TOPIC 1: MICROECONOMIC PRINCIPLES AND SPORT

1.1 Scarcity in Sport

Theory: 'Scarcity' is a central concept in the world of economics. When a resource is scarce, it needs to be **rationed**. Rationing then leads to **competition**. When it comes to sport, scarce elements include –

ATHLETIC PROWESS

Fans appreciate the beauty and seeming impossibility of athletic prowess. True athletic prowess is rare, and has drawn comparisons with art.

ABSOLUTE AND RELATIVE TEAM QUALITY

The *quality* of sport is a scarce commodity that generates the competition fans enjoy. Team quality is comprised of two kinds**:**

Absolute Level of Quality

Absolute Level of Quality is the difference in quality between major and minor leagues. Although fans enjoy the quality of competition at any level, they are willing to pay more (**demand more**) for **higher quality levels**. Thus, *Absolute Level of Quality* matters.

Additionally, the level of competition that particular fans will enjoy depends on their *willingness* to pay for team quality; those willing to pay **more** attain a **higher level of quality** than those willing to pay less.

Relative Level of Quality

Relative Level of Quality is the competitiveness of a team once the absolute level is determined i.e. the difference between teams at the bottom of the table (*cellar-dwellers*) and those at the top (*division champions*).

Rottenberg's Uncertainty of Outcome Hypothesis: Fans want their teams to win in close games and appear in the latter stages of competitions – if not every year, then often. Even if the best that fans can support in a particular location is *minor league sports*, they will still care deeply about the competitiveness of their team at that level.

It has been shown that teams with a) higher – but not perfect - winning percentages, and b) higher percentage of close games could charge higher ticket prices – **because there was more demand for that team**. This illustrates an important principle:

If fans care about relative outcomes, there must be a **balance in competition** between teams.

That is to say, if the same teams always dominates a league and the championship is a foregone conclusion, *fan interest will start to wane*. In order to maintain fan interest, a sports league has to ensure that teams **do not get too strong or weak relative to each other**. This will preserve the *uncertainty of outcome principle*.

COMMONALITY OF SPORTS

Sports games provide a **common bond** among people. This is evident in the way mutual supporters of a team interact towards one another. In this case, the team is the scarce resource – supporters will choose to support this single team above all others.

VICTORY

Fans love their teams, but enjoy it even more when their team wins – especially when they come out on top over a bitter rival. Thus, winning is very closely related to competition.

1.1.1 Rationing in Sports

Theory: From an economic perspective, the factors described above (*athletic prowess, team quality, commonality & victory*) are all scarce commodities; there is not enough of them freely available to satisfy all desires. Thus, **rationing** must occur – mechanisms to help *discriminate* between those who want sports.

There are many rationing devices, but the most important is **price**. If fans are willing to pay ticket prices, they get to witness the sports events. The more fans in a given location are willing to pay for quality, the higher the quality of their team will be. This has a knock on effect – advertisers in turn will be willing to give media providers the financial incentive to show sports on television.

1.2 Demand Theory in Sports

Theory: Fans want to share in the excellence, competition and vicarious thrill of winning associated with sports teams, and are willing to pay in order to do so. **Demand –** the relationship between price and quantity demanded – is exemplified in the sporting world through the relationship between *ticket prices* ('price') and the willingness and desire to purchase those tickets i.e. *attendance* ('quantity demanded').

1.2.1 Demand Determinants – *Movements Along* and *Shifts Up and Down*

Theory: If the ticket price changes, a **movement along the demand function** will evince the change in quantity demanded. This illustrates an important concept:

As the price of tickets increases (decreases), the quantity demanded decreases (increases)

Changes in *other factors* will cause a change in demand itself. Because these factors **shift the demand curve up or down**, they are known as *demand shifters*. The factors are:

i. Preferences – fans have their preferences for the sports they enjoy, and are willing to pay more **demand**) to witness those sports. Major preference contributory factors include:
   a. ***Experience*** - fans enjoy the games they learned to play/follow growing up.
   b. ***Demand for Excellence*** **–** this helps to explain why some sports fans demand the level of excellence afforded in men's sports over the same in women's sports.
   c. ***Quality*** **–** this is most important preference element; that is, the *intensity* of the preference for quality supersedes all other elements. Fans enjoy higher quality relative

to lower quality, but the *intensity* of that desire is reflected in willingness to pay. Fans that place a higher premium on victory have a greater willingness to pay for that quality.

