

USING CURRENT AND UP-TO-DATE EXAMPLES AS A TEACHING TOOL IN ECONOMICS: A DESCRIPTION

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ABSTRACT

In this paper we provide a pedagogical tool to make the experience of students in an Economics course more enriching, exciting and rewarding. We promote the idea of using examples from current events that are happening or have just taken place and relating them to economic concepts. This would involve the instructor researching and adding examples and case studies from real life events as they unfold. This would mark a change from using examples and case studies that are described in standard texts as they tend to be older and out of date, and are unable to excite students or hold their attention for very long. We provide examples and descriptions of a few examples and case studies that have been developed for MBA economics classes. We note that students are a lot more excited and are able to relate much more easily to current and up to date examples and some may have even experienced the events described in the examples. This leads to a positive externality for the class.

INTRODUCTION

There has been a multitude of new thinking and research about various teaching methods that can be used for economics courses, both for undergraduates and for graduate MBA courses (see Becker and Watts (2005) and Becker, Watts and Becker (2006)). The traditional chalk and talk methods as a pedagogical tool in all subjects have become less and less popular as students become more and more demanding about teaching methods that are more in tune with the 21st century technological revolution. A traditional “chalk and talk” pedagogical style tends to make students less and less interested in the happenings of the classroom and more likely to let their minds wander away to other thoughts. With the advent of smartphones and the use of laptops in the classrooms, students have every opportunity to tune out their boring “same old same old” professor and hop onto the internet where they can easily peruse the happenings of the day, catch up with their friends on Facebook, Twitter and other social media or could just carry on a text message conversation with their friends, some of whom might be sitting in the same classroom. In addition to this being a problem for all courses, economics courses have the rather unsavory reputation of being dry, boring, impossible to understand, too math and graph oriented, too abstract with little real life applications etc. The last comment is especially galling as the principle ideas of economics have everything to do with business, and it is really not too difficult

to come up with hundreds of examples of applications of each economic concept. If you open the pages of any Business news website, or periodical you will find a lot of events happening right then that demonstrate some application of an economic concept.

Mark Maier and Scott Simkins (2009) in a fundamental piece of pedagogical work called Just In Time Teaching (JITT) provide insights into the use of student assignments that students have to look at, grasp the concepts of the questions and finish in just a few hours before class starts. Despite the obvious thoughts of slap dash work and corner cutting by students, the pedagogy actually helps students develop skills of introspection and persistence as well as innovation of thought. The idea behind this is really simple and practical: when students enter the real life and are employed, they will face innumerable just in time assignments. They will have to process the information and come up with strategies and solutions in just a few hours. Students in a classroom realize this, and the excitement of having a project or homework that resembles a real life work assignment at least in terms of the time available makes students more eager to engage in their coursework. Following the JITT innovation, in this paper we explain the process of using cases and examples that are currently taking place in the real world and relating them as applications of an economic concept that is being taught in class. Current text books in economics both at the undergraduate level and at the MBA level have increased the use of examples and cases to help students grasp an economic concept and to illustrate its use in the real world. A brief scan of the latest texts in both Principles of Economics and MBA Economics courses reveals the following examples and cases: LeBron James choosing not to attend college (opportunity cost), outsourcing to China (international trade), Pricing Tickets for Broadway shows (price discrimination), FCC Auctions (Economics of information and uncertainty) and the managerial perils of Asian chipmakers at the height of the tech boom (perfect competition). Unfortunately none of these examples can be called “just in time” i.e. the stories in them have all taken place quite a while back. Thus, students find it difficult to relate to the examples and cases because they are not current, and they have either forgotten about it or they have never heard of it. We can thus understand their complaint that economics concepts have few real life examples. It is not that the concepts have few applications; it is that the students have no interest in an example that is not current. Students would be much better served if instructors use as applications to economic concepts current events that can easily be looked up and that students are aware of or still remember because it occurred in the not too distant past. This would require periodic update of examples by the instructor, rather than relying on examples provided by the textbook author. In this paper we describe a few applications that are described by stories and events that have just occurred or are currently occurring, are fresh in the minds of the students and will remain interesting to students for at least a few more months. We relate these stories to economic concepts that are taught in a standard undergraduate or MBA economics class, and provide anecdotal evidence of enhanced student participation and interest.

