State-funded IVF will make us rich... or will it?

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Recently, several claims have been made that free provision of in vitro fertilisation (IVF) will boost our economy. This is premised on the assumption that people provide more in terms of tax and insurance than they consume in resources, leaving an overall gain. Even where these 'replacement' people are created by means of IVF, it is argued that the costs involved are easily offset by the financial contribution we can expect IVF-conceived adults to make to our economy. However, although it may be true that the creation of a new person constitutes an overall financial gain to the state, I question the degree to which the arithmetic involved is as simple as the reports suggest.

Research presented by a group of scientists at the annual conference of the European Society of Human Reproduction and Embryology in Prague, which has been widely reported in the media, has suggested that it is in our society's economic interests to fund access to in vitro fertilisation (IVF) treatments.^{1,2} The team, led by Professor William Ledger from the University of Sheffield, claims that for each IVF baby born, the economy makes a net gain. But can this possibly be true? IVF is an expensive procedure, which by its very nature creates more claimants on state funds and National Health Service (NHS) resources. IVF also takes a financial and physical toll on all those involved: the women, their partners, and the children born as a result. It might be assumed that state funding of IVF would be a drain on public resources, rather than boosting them. However, the researchers have suggested otherwise. Their claim is that the average £13 000 that it costs to create a baby using IVF is far exceeded by the average of £160 000 in taxes and insurance that will be paid by an adult in full-time employment. Thus for each state-funded IVF baby, our economy apparently benefits by a net gain of £147 000.

These figures certainly look compelling. However, this is obviously not the whole of the picture. Although the figures cited by the Sheffield team may be accurate, their use in this simplistic arithmetical calculation is misleading for many reasons, both economic and ethical.

To address the economic considerations first: another way of looking at the issue would be to say that if the average person in full-time work benefits the economy by £160 000, as the research suggests, then

clearly for every state-funded IVF person, the economy *loses* the £13 000 that is paid for IVF treatment. If large numbers of people are born through IVF rather than through natural conception, this loss could become extremely significant.

Citizens who are not born as a result of IVF are therefore a better economic asset, and save the economy £13 000 per person born, compared with IVF offspring. However, if IVF is *not* state-funded, but is paid for privately by individual couples, then IVF and normally conceived children would benefit public funds equally. This means that (if we are focusing on using reproduction as a means of boosting the economy) the government should either encourage people to pay for their own IVF treatment, or focus its efforts on persuading fertile couples to reproduce.

On a more general note, IVF is an extremely costly way of remedying infertility. Crucially, it does not cure the problem, or address the underlying causes of decreasing fertility in our society. The causes and prevention of infertility tend to be swamped in the high-profile – and high cost – drama of IVF. Focusing government resources on IVF may undermine the possibility of developing satisfactory preventive measures that might well be more cost-effective in the long term. A report given at the same conference at which the Sheffield team presented its research suggested that offering counselling to women may improve their fertility. If effects such as these could be obtained for less than the £13 000 required for an IVF baby, then they would certainly be desirable. In short, economic benefits might well result from research into cheaper ways of addressing and remedying infertility.

Apart from its financial cost, IVF is also expensive in terms of its impact on health, time and consequent loss of earnings. Women undergoing IVF treatment must make repeated trips to their clinics. Each trip may represent earnings lost as the woman is obliged to take time off work. In health terms, the drugs given to women can cause a number of adverse reactions, some of which may – albeit rarely – be fatal. The effects of drugs on women undergoing fertility treatment may be reflected in terms of working days lost. Where side effects are severe, hospital treatment may be required, further draining NHS resources.

In addition to this, there is ample research to prove that IVF treatment has vastly increased the numbers of multiple births (twins and triplets) in the UK over the past 20 years. Multiple births place a severe strain on the economy, as they are far more dangerous both to fetuses and mothers. Fetuses may not survive the pregnancy, and if they do, their chances of being born prematurely, with all the attendant risks and costs, are significantly higher than with other births, as is evidenced by previous research carried out by Professor Ledger's own team and others.^{3,4} These health problems may affect premature offspring throughout their lifespans. Multiple births also endanger the mother herself, who stands a much greater chance of suffering complications during the birth, which may necessitate lengthened hospital stays, and further loss of earnings.

We also need to take account of the psychological impact of fertility treatments on women. The cycle of anxiety, hope, anticipation and despair if treatment fails can take an enormous toll on women and their partners, and again this is reflected in days lost from work. The average sum of £13 000 to have a baby through IVF incorporates a number of failed attempts. A brief look at figures from the UK's regulatory body, the Human Fertilisation and Embryology Authority, shows how uncertain an endeavour IVF can be. In the year from 1 April 2003 to 31 March 2004, 29 688 women underwent IVF treatment. They received 38 264 actual cycles (i.e. >1 cycle per individual). From these treatments, 8251 successful births occurred, resulting in 10 242 children (as a result of multiple births).⁵

These figures clearly show that any individual undertaking any one cycle of IVF will probably fail to have a child. This means that the pressures, both physical and emotional, on the patient are present through a long period of time, as she goes through repeat cycles and failures. Days lost to health problems related to IVF are difficult to calculate. However, this remains an important consideration in this economic equation.

We also need to address the question of IVF funding in the context of other treatments. Our healthcare resources are finite, and the decision to fund any particular treatment will inevitably result in fewer resources being available elsewhere. IVF does not exist in a vacuum; it is one of many treatments competing in our economy and our healthcare system for funds. More importantly, perhaps, the idea of funding treatments on the basis of the potential economic gain to society represents a step away from the ideals of our health service.

The NHS was founded on the principle that treatments should not be allocated on the basis of patients' earning potential, or any other social factor. If we justify allocating resources to IVF based on future gains to the economy, why should we not prioritise other treatments in circumstances where this would be equally profitable? For instance, recipients of organ transplants could be chosen on the basis of their likely economic contribution to society. Many people would find this disturbing, but the underlying reasoning is the same in both cases.ⁱ

ⁱIn fact, since the first draft of this paper was written, the HFEA has decided to allow women to receive subsidised fertility treatment in return for eggs donated for research. This seems to be a step along exactly the lines that I have criticised here, whereby the possibility of profiting from a patient's resources in one context expedites medical treatment in another.

Apart from these considerations, it is also deeply questionable whether economic deficits should be addressed by the adoption of a pronatalist state policy or indeed, whether they *can* be.ⁱⁱ Certainly in the UK, this is not something for which the state or the public have shown a desire. Traditionally, our reproductive decisions have been seen as inherently private, and state interest in reproduction is regarded as intrusive, if not sinister.

The question of state funding in relation to IVF certainly requires attention; the current patchy and inconsistent provision is a source of confusion and misery to many people. However, the glib assurance that state-funded IVF can be justified by a supposed boost to our economy needs to be viewed with scepticism in the face of the economic and ethical complexities of the area.

ⁱⁱLevitt and Dubner⁶ argue that Ceausescu's pronatalist policy in Romania had an unexpectedly detrimental effect on the country's economic and social stability, as the children of women who are unable to procure abortion are, it is claimed, statistically more likely to become criminals. This claim is controversial; however, the point of interest remains whether or not one accepts this view—namely, that the results of addressing social or economic difficulties by means of a pronatalist policy are at best unpredictable, and at worst self-defeating.

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