d. ***Outcome uncertainty*** – fans prefer to witness a competitive league and matches, and are willing to pay more for greater competition.

ii. Fan Income – income changes cause sports demand functions to shift; an increase in income can cause demand to either a) increase for 'normal goods' or b) decrease for 'inferior goods'. For example, if fan if fan income rises, sports fans may shift their purchases from amateur leagues to professional leagues. This would make professional leagues '*income* ***normal***', and the amateur leagues '*income* ***inferior***'.

iii. Price of Other Goods – all entertainment options can be considered alternative consumptions possibilities. Whether demand increases or decreases with the price of another good depends on whether a sport and its entertainment alternative are **substitutes** or **complements**:

a. ***Substitutes*** – if the price of alternative entertainment falls, fans may choose to pursue the alternative to sports attendance.

b. ***Complements*** – if the price of a complement to sporting venues - eg. the cost of parking - increases (decreases), fewer (more) people would attend matches.

iv. Fan Expectations – if fans *expect* the price of particular sporting events to increase in the future, their demand might increase in the present i.e. will wish to consume more of it **whilst it is cheaper**. Alternatively, if fans expect the price of particular sporting events to decrease as it gets closer to the time, they may decrease their demand in the present, holding off consumption **until it gets cheaper**.

v. Population – as population increases (decreases), demand will increase (decrease). However, because population is ***dynamic*** – *some spectator bases grow whilst others decline* – owners of sports teams are interest in the demand prospect of different locations, and will alternative locations for their teams if it shown that a greater support base – and willingness to pay – is available elsewhere.

1.3 Lessons from Demand

Market Power

Demand functions are *negatively sloped*; as price increases (decreases), fans demand less (more) tickets. That demand for sports slope downwards illustrates an important concept –

Substitutes to sport are always available; consumers view all other manner of entertainment as substitutes for sports.

Anything that entertains people is considered a substitute for sports. The shape of the demand curve for sports depends on the availability of substitutes. Depending on the situation, team owners and administrations either have **unlimited market power** or **little to no market power** in changing the prices

they charge. Firms are deemed to have market power when it has *few close substitutes*. In sporting terms, this comes to do a team being the only one available in its geographical location.

Preferences

Preferences are at the heart of differences in demand. For a given *absolute* level of play, fans demand the **highest relative competition** they can afford. Fans are willing to pay more for a greater level of competition. This spurs players on to making themselves relatively more competitive than their peers.

However, this can sometimes have a negative effect – *the use of performance-enhancing drugs*. Performance-enhancing substances give athletes an unfair relative advantage to other players. But, economically, if enough players take the drug route to performance enhancement, eventually absolute competition will be raised as well. Thus, the use of drugs creates utility for fans via their enjoyment of **higher levels of absolute competition**.

Change in Demand v. Upward Sloping Demand

The law of demand states that consumers buy *fewer units* when *prices rise* – hence a downward-sloping demand function. However, in the sporting world, **both** attendance (*units of demand*) and price change increase over time. This suggests that demand in sport *slopes upwards!*

This is an error in distinguishing between the **quantity demanded** – which suggests that demand slopes upwards – and **demand itself**. To assume that the relationship between attendance and price represents a single demand function is to assume that *no other demand shifters have changed over time*. This is an unreasonable assumption; it is highly likely that certain factors of demand – such as **population & income** – would lead to higher prices and attendance over time.

Demand Perspectives on 'Large' and 'Small' Markets

Historically, 'large-market' teams win more often than 'small-market' teams. Part of the reason has to do with the fact that teams with **larger populations to draw from** have the opportunity to earn higher revenues. This means that 'large-market' teams will *buy better players* because they can earn higher revenues from those players than 'small-market' teams. Although it is **revenue** that ultimately drives a wedge between 'large-market' and 'small-market' teams, **population** is one of the determinants of revenue differences.

In saying that, population is not the only factor that determines demand for sport; a team owner may consider moving to another location, *even if the population is smaller*, so long as other factors – **income, preferences** – manifest in greater demand.