ELASTICITY AND PRICE DISCRIMINATION

An Example: Evidence from Sams Club and CVS

In a recent New York Times article, “Sam’s Club personalizes Discounts for Buyers” (May 30 2010) the reporter Andrew Martin talks about an innovative discount idea from Sam’s Club, the warehouse chain of Wal Mart. He describes a new program called “eValues” where Sams Club customers who are “Plus” members can go to a bright green kiosk near the entrance, swipe their membership card through the card-reader and get an individualized booklet of coupons. This individualized booklet is tailored to each individual’s expected demand for products and provides them with coupons for products that they would most like to purchase using the discounts. This is significantly different from the standard across the board discounts offered by most retailers. For example warehouse clubs send out a booklet of coupons that any individual belonging to these warehouses could use. Similarly grocery stores have long used “Preferred Shopper Cards” to offer discounts on products on their shelves. For example, if you browse by the selves of a grocery store aisle, you will see the price tag for a particular product offering the information that the normal price is \$ x while if you use the preferred shopper card for that store the price will be \$ $(x-a)$. A similar though more generic idea that has often been used by producers and distributors is the coupon booklet insert that comes with your Sunday newspaper. In that booklet you get a wide variety of product coupons that you can then use in any grocery store to get a discount on the particular products that you buy. Grocery stores often complement these coupons by offering “double coupon” deals. Retail consultants call this type of individual pricing the “holy grail” of the retail business and predict that more and more businesses will use data mining and the power of predictive analytics to target individual customers. Indeed, amongst retailers CVS and Kroger have already started offering individualized deals and coupons through kiosks while grocery giant Jewel offers individualized deals for a future shopping trip at the checkout counter.

The Standard Economic Theory

In standard undergraduate and graduate economics texts we often refer to coupons as a great example of price discrimination. In fact it is one of indirect price discrimination where the producer or seller cannot identify individuals belonging to any group separated by similar demands, thus has to provide coupons to (possibly) every customer. The seller consequently cannot make the discount available to only those that belong to a particular demand group. Thus there is always the possibility that an individual belonging to a different group may also use the coupon and thus the positive effects of price discrimination may be diminished for the seller. As an example consider a producer of toothpaste who wants to spur demand for their particular brand. In order to do this they provide an insert in the Sunday newspaper which has a coupon for

\$2 off that particular brand. The rationale for the coupon is to expand the customer base for the product i.e. it would include all those customers who want to buy the brand of toothpaste but consider the current price too high i.e. they are willing to pay a lower price for the toothpaste. By bringing this new group into the market, the seller is able to increase their profits as long as the marginal cost of production is covered. However the basic idea of price discrimination is to provide the same product to different groups of customers at different prices – in this case the idea is to provide the toothpaste to well off customers at the higher price without the coupon, and to provide it to the not so well off at the lower price with the coupon. It is quite likely in this case that some customers of the well off group could easily use the coupon thus lowering the extra profit estimates for the seller. If however a seller is successful in correctly identifying the individuals in the different groups (i.e. Direct price Discrimination) that would imply a higher profit for the sellers than Indirect Price Discrimination. A great example would be differentiating prices in movie theaters with a lower price charged to individuals with a student ID card relative to individuals that are not students i.e. do not possess a student ID card. However this type of Price Discrimination has been considered difficult to achieve.

Explanation of the theory using the Real World Examples

As we can see, the cases and examples that we described to a large extent are applications of the economic theory of Price Discrimination. There is however a slight difference – the theory usually describes a more generic idea of Price Discrimination (indirect price Discrimination) where sellers can't exactly identify the individuals belonging to the different groups which of course leads to a potential lesser benefit situation for the sellers. So how does a seller limit the losses from this type of “cannibalizing” and move towards the Direct Price Discrimination model? The best solution would be to provide individualized deals to customers. Thus, customer A would get a different set of coupons than customer B, and thus coupon booklets would not be generic amongst all customers. Up until recently this has been practically impossible for the sellers to achieve primarily because they did not have hard information about the types of products an individual customer A would like to have coupons for – i.e. what would be the products that customer A would not buy if it was selling at its full price, but would buy if there was a coupon that took off \$x from the full price. However with the advent of customer cards and the tremendous data gathering powers that such cards gave the sellers, it was only a matter of time before the sellers realized the enormous data mining reach that they held. As an example the sellers could easily track the purchases made by Customer A and the prices that Customer A paid – they would find that Customer A paid full price for a certain number of products while they only bought a certain other group of products with a discount coupon. In fact, the data would be able to pinpoint the brands that Customer A would buy at full price and the brands that they would buy at a discount. It is quite possible that Customer A would behave differently with respect to two different brands of the same product i.e. Customer A would pay full price for

Cereal X but they would only buy Cereal Y with a discount coupon of \$C. Data Mining and Predictive Analytics in fact gives the sellers an incredible amount of information about the exact demand curve of Customer A and thus since they can estimate the demand curve for customer A they can find Customer A's price elasticity of demand for various products. This of course is the textbook working of price discrimination where a customer with a higher elasticity of demand for a product pays a lower price (since by definition of elasticity they are relatively highly price conscious about that product) and vice versa. Thus armed with this knowledge of price discrimination and the elasticities, sellers can target certain customers with individualized coupons.

