Dear Editor:

The world currently spends $100 billion annually on medical education\textsuperscript{[1]}. This seems like a massive amount at a macroeconomic level. At a microeconomic level, medical school tuition fees in many countries are now as high as $14,000 per year. This will seem like a massive amount to an 18-year-old school leaver from an average financial background. Economic depressions make both figures seem even larger – to the state and to the individual. With so much cost at stake - at a financial and human level - I believe that it is worth asking why medical education is so expensive. Searching for the answers leads to some unexpected places.

When a product or service is expensive, we naturally assume that this is because it costs a lot to produce or provide it. However, that is not always the case. Tuition fees are a case in point. They have risen in recent years but it may be that the rise is not a real one. The fee rises but the size of low interest student loans rises with it - logic would suggest that the rising tuition fee is necessitating the rise of the student loan – but could the opposite be happening? What would happen to house prices if the government guaranteed very low interest loans to anyone who wanted to buy a house (and said that you only needed to pay it back when you got a job)? House prices would naturally rise. Could the ubiquitous availability of very low interest loans similarly be driving inflation in tuition fees?

Another factor that can drive price and that is unrelated to the cost of production is demand. If the demand for goods or services increases, so will the price. Certainly, the demand for medical education is high. The ratio of applicants to medical school to accepted candidates is 16:1\textsuperscript{[2]}. It is unsurprising that with this level of competition prices will rise.

Along with demand comes supply. Limited supply also drives price. Most medical schools are allowed to admit only a limited number of students each year and so the supply is constrained. Even if schools were allowed to admit more students, then the traditional model of education that is still used by many of them would mean that they could not deliver the same education to significantly more students. Only by rethinking the model of provision could they achieve this. The movement towards massive open online courses (MOOCs) suggests that some institutions are rethinking their models but providing MOOCs in the context of medical education brings its own problems\textsuperscript{[3]}.

Does competition drive up price? Certainly all medical schools want to attract the best candidates and drive their brand amongst students, faculty and funders. In the race to do this, they may sometimes overinvest in resources that may not necessarily be core to the quality of medical education provided. So state of the art facilities, simulation centres and clinical science buildings may abound, but they all require funding and may add significantly to price without having a great impact on outcomes\textsuperscript{[4]}.

A separate factor may relate to activity. Say you paid your piano teacher $30 hour of tuition, but your teacher spent 30 minutes of the hour composing their own music. You might well feel hard done by. How then does the medical student feel when their tuition fee is used to subsidise university research that has no other revenue source? If all the money that is allocated to medical education was actually spent on medical education, then we would probably get more and/or better medical education – or the price might fall\textsuperscript{[5]}.

Lastly, there is the issue of motivation. What might motivate a dean or vice-chancellor to provide medical education at a lower price? This might please students who pay the tuition fees, but an irony of the current third level education system is that these might not be the most important stakeholders within the system. The stakeholders that matter might be premier league researchers who can bring in grant funding or star alumni who might increase the school profile or influence government departments. According to Catto, “research interests of medical schools and their parent
university may take precedence over teaching commit-
ments and clinical duties[6]. This has certainly hap-
pened in the past, and certainly should not be allowed
to continue into the future.

What underlies many of these arguments is the dif-
ference between cost and price. Academic debates over
the definition of these concepts abound – however, for
the sake of this piece, let us assume that the cost of
something is the amount of money necessary to pro-
duce it and the price is what you pay for it. They are
commonly confused but they are different. This differ-
ence may account for at least some of the world’s $100
billion and the would-be student’s $14,000.

Dr. Kieran Walsh
FRCPI, FHEA,
BMJ Learning,
BMJ Publishing Group.
BMA House, Tavistock Square,
London WC1H 9JR,
UK.

Tel: 0207-3836550,
Fax: 0207-3836242,
E-mail: kmwalsh@bmjgroup.com.

The author reported no conflict of interests.

References
[1] Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T,
et al. Health professionals for a new century: transforming
education to strengthen health systems in an interdepen-
dent world. Lancet 2010;376:1923–58.
[2] http://en.wikipedia.org/wiki/Medical_school_in_the_United_-
Kingdom#cite_note-stats-2
[3] Masters K. A brief guide to understanding MOOCs.
Internet J Med Educ 2011;1, DOI:10.5580/1f21.
[4] Walsh K, Jaye P. The relationship between fidelity and
cost in simulation. Med Educ 2012;46:1226.
[5] Walsh K. Cost effectiveness in medical education: an
introduction. In Walsh K, Editor. Cost effectiveness in
medical education. Abingdon Radcliffe 2010:1–4.
[6] Catto G. Interface between university and medical school:
the way ahead? BMJ 2000;320:633.