1.4 Opportunity Cost & Comparative Advantage

Theory: An *opportunity cost* is the **next best alternative foregone** when making a decision. In sporting terms, an opportunity cost is faced when deciding in which position to use a player. If the goal of a team is to *win as many games as possible*, then the opportunity cost of using a player in one position is the **wins that the team sacrifices by not using that player in another position**.

When assessing opportunity cost, 2 terms have to be considered:

1) **Absolute Advantage** – where a person (sportsman) is <u>more efficient</u> at their activity than any other person (sportsman) i.e. the best at everything in what they do. 'Efficiency' is defined as:
    a. Using *less* resources to produce the *same amount* as others;
    b. Using *the same amount* of resources to produce *more* than others.
2) **Comparative Advantage** – where the opportunity cost for a person (sportsman) in one activity is <u>lower</u> than the opportunity cost for another person (sportsman).

One of the most important conclusions from the theory of comparative advantage is that **developing particular skills** and **specialising in activities that use these skills** make individuals and firms (teams) <u>better off</u>. Therefore, even if a particular player has an ***absolute advantage*** in all positions, teams should use the player in a position in which he has a ***comparative advantage*** relative to his teammates.

ILLUSTRATION:

Opportunity Cost and Comparative Advantage

- One Illustration: Frustrated fan
  - Why does coach play player X there?
    - Eg. Western Bulldogs: Chris Grant in defence when he was clearly the best tall forward in the team?

	Chris Grant	Matthew Croft	
Defence	+4	+2	**Net Payoff (value in net goals to team, ie. goals scored or saved)**
Attack	+2	+1	

← Shown left is an illustration of the relative abilities of Chris Grant and Matthew Croft in 'Defence' and 'Attack':

- Defence is assessed in terms of number of goals **<u>saved</u>** per game.
- Attack is assessed in terms of number of goals **<u>scored</u>** per game.

As can be seen, Grant has an ***absolute advantage*** in both defence and attack; he saves <u>2 more goals per game</u>, and scores <u>1 more goal per game</u> on average. But Grant can't play in both positions.

Therefore, the coach should play Grant where he has a ***comparative advantage*** i.e. where the <u>opportunity cost</u> of playing him in one position is *lower* than the opportunity cost of playing him in the other position.

In terms of the opportunity cost of switching **from defence to attack:**

- Grant's contribution is **2 units <u>less</u>** i.e. he *scores* 2 less goals per game than he *saves*.
- Croft's contribution is **1 unit <u>less</u>** i.e. he *scores* 1 less goal per game than he *saves.*

In terms of the opportunity cost of switching **from attack to defence:**

- Grant's contribution is **2 units <u>more</u>** i.e. he *saves* 2 more goals per game than he *scores*.
- Croft's contribution is **1 unit <u>more</u>** i.e. he *saves* 1 more goal per game than he *scores*.

Conclusion: Grant has a comparative advantage in *defence*, saving 2 more goals than he'd score if he played in attack; as compared to Croft, who would save only 1 more goal in defence than he'd score if he played in attack. Hence, Grant should play in defence, and Croft should move to attack, *only scoring 1 less goal than he's save* (Grant would score 2 less goals than he'd save).

1.5 Demand, Supply, Equilibrium & Economic Welfare

Theory: Competitive markets *maximise economic welfare* by balancing out **Producer Surplus** (PS) and **Consumer Surplus** (CS). Thus, Maximised Economic Welfare = CS + PS.

However, when there is *market intervention* – usually by the government – economic welfare is lost. This concept is particularly evident in the laws of **scalping**. According to scalping laws, no one can sell tickets for *more than their face value* i.e. value printed on the ticket. However, the face value of the ticket is usually well below what the free market would dictate. Thus – in economic terms – the laws of scalping impose a ***price ceiling*** on tickets, keeping their price far below equilibrium.