Sellers can also use the data to forecast the probable likes of their customers. For example, they can consider a group of products where a number of customers have exactly the same demand and using the data on the demand curve for other products that this group of customers have, they can forecast with some accuracy the demand curves of customers with similar initial choices. For example let us say that a group of customers have exactly identical demands for a group of products. The seller looks at the data for products outside the ones that constitute the identical demands of these customers and finds that customer A is willing to pay \$K for product X while customer B is willing to pay \$L for product Y. The seller, based on the similarity of demands for customers A and B can predict that customer A should be willing to pay about \$L for product Y and customer B should be willing to pay \$K for product X. Thus they can target customers A and B based on these projections. In a sense, using the power of data mining the sellers are moving towards the model of "perfect" price discrimination where they could charge each individual the price that they would be willing to pay through the use of highly individualized coupons. In fact, as the retail analyst in the case above seems to imply, individualized pricing is in a sense the best strategy from the point of view of the sellers because it can completely eliminate the surplus of the consumer.

Another Example: Rates for Medical Services

In healthcare –physicians, hospitals and other service providers charge different rates to different groups of patients. Depending on what kind of health plans (PPO, HMO --and there are variations within them) or Medicare or Medicaid the patients belong to, reimbursements rates to the healthcare providers vary significantly.

Explanation of the theory using the Real World Example

In this example, again we have a great application of price discrimination. A physician's office might have a collection of patients that belong to different types of health plans, and are thus paying different premiums, deductibles and co-pays. However the service rendered by a physician for an annual checkup as an example or the lab for a general blood test are exactly the

same. The service received by one patient cannot be transferred or “sold” to another patient and thereby meeting one of the key elements of price discrimination theory. The incentive for the physician’s office in accepting different types of insurance coverage is to increase their pool of patients and capture additional revenue.

THE PRISONERS DILEMMA

One Example: AT&T versus Verizon

Recently the advertising world was intrigued by the epic advertising battle waged by rival wireless providers AT&T and Verizon. It all started in Fall 2009 when Verizon sharply escalated the battle with AT&T by mocking the latter’s “There’s an app for that” campaign by creating a “There’s a map for that” campaign that showcased Verizon’s superior 3G network and AT&T’s supposed inferior network. As a result AT&T unsuccessfully took Verizon to court, and after that viewers were treated to Luke Wilson singing AT&T’s praises – commenting about among others AT&T’s superior 3G service and the ability to talk and surf the internet at the same time. The sparring on the airwaves continued until early 2010 when AT&T (and subsequently Verizon) changed their advertising strategies to a more non confrontational one which point out the benefits of each provider’s service rather than pointing out the faults of their competitors’ service. What were the results of this all out advertising war that captivated viewers for over 6 months? According to USA Today it ended pretty much in a draw, with neither side being able to gain an advantage over the other since they both added subscribers at pretty much the same pace. AT&T added 2.7 million subscribers while Verizon added 2.2 million. Data showed that most of the new subscribers came from their competitors Sprint and T-Mobile according to Charles Golvin of Forrester Research.

The Economic Theory

We have here a pretty standard example of the Prisoners Dilemma Game from Game Theory in play. In our standard textbook example, there are two prisoners who have been apprehended on suspicion of committing some misdeed. They are interviewed separately and each has two strategies “confess” or “not confess” with their payoffs dependant not only on their own strategies but also the other person’s strategy. The standard textbook Prisoners Dilemma matrix is shown below.

The payoffs signify jail terms depending on the strategies chosen. Solving for the first prisoner Bonnie we find that she has a dominant strategy of “confess” i.e. no matter what the other prisoner does he is always better off with “confess”. Similarly the other prisoner Clyde also has a dominant strategy of “confess”. This implies that both prisoners will choose to confess, and as we can see from the matrix end up in a situation where both of them are worse off than (each)

choosing the strategy “not confess”. As most economics textbooks explain, each prisoner is afraid that the other will choose to confess thus getting the benefit of a favorable outcome, while they are left significantly worse off if they choose to “not confess”. The classic textbook example of a Prisoners Dilemma situation is that of a price war between two competitors.

