensures greater variation in what is provided.

Secondly, perhaps the lottery is a reasonable source of funding. This is voluntary: those who buy a ticket are choosing to support the arts.

But, our history shows that arts and culture can develop independently of the state•

Philip Booth
Editorial and Programme Director
IEA
pbooth@iea.org.uk



SUCCESSand CITY

Last year I co-ordinated a report for the World Economic Forum on the competitiveness of cities. We compiled case studies of cities around the world – cities with different endowments and at different stages of development

Urbanisation is the "megatrend" that is most relevant to city competitiveness. Never before has the world urbanised at such speed and scale as it is doing today.

As of 2010, for the first time in history, over half the world's population lives in cities. But they already account for over 80 per cent of global GDP. According to the UN, globally, an extra 2.5 billion people will urbanise by 2050.

For the foreseeable future, rapid urbanisation will be an almost-exclusively non-Western affair: 94 per cent of those who will move to cities in the next few decades will come from the developing world.

What makes cities successful?

Institutions are vital to a successful city – that is, the decision-making framework of the city. Leadership and vision – a clear, far-sighted view of where cities should head, and a single-minded practical will to ensure they get there are also important: Lee Kuan Yew in Singapore, Sheikh Mohammed in Dubai, Sergio Fajardo in Medellin, Colombia and S.R. Rao in Surat, India, are stellar examples.

Hong Kong and Singapore highlight the importance of building up sound economic institutions through successive phases of development. But Monterrey in Mexico and Cebu in the Philippines point to fragile institutions that can endanger existing gains as well as future competitiveness.

Cities should also look out for windows of opportunity – often during a political or economic crisis – to push through a critical mass of decisive reforms. This is what happened when Singapore was ejected from Malaysia in 1965.

There should also be a sound regulatory framework. Getting the basics right – stable and prudent fiscal policies, including low and simple taxation; a flexible labour

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market; openness to trade and foreign investment; simple and transparent business regulation – is vital. Cities should develop their own policies on trade, foreign investment, tourism and attracting talent, and go global as far as they can. Hong Kong, Singapore, Dubai, Hyderabad and Ahmedabad in India, and Ningbo in China are great examples.

Thought also needs to be given to the city's core physical infrastructure. Cities need a mix of planning (in terms of "rules of the road") and organic growth, which are complements, not substitutes.

Manhattan is a great example with its street grid and room for organic expansion over the past two centuries. Brasilia, Chandigarh in India, and many Chinese cities today are counter-examples of overplanning.

Urban density, including "building tall" in city centres, is preferable to urban sprawl. Hong

Kong and Singapore are great examples of urban density, as is Chicago in recent years.

Education, health care, digital infrastructure, the arts and culture all need innovative market approaches to boost cities' human capital and quality of life. Not least, an "open society" – tolerance, freedom of expression and cosmopolitanism – is the city's seedbed of ideas, entrepreneurship, innovation and growth – as the most successful cities in the West have shown.

The renowned urbanist Jane Jacobs said that successful cities are those that are flexible and adapt quickly to changing conditions. The alternative, like Detroit, is to get stuck in mono-industrial, mono-cultural decline.

Economic freedom is the prerequisite. Cities will have different priorities depending on their endowments, levels of development and other initial conditions. But "getting the basics right" and expanding economic freedom should be the common denominator for all cities.

The best thing going for cities is that reforms at the municipal level are usually more feasible than at the national level.

That is the premise behind Paul Romer's idea of "charter cities" – start-up cities that import rules based on the freedom of individual choice and movement.

Urbanisation trends enlarge these possibilities. Cities should grasp these new opportunities and put reforms on a fast track.

Razeen Sally
Director, European Centre for
International Political Economy
Razeen.sally@ecipe.org