A price ceiling creates 2 problems for buyers (*consumers*) and sellers (*producers*):

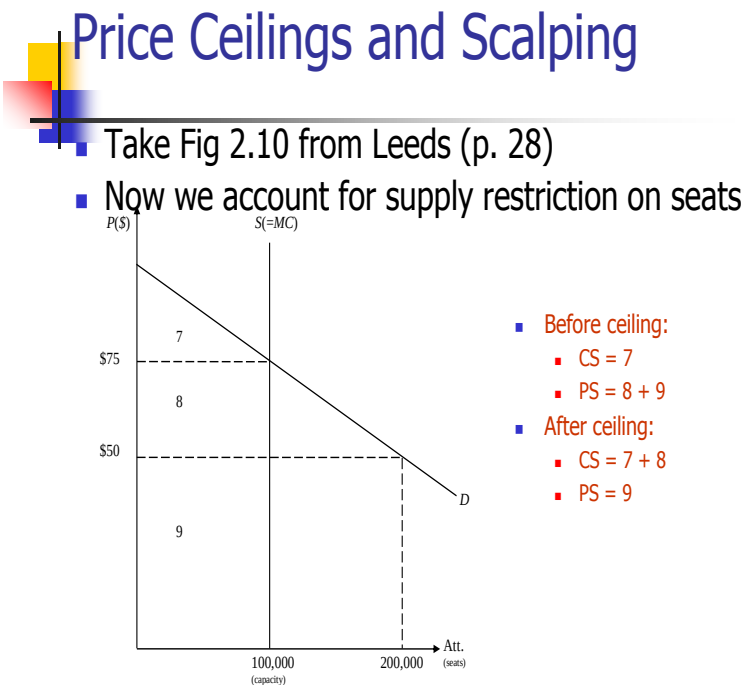
I. **Excess Demand** – a price ceiling creates excess demand for tickets, since the quantity of tickets demanded is much greater than the quantity of tickets supplied.

II. **No guarantee spectator with greatest utility will receive the ticket** – usually, in a free market economy, the goods go to the consumer who receives the greatest utility. However, where a price ceiling intervenes, there is no guarantee that the people who place the greatest value on the tickets will get them. If price does not serve as an allocation mechanism, someone is only just willing to pay the face value of the ticket might get one, whilst someone who values it far more highly might not. Thus, when price does not ration tickets, some other limited resources – usually time – does (as shown by the long queues for tickets as soon as they are released).

Conversely, **if scalping was legal**, economic welfare would be increased. For example:

- *Daniel is willing to pay **$100** for a ticket (D = MB);*
- *Melanie has a ticket, but values it at only **$15** (D = MB);*
- *If Daniel buys the ticket from Melanie -*
    - A) Daniel's CS: $100 - $70 = $30 less than he would have paid (saving) + surplus of going to the game
    - B) Melanie's CS: $70 - $15 = $55 more than the ticket is worth to her.
    - C) Total CS: $30 + $55 = **$85.**
- *Thus, from reallocating the ticket from Melanie (**MB = $15**) to Daniel (**MB = $100**), economic welfare is increased – yet this is prohibited under scalping laws!*

1.5.1 Supply Restrictions & Scalping



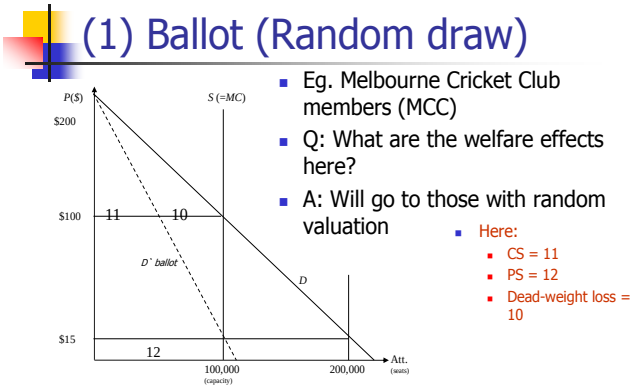
Theory: In contrast to scalping, the economic welfare situation that arises when there is a a supply restriction is as follows:

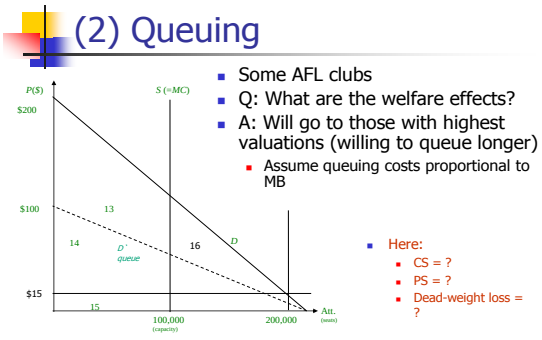
a) **CS:** Area under Demand Curve down to price charged i.e. the value consumers would be willing to pay *less* the amount they have to pay. When –
   a. Capacity = 100,000 seats, Price = $75: **CS = 7, PS = 8 + 9**
   b. Capacity = 200,000 seats, Price = $50: **CS = 7 + 8, PS = 9**