Table 1: The Prisoners Dilemma Matrix			
		Clyde	
Bonnie		Confess	Not Confess
	Confess	$(-5,-5)$	$(0,-10)$
	Not Confess	$(-10,0)$	$(-2,-2)$

Explanation of the theory using the Real World Example

As we immediately notice, the application of this theory occurs exactly in the behavior of AT&T and Verizon with respect to their advertising campaigns. Both AT&T and Verizon would be better off if they choose not to directly confront the other in their advertising campaign. However both of them cannot let their rival get away with negative advertising. In fact, as an outcome this case exactly mirrors the standard Prisoners Dilemma outcome – neither of the competing firms is able to carve out an advantage over the other, in fact they are only able to increase their subscribers by poaching them from other smaller competitors. This is the point of difference with a standard textbook example, where there are only two firms. In this case obviously there are more than two competitors- in fact it is these other competitors that suffer a loss of subscribers because of the increased visibility of AT&T and Verizon’s products. In fact it can be argued that both AT&T and Verizon could have had the same outcome spending a lot less money on a lot less advertising with a few more positive advertising spots.

Another Example: CVS versus Walgreens

Another interesting recent case involves two pharmacists CVS and Walgreens. Rather than a situation where the two indulge in a competitive battle against each other over advertising or a price war, they battle against each other on the services offered. In early June 2010, Walgreens announced that it would “no longer participate in new and renewed benefit plans from its rivals (CVS) drug benefits unit” (CNN Money, June 7 2010). The main grievance of Walgreens was CVS Caremark’s Maintenance Choice Plan which started requiring patients that have chronic medical conditions to fill their prescriptions at CVS pharmacies only rather than giving them the choice to fill it at Walgreens (or other pharmacies). As a result of this announcement both companies shares fell – CVS fell 8% and Walgreens fell 2.7%. As a response CVS in a couple of days decided to drop Walgreens from its pharmacy benefits plan, which would force some of its benefits customers to pay a much larger amount to get their drugs

from Walgreens, leading to a potential loss of customers for Walgreens. As a result CVS shares fell 1.5% and Walgreens fell 3%. Eventually, about a week later the two pharmacies decided to end their war, coming to a compromise agreement the financial terms of which were not disclosed. As a result both firms saw their stock values increase.

Explanation of the theory using the Real World Example

Again in this case, the entire story follows a pretty predictable textbook example of Prisoners Dilemma. As evidenced by the movement of their stock prices – both companies would have been better off if they had initially come to the compromise agreement that happened at the end. However since they are fierce competitors in the pharmacy market, CVS chose the intense competition strategy rather than the compromise strategy. The intuition behind this choice is pretty simple: CVS was unsure about the actions of Walgreens in this competitive battle. It would have been better off for both to start out with the compromise strategy, but CVS knew that if it unilaterally chose to not to engage in a competitive battle, Walgreens would engage in a competitive battle. Similarly for Walgreens, if it chose to not engage in a competitive battle CVS best option would be to undercut Walgreens strategy. Thus each company's best or dominant strategy was to engage in competitive battle, as long as it was unsure of the other company's actions. This service war ended when both realized the futility of this Prisoners Dilemma type situation and came to a compromise agreement after which both companies are aware what their competitor's strategy is in this instance.

STUDENT REACTIONS

The examples/case studies listed above are currently being used in the MBA course Managerial Economics. Students are considerably more positive about the examples since they can actually remember the Verizon versus AT&T advertising wars involving the actor Luke Wilson, and are also more positively inclined towards the CVS versus Walgreens battle since it has happened very recently and some students were actually in the middle of the back and forth between the two companies. Some students have already used the kiosks in Sam's Club and CVS to get their personalized coupons and have received personalized discounts at the jewel checkout counter. Thus, the personal experiences of the students acts as a positive externality to all the students in the class and makes them a lot more enthusiastic about the concepts since they see the actual experiences related to these concepts. The current and future iterations of this course will also feature a survey that will note student reactions, and we can capture the reactions over time as we keep the examples/case studies current by incorporating newer ones.

CONCLUSIONS

In this paper we have offered a pedagogical tool to make the instruction of economics more appealing and interesting to students. We argue for the inclusion of new examples and case studies that serve as applications for economic concepts, developed and written by the course instructor that is taken from events that have happened recently or are currently happening. This keeps the instruction of economics fresh for the students and promotes significantly more student interest and participation relative to examples and case studies explained in the text that tends to be from several years ago and out of date. We describe a few examples and case studies that were developed using current events and relate them to economic concepts usually described in class and note the student satisfaction and engagement just by virtue of them being current and a part of the experience of some students. We are hopeful that we can continue providing new examples and case studies to enrich the student experience.

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