La maladie imaginaire

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Introduction

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Pieter Kalbfleisch, chairman of the board of the Residentie Orkest, knows that it is hard, nay impossible, to run a symphony orchestra as a profit making enterprise. As was documented in a December 2010 NRC newspaper article all Dutch symphony orchestras make a loss and need substantial subsidies to make ends meet. Depending on the orchestra average subsidy is between 50 to 150 Euros per ticket per performance. The newspaper article was written preceding a policy discussion in the Dutch House of Representatives on the government's plans for deep cuts in cultural subsidies. Those cuts must be the other thing keeping the chairman of the board awake at night.

Watching the rock star status of André Rieu and his Johann Strauss Orchestra, epitome of Dutch cultural export success, one has to conclude that some performing art companies are making a profit some of the time, while most music, dance and theatre companies are making a loss all of the time. It is said that the latter have a perfect excuse. It is said that they suffer from Baumol's disease; a disease that makes losses as unavoidable as a sunrise in the morning. This disease explains the necessity for permanent governmental subsidies and philantropical help and gives the sector a strong argument as to why performing arts cannot operate in a competitive market. It is not explained why the Johann Strauss Orchestra does not suffer from the disease, while all others do. The disease is, to a large extend, nonexistent. It is to paraphrase the title of Molière's 1673 showpiece of the French theatre 'une maladie imaginaire'.

1 A full-fedged pandemic

Baumol's disease is widely spread. Not only are performing arts seen suffering from it, but also the health sector and education. It is also a popular disease, in the sense that it is often quoted in public discourse. A quick check in LexisNexis searching for 'Baumol' reveals that in the last half year Baumol's disease pops up twice in a Dutch newspaper in the context of the health sector. In a third article Baumol is proposed as the perfect candidate for a future Nobel Prize in Economics. Two quotes on Baumol's disease, does not seem much, until is contrasted with another economic term such as 'zoektheorie' (search theory). This term was quoted by nobody in the last half year even though the Economics Nobel Prize recently handed out was precisely for three economists having invented search theory.

So what exactly is Baumol's disease? According to Mark Blaug (2001) it is "the jewel in the crown of cultural economics". The original formulation is in William Baumol and William Bowen's article from 1965 and reappeared in their joint book publication a year later (Baumol and Bowen, 1966). There is a simple version of Baumol's disease that hits you like a glass of undiluted vodka on an empty stomach, and there is a more complicated version that you need to mull over like a good glass of Italian wine. Both versions are misleading, with the simpler version being more misleading than the complicated one.

The core message of both versions is that it is impossible (simple version) or much harder than in other sectors (complicated version) to increase labor productivity in the performing arts. The simple version works by way of example. Take Mozart's String Quartet in D major K499, known as "Hoffmeister". It takes roughly half an hour to play the four movements and it takes four string players to do it. One could try to increase productivity playing it faster and finishing in 20 minutes, by leaving out ten percent of the notes or by dropping one of the string players. It would not be the same. It took a combined 2 hours of work to play this quartet in 1786 when Mozart wrote it for his friend Hoffmeister and it still takes two hours in 2011. No productivity increase in more than two centuries. Similar arguments can be made for all performing arts. "Alas poor Yorick" cannot be left out of Hamlet, the Dying Swan has to dance for all the time it takes to die and the Ring of Nibelungen will always go on forever. The point of the simple version is that performing arts is a peculiar sector in contrast with all those other sectors where productivity increases steadily over the years. At the end of the 19th century Dutch farmers could hardly feed themselves. Thanks to steadily productivity increases over the years Dutch agribusiness is now a money making competitive sector that feeds the world. The Concertgebouw was subsidized by an assembly of Amsterdam notables when it was founded in 1881 and is still subsidized more than a hundred years later.

The more complicated version takes reasoning of the simple version to its logical end. Assume for the sake of argument as do Baumol and Bowen (1965) that there is a productive sector (manufacturing) and an unproductive sector (arts). In the productive sector the output per man-hour increases with 4 percent per annum. In the arts sector output per man-hour

does not change. The average productivity increase economy wide is 2 percent (giving both sectors equal weight). Assume further that workers can work equally well in both sectors and that labor moves freely between sectors; also there is no price inflation. Baumol and Bowen assert that wages will rise with the average economy wide productivity increase of 2 percent in both sectors. This results in the per unit labor cost in the productive, manufacturing sector, to decrease with 2 percent as the wage increase of 2 percent falls behind of the 4 percent productivity increase in that sector. The fall in unit labor cost can be used in this sector to reduce prices, increase profits or both. In the arts sector the per unit labor costs will go up with 2 percent because the wage increase is 2 percent and there is zero productivity growth. The arts sector either has to increase prices or what happens more often, will make losses. A company that structurally makes a loss year after year cannot survive in a competitive environment. Rather it requires ever-increasing financial help from government and private philanthropists or sponsors.