Hence, the effect of the ceiling here is that there is **no deadweight loss** i.e. there is no change in welfare because output has not decreased – surplus has merely transferred *from producers to consumers*.

APPLIED EXAMPLE:

On Grand Final Day, the AFL has to allocate 100,000 seats amongst 200,000 spectators who are willing to pay. Two methods by which they distribute these scarce tickets include **balloting** and **queuing** –





Comparing the 2 approaches;

(1) **Ballot** – scalping would occur, as some 'lucky' ballot winners (those who do not value their tickets so highly) could re-sell to those with higher valuations.
(2) **Queuing** – scalping less likely to occur because those who queue already place a higher value on the tickets than most.

Economically, scalping improves welfare, distributing tickets to who value them most. However, it is illegal because it is viewed as *inequitable*.

1.6 Monopoly Pricing

Theory: Up until now, the assumption has been made that all goods are bought and sold in competitive markets. However, this assumption is usually inaccurate and unrealistic in sports markets; a **monopolistic market structure** commonly operates. The following is an analysis of competitive markets against monopolistic markets.

1.6.1 Perfect Competition

Theory: The unique characteristics of *perfectly competitive markets* are as follows –

i. **Many -** many producers and consumers;
ii. **Homogenous product** - All consumers and producers purchase and sell a **homogenous product**;
iii. **Each firm is small and has no individual market power** - Buyers (*consumers*) and sellers (*producers*) are small relative to the overall size of the market, so no single firm or consumer can alter the market price individually. If a firm in a competitive market tries to raise its price, consumers will purchase an equivalent product elsewhere at the market price. Thus, there is **no individual market power**.
iv. **Firms can freely enter and exit the market** – if the market if profitable, more firms will enter. This will shift supply to the right i.e. increase supply, causing prices to fall and reducing individual firm's profits. This benefits consumers in 2 ways:
    a. Ensures firms cannot restrict output to drive up prices and earn excessive profits.
    b. Ensures consumer desire for the market product is satisfied i.e. maximises society's gains (**economic efficiency**).

Because firms can sell each additional product at the market price – and no more – the extra revenue received (***marginal revenue***) is equal to the ***price*** charged on the previous product (**MR = P**); that is, each successive product is sold at the same price as the last. Thus, producers in a perfectly competitive market weigh up:

- **Marginal Revenue** – additional revenue from each successive product; against
- **Marginal Cost** – additional cost incurred to produce each successive product.

Thus, producers maximise profits by producing and selling additional products until –

Revenue earned from selling each product = Cost of producing that product (MR = MC).

1.6.2 Monopolistic Structure

Theory: A monopoly exists when a *single firm* is the *sole producer* in a market. The demand curve faced by the monopoly is the market demand curve, because the firm does not share the market with any other firms.

In a sporting sense, sports teams have **considerable market power** – perhaps even monopoly power – because there is not necessarily a close substitute available, especially where a single team occupies an entire geographic location. Sports teams also gain their considerable market power from –

a) **Fan preferences –** fans form an attachment to a particular team above all other teams available.
b) **Ease of attendance –** as some teams are the sole 'firm' in a particular geographic location, fans (*consumers*) prefer the team over all others due to the ease of attendance.
c) **Barriers to entry –** other teams (*firms*) often face substantial barriers to entry in particular locations (*markets*), such as access to playing facilities or difficulty in attaining a television contract. These barriers prevent new teams (*firms*) from providing a reasonable alternative, leaving the pre-existing team being the sole provider in a monopolistic market.

Unlike a competitive firm, a monopoly does not passively accept the price and quantity dictated by the intersection of supply and demand; the monopolist can choose to either a) lower prices and expand demand, or b) raise prices without losing all of its customers (fans). However, like firms in competitive markets, the monopolist usually sets a price which **maximises profit** (i.e. **MR = MC**).

