## Why do students receive a discount on cinema tickets but not on popcorn?

## Ben Wyer

In this paper I will analyse the peculiarity where two complementary products sold side by side, in the same venue, are not available for the same student discount. Firstly, I will evaluate why in fact students in particular are able to buy the tickets at a reduced rate, and then subsequently explore why it is only offered on these specific products in question.

I first noticed the problem when a friend acquired a position at my local cinema, and was informing me of the student discounts available at his particular branch. Initially it didn't seem logical to me as popcorn is notoriously known for having very large profit margins; sometimes even resulting in the packaging used costing more than the product itself. This is where I started to look at the underlying economic principles that must be at hand to try and make sense of the situation.

The first concept that came to mind is the price elasticity of demand. This is known as 'the responsiveness of demand to a change in price' ${ }^{[1]}$. Markets can be defined as either 'elastic' or 'inelastic'. If the price of a product in an elastic market was to increase by a small amount, the quantity demanded of that product would fall by a proportionately larger amount, making the market very responsive to price. Inelastic markets are the exact opposite of this, being very unresponsive to changes in price. With regard to the cinema, I
will separate their target market into two segments for simplicity; students and the general public. Students generally have less disposable income at hand and are more sensitive to changes in price, making them price elastic. The general public tend to have more disposable income (with the assumption that they are not unemployed) and are less sensitive to price changes, making them price inelastic. If the cinema was to increase the prices of their tickets, the quantity sold to the general public would only decrease by a small amount, but consequently the quantity sold to students would decrease proportionally more, decreasing revenue overall. To take advantage of both markets, the cinema offers a lower price to the students, but maintains the higher price for the general public who are more willing to pay this price. This is known as price discrimination, and is a well known method for a firm to maximize its profits.

There are three main types of price discrimination, first, second and third degree. First and second do not specifically apply to this example, so I will focus on third degree and put a brief explanation of the others in the technical appendix. Third degree discrimination 'involves charging different prices for the same product in different segments of the market' ${ }^{[2]}$. In the cinema the two markets are separated by their price elasticity, and hence their ability or willingness to pay. The graphs below highlight the two different amounts of profit made from each market and then the total profit, shown by the area highlighted in purple.
[Figure removed due to copyright restrictions. Please see:
http://www.revisionguru.co.uk/economics/pricedis.htm] [3]

The graphs follow the assumption that as it is the same product in both markets, average costs remain the same, shown by the green dotted line. Also, it assumes that the cinema is operating at the profit maximizing point; where marginal costs equal marginal revenue. The demand (AR) line on the $3^{\text {rd }}$ graph is kinked to accommodate for the two very different demand lines in market A and market B (the public and students).

By creating a pricing system like this, the cinema is maximizing its profits and subsequently maximizing its producer surplus. This is the difference between the market price and the lowest possible price they were willing to charge. By lowering the price for students this way, it gives the company access to a new market without the cost of innovating the product, in addition to the previous market being charged market price. The extra supernormal profit made from the students could then be reinvested in the cinema, giving the consumer access to better quality services or even a larger variety of films. Also, these profits could be used to cross-subsidize late night/early morning showings of films that are loss-making operations. This gives consumers who can't make the peak-time showings the ability to see the off-peak ones, benefiting the market as a whole.

Also, for price discrimination to occur, there has to be a monopoly on the market. If the market was saturated with competitors, the competition would simply drive the market price down until the business is not profitable. Cinemas often have a monopoly on the market as they are very spread out and, in smaller towns or cities, there often is only one cinema in business.

For price discrimination to take place, a number of criteria have to be met. There has to be a difference in elasticity between markets, there has to be monopoly power over the market, and finally there have to be restrictions on the resale of goods. Earlier we proved that there are differences in the elasticity between students and the general public, and this can be generalized between both the sale of tickets and popcorn. Also, cinemas often have a monopoly over the sale of tickets as the number of venues is quite scarce. It can also be said that there is a monopoly on the sale of popcorn inside the venue as outside businesses aren't permitted to sell popcorn within the cinema. And, finally, there have to be restrictions on the resale of goods. If a student was to sell their ticket to the general public, the ticket could not be used as it is checked when it is used up, not to mention the opportunity cost of queuing for the tickets and having to see a later screening outweighing the small gain in profit. However, there is nothing stopping the students buying popcorn and then selling it on for a profit, if there was a discount available. This is because the product is identical with or without the discount, and would still be demanded by the general public regardless.

This analysis is not perfect and does have its limitations. For example, this paper has been simplified to only include students; cinemas usually have different price levels for a number of consumers such as OAPs and children. Also, I have assumed that students have the same preference to popcorn as the general public. The discount may not be offered to students as they simply do not demand any, regardless of price. Students could have an increased utility from seeing two movies instead of buying popcorn.

Throughout writing this essay, I have come to the conclusion that through a limited analysis, students are offered discounts as a way for the cinema to maximize their profits by giving them access to new markets. Also, popcorn does not have a discount associated to it as it does not fulfil all the criteria for price discrimination to take place. The consumer benefits overall, as more consumers have access to the product and also the increased profits can be reinvested to make the experience better for them.

## Technical Appendix

First degree price discrimination - This is when the market is split up and each consumer is charged specifically the amount that they are willing to pay. This can be hard to implement. Second degree price discrimination - This is when any surplus products or capacity is sold at the last minute at reduced prices. For example empty seats on a flight.

Opportunity cost - 'Cost measured in terms of the next best alternative forgone' ${ }^{[1]}$

## References

[1] Essentials of Economics John Sloman \& Dean Garratt - Fifth edition
[2] http://tutor2u.net/economics/revision-notes/a2-micro-price-discrimination.html
[3] http://www.revisionguru.co.uk/economics/pricedis.htm
http://market.subwiki.org/wiki/Price discrimination\#Costs and benefits of price discrimi nation

Intermediate Microeconomics, Hal R Varian - 8th Edition