Note that the cost disease extends to other service sectors as well. It is also claimed that similar to the art sector, productivity can hardly be increased in the health sector. Severe Alzheimer patients need to be taken care of 24 hours per day, 7 days per week and it does not seem possible to automate or mechanize care and increase its productivity (Theeuwes 2005). Similar constraints are to be found in the education system or in most of the service industry such as restaurants and barbers. As balding men waiting in the barber shop knew a century ago, and still know today, the haircut of a man with lots of hair always takes forever.

2 Looking elsewhere

Contemplating the extended version of Baumol's cost disease long enough, makes one realize that there must be something wrong with it. By definition half the sectors in the economy have a productivity growth below the national average. According to the Baumol hypothesis this would imply that half of the economy suffers from cost disease, which is obviously not true. In all major economies the service sector amounts to two thirds or even four quarts of the economy. Baumol suggest that especially the service sector suffers from lagging productivity growth. It that were really true all major economies would have structural cost problems, which they haven't. In a later article Baumol retracted some of his more extreme predictions (Baumol et al., 1985).

The simple truth exposed in the example of the Mozart Quartet always requiring four players during half an hour probably explains the attractiveness of Baumol's contribution and its popularity in public discourse. There is nothing wrong with the example or its logical conclusion. But it is barking up the wrong tree. It is not in the number of musicians or their playing tempo that one should look for productivity improvements. Productivity improvements in the performing arts are to be found elsewhere.

Look at a performing arts company as a firm producing performances. An arts company production period is a 'season' and in each season a number of 'productions' is made and each production is performed a number of times. Economists make a distinction between the short run and the long run. In the short run capacity –such as size of the concert hall - is given. It could be a thousand seats and that is the maximum size of the audience per performance. Give its hall size the performing company can increase the productivity of its orchestra or its troupe of actors or dancers by changing the length of the season, by playing off season, by changing the number of productions during a season and by varying the number of performances per production.

The production of each new play or ballet requires substantial initial costs. There are the rehearsals, new costumes and a fancy decor and the publicity campaign. Once the initial costs are spend, average cost per performance will decrease with more performances. There are of course limits to the number of performances that can be repeated but as long as there are customers willing to pay a price that is higher than the always diminishing average cost, it is a profit making proposition. This is how the entrepreneurs in the profitable part of the performing arts make their money. That is how musicals became booming business in the Netherlands in the last decades.

Note also that performing arts are the perfect place to extract large chunks of consumer surplus, or in this case audiences surplus, by price discrimination. Different seats are charged different prices and different groups (students, pensioners, sponsors) pay different prices. Sensible price discrimination increases profitability. Performing arts companies could be like

airlines whereby each passenger in the plane has paid a different ticket price, thus extracting from each as much as possible of what he or she is willing to pay.

There is also the long run. In the long run capacity can be changed. A new concert hall or theater can be built and made larger than the one before. Or one could go the way that movie theaters went; building multiplexes that house up to 20 screens or megaplexes with more than 20 scenes. There is some of the multiplex in the Concertgebouw with the main and the smaller hall, but it is not yet like the Pathé theaters in Amsterdam (where, by the way, one can also watch performances by the New York Metropolitan Opera). The point here is not that concert halls and theaters should be like the movies, but that rather than shortening the time it takes to play Beethoven's ninth it can increase productivity by increasing numbers of eyeballs that see and earlobes that hear Hamlet, Cecilia Bartoli or Swan Lake in a given year.

Quality is an important characteristic of performing arts, that within limits, can be changed over time. With enough cost pressure quality does change. Empirical evidence shows that art production do adapt to avoid increasing cost. When deciding about what production to put on the program, it is always possible to reduce costs by choosing simpler plays with smaller casts, repeating earlier productions and going for 'best sellers' that attract large audiences. It is always cheaper and more profitable to repeat the 1981 theatre legend "U bent mijn moeder" in which Joop Admiraal, alone on stage, played his old mother growing senile, than to put the Gijsbrecht van Aemstel on the program, attracting dwindling audiences and requiring large numbers of speaking and mute actors and even more noble men, nuns, virgins and refugees. One could also use cheaper performers. Clearly cost cutting is limited as audiences will stay away if the production gets too cheap, but at the same time the audience does not always notice when last year's décor, freshly painted, is used again.

3 It's no pianoforte anymore

In spite of what Baumol's disease suggests, there are major technological advances in the performing arts over the years. Over time concert halls and theater halls have been better designed and lightning and sound systems have improved dramatically, all of which meant that larger audiences could enjoy performances in a better way. Looking over much longer periods instruments and playing techniques have changed. The modern piano is another instrument than the pianoforte that Mozart used for composing.

The most important productivity change in the performing arts over the last decades is caused by the vast broadcasting and recording possibilities that extend consumption of a single performance to thousands and even millions consumers. In recent years these possibilities have exploded through the internet. Of course a digitalized Norma is a different opera than with Norma in the flesh. But it is a very close substitute. With advancing technology a DVD projected on a large home screen with a pitch perfect audio system is a very close substitute indeed. With a digitalized version of Norma featuring Maria Callas one can increase consumer surplus from the relatively small audience size that watched her in the Scala to millions of fans worldwide. The simpler version of Baumol's disease concentrate on increasing the productivity on the production side. This is impossible, but it is also not relevant. Productivity increases are only relevant when they increase consumer welfare and that is exactly what the extended recording, broadcasting and internet possibilities have done and are still doing for the performing arts.