In a monopolistic market –

- **Demand –** as the sole producer in the market, the monopolist (team) faces the downward sloping demand curve (as opposed to firms in perfectly competitive markets, which face a *horizontal demand curve*).
- **Marginal Revenue –** marginal revenue is the additional revenue teams receive from selling each additional ticket. In order to increase marginal revenue, teams have to *sell more tickets*. However, in order to do so, they must *lower their prices*. Whilst this boosts sales, it does decrease revenue. As a result, the marginal revenue curve is below the demand curve.
- **Marginal Cost –** as long as the team is not at capacity, the marginal cost of accommodating *one extra spectator* is close to zero i.e. it costs the team relatively little to sell one more ticket and to admit one more fan. As a result, it is typically assumed MC = 0. When ticket sales reach the capacity of the stadium, marginal cost becomes infinite as the team cannot sell any more seats at any price. At this point, MC becomes vertical.

A *perfectly competitive market* operates where market demand (D) cuts the marginal cost curve (MC) i.e. where **D = MC**. However, a *monopolist* produces a greater quantity, because its marginal revenue curve cuts the horizontal axis at a much lower level of output. Thus, the monopolist will **charge a higher price**.

1.6.3 Effect of an Increase in Demand – Player Costs

Theory: The monopolistic model **ignores the cost of player contracts**. Player contracts are *fixed costs* i.e. do not vary with output – unlike attendance at matches. Because player contracts do not affect MR or MC, the price and quantity which maximise profit do not change. Hence, the cost of player contracts *should* have no bearing on ticket prices.

And yet, teams may still raise prices after making new signings. This occurs when teams sense fans will be willing to pay higher prices to view the new signings in action. Thus, teams charge higher ticket prices because the *demand curve* – and hence the *marginal revenue curve* – shift outward, leading to a higher equilibrium price and quantity. In short, teams charge higher prices when they make new signings because they **can**, **not because they must**.

1.7 Pricing in the *Inelastic* Region of Demand

Theory: Economic literature that analyses *demand for attendance* consistently finds that teams price in the **inelastic region of demand**. But in the inelastic portion of the attendance demand function, marginal revenue is negative. In these circumstances, firms can **increase revenue by reducing output** i.e. by selling less tickets or selling at higher prices. Yet most of the time they choose not to do so, and sell in the inelastic region even when it means they are generating less revenue and profit.

Reasons suggested for such behaviour include:

- **Owners don't care about profits** – if this were true, pricing in region where marginal profit is negative could happen on preferences alone. However, this suggestion is nonsensical; owners, like all businessmen, care about profits.
- **Non-attendance (non-gate) revenue –** a more likely suggestion is that, by keeping gate prices low and thereby attracting greater crowds, owners hope to offset this comparatively low revenue base with other *non-gate complementarities*; that is, owners hope to offset the reduction in gate revenue with revenue from a) car parking, b) licensed merchandise sales, or c) edible concessions – food & drink. Owners will continue to reduce ticket prices *so long as the added revenue from concessions makes up the difference.*

1.8 Changes in Demand and Changes in Total Revenue

Theory: Suppose the population or income levels of a particular geographic location increases. Consequentially, the demand function itself would *shift outwards*, so that greater attendance would be demanded at every ticket price. As a further result, **total revenue would increase**.

1.9 Strategic Pricing

Theory: Monopolies have market power – the ability to set and control price. In the basic monopoly model, the monopolist *chooses one price and charges it to all customers at all times*. However, in the real world, firms charge different prices for the same item at different times for different customers. Such pricing **enhances the monopolist's profits**.

1.9.1 Open Leagues, Closed Leagues and Monopoly Power

Theory: Open leagues have less monopoly power than closed leagues. In an open league – such as the *English Premier League* – teams can be promoted/relegated i.e. change from year to year, but in closed leagues – such as the *AFL* – teams are fixed.

Open leagues have less monopoly power in that:

a) They **cannot limit** the number of teams in a city;
b) **Any team can form** in a lower league and work its way up.