The more complicated version of the Baumol cost disease model makes two questionable assumptions. The first concerns the wage matching in the art sector. Given the substantial erosion over time of the relative earnings of workers in the performing arts sector, matching is obviously not happening. Earnings in the performing arts are staying behind. Of course there are superstars in the performing sector earning many times the Balkenende norm but by and large earning a decent living in the performing arts sector is not easy. Certainly considering the intensive human capital investment which are required to become a accomplished artist. Artists are assumed to sacrifice money income for the pleasure of belonging to the arts scene. In spite of the relatively lower earnings there is still an excess supply op people trying to get into the arts world. In any case whatever threatening cost increases might have arising, it has been avoided by keeping earnings relatively low, rather than matching with the rest of the economy.

The second questionable assumption concerns the possibilities of passing on the cost increase through higher ticket prices. Over time real income has risen considerably and with it cultural consumption has also gone up. In any case the audience at performing arts performances is usually skewed to the right. Meaning that in the distribution of income, education and age, they are mostly on the right side of that distribution. Richer, higher educated people appreciate the arts and have the means to pay for it. Whatever cost increase there was, could have passed on, at least partly, in higher admission prices.

Finally the expected permanent cost explosions and increasing losses due to Baumol's disease have not been found in the data. A conclusion in articles reviewing the evidence such as Throsby (1994) and Abbing (2005). It is even the conclusion of an empirical study done by Bill and Hilda Baumol (1980). This is not saying that performing arts have been doing well and dandy over the years. What the data show is that losses are not so much due to Baumol's cost disease but have other causes such as dwindling audiences or dwindling government subsidies or philanthropic support. A point already made for the Dutch performing arts by Berend Jan Langenberg (1992) and before him by J.D. Hilferink (1972). Empirical studies also show that over the years performing arts companies have reduced labor inputs, changed repertoire and adopted other cost-reducing strategies.

4 Curtain call

To sum up: one of the main arguments for subsidizing performing arts and keeping them out of the competitive market has been Baumol's disease. This argument is wrong or at least it is not valid in the way it is often used. There are many ways in which a performing arts company can change its production process and its products and go for a profit (of smaller losses). There are technological and productivity advances possible in the arts sector, certainly in terms of increasing consumer welfare. There are lots of examples in the performing arts sector that every day make the point that profitability is possible. There are clearly competitive markets for performing arts: musicals, popular music, popular theater, stand up comedians, circus, popular dance, magic, movies. They all make it in a competitive market. Which makes one wonder about the others that do not succeed. The difference between the group that makes it and the group that does not make it, corresponds with what is considered, to put it in very simple terms: low art and high art. High art companies are usually the ones that run into losses.

In their original article Baumol and Bowen (1965) also discussed this high and low end aspect of the performing arts sector. In that part of their analyses they noticed that some performing arts companies are not on earth to make mony but to provide society with quality art: quality as an end in itself and at all cost. When more subsidies are poured into these companies, they will only use it to increase the quality of their performance, to build more lavish production and to hire higher paid top artists. Aiming for the highest quality, there is an endless need for subsidy. In their quest for quality they end up in a situation where their marginal cost is way above their marginal revenue, implying that each additional customer rather than adding to profit only adds to losses. Their endless quest for quality explains why these companies are not keen on cost cutting or finding ways to make more money.

Why subsidize high art companies? In terms of market failure, always the economist's main reason for government intervention, there is for sure the positive externality of arts argument. High art performing companies contribute to national identity, culture and civilization. Without the Concertgebouw Orchestra the Netherlands would be a bleak place to live. Survey research in which the population is asked about their willingness to pay for high art, shows that lots of citizens are willing to pay taxes to finance the availability of high art performance, even when they themselves have no intention to ever use it.

Even though there are valid reasons to subsidize high art with tax payers money, the unsolvable question remains: by how much? It is not only hard to measure how large the positive externality is (although survey questions certainly will help) but one also realizes quickly that providing performing arts with more subsidies will always be used to increase the quality of their productions an it is hard to tell were quality increase ceases to be sensible.

What this article hopefully made clear is that Baumol's disease should not be an argument in deciding about subsidies. And neither should the chairman of the board of the Residentie Orkest use it as an excuse. Even though it is a popular hypothesis in society at large. Baumol's disease is sufficiently pessimistic to have the same attractiveness for society as the dire prediction of increasing poverty due to population growth by Malthus in the 19th century and the end of the world predictions made by the Club of Rome in the 20th century and by Al Gore in the 21st century. Societies love predictions of imminent misery. In spite of all its weaknesses Baumol's disease might even still be a great idea. At least that is what Mark Blaug (2001) concludes: "If greatness lays not so much in being right, but in stimulating others to find what is right, then Baumol's [.] model is one of the great ideas in economics".

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