By way of contrast, teams in closed leagues have more monopoly power in that:

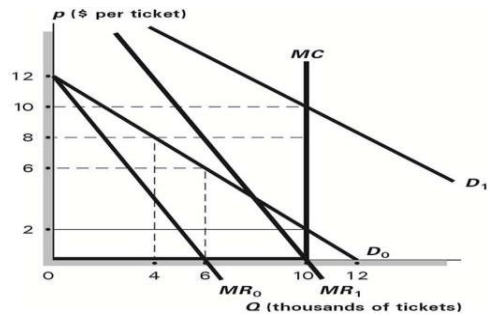
a) **Teams are fixed**, so other teams cannot just form in lower leagues and work their way up;
b) **There is a limit** on the number of teams in a city, with new teams encountering barriers to entry.

1.9.2 Variable Ticket Pricing

Theory: Some games are just more attractive than others. When games are more attractive, **demand** for tickets those games increases, shifting the demand curve *to the right*. Factors which drive the difference in demand for attractive games include –

a) The quality of the opponent;
b) The existence of a long-standing rivalry;
c) The presence of star players in the opposing team;
d) Promotional events; and even
e) The weather.

Thus, rather than charge the same price for all games, teams can increase profits if they *vary the price* of tickets from game to game. **Variable Ticket Pricing** sets tickets in accordance with expected demand for a future game. When a team believes that demand will be higher for more attractive games, they will *charge more* for those games. Contrastingly, when a team believes demand for a given game will be lower, they will *reduce the price* to compensate.



MC = 0 – up to the point of capacity (10,000 people). **D0** = Demand for *less popular game*; **D1** = Demand for *more popular game*. If a team uses a Variable Pricing Strategy, they will set MR(0) = MC, and MR(1) = MC – resulting in prices of **$6** and **$10** respectively.

This means that the team will sell out (10,000) tickets to the more popular game, and will sell 6,000 tickets to the less popular game. If the team tried to sell tickets to the *less popular game* for $10, most seats would go **unfulfilled**; contrastingly, if the team tried to sell tickets to the *more popular game* for $6, it would sell out the game, but make **40% less revenue**. If the team chose to sell all tickets for $8, the price would be *too high* for the unpopular game (attendance falls by 4,000, meaning revenue falls by $32,000), whilst the popular game will sell out but with a **$20,000 revenue loss** (from $100,000 to $80,000).

1.9.3 Dynamic Ticket Pricing

Theory: Some factors are *not known before the season opens* – for example, the home and away team's season records. Thus, demand will sometimes only rise **in response** to events during the season. **Dynamic Ticket Pricing** allows a team to capture *additional revenue* based on individual game characteristics that are unknown at the start of the season. Thus, teams adjust ticket prices during the season as events unfold.

1.9.4 Bundling

Theory: Some fans want to see specific games very badly, and are willing to see less attractive games to receive the tickets they desire. Thus, teams can increase revenue by **bundling games together** i.e. by making fans who want to buy tickets to their desired game also buy a ticket to an unpopular game at the same time. Thus –

- Fans get to see the team they want at a relatively low price; and
- The team sells tickets that it would not otherwise sell.

With product bundling, firms take advantage of differing demand across products, capturing some of the consumer surplus that might otherwise accrue to buyers.

1.10 Price Discrimination

Theory: Variable Ticket Pricing, Dynamic Pricing and Bundling are ***pricing strategies*** based on differences in the perceived quality of different games by a given consumer. By way of contrast, ***Price Discrimination*** relies on teams identifying differences in willingness to pay for the same game.

Often, teams charge a single price to all consumers because they have **no way of determining which consumers are willing to pay more**, and consumers have **no incentive to reveal their willingness to pay**. If a monopolist could sort consumers by their willingness and ability to pay and set prices accordingly, it could capture some – or all – of the consumer surplus. Such a pricing strategy also *reduces or eliminates deadweight loss* as profit.

This is **Price Discrimination** – the method of charging one consumer more than another for the same product.[1] Unlike the name suggests, price discrimination is not based on prejudice; merely the strategy teams adopt in charging more to those willing and able to pay more.

1.10.1 Perfect Price Discrimination – *First Degree Price Discrimination*

Theory: Under the perfect price discrimination strategy, each consumer is charged the **maximum he/she is willing to pay**. This requires and is based on the assumption that teams know *each individual consumer's demand* i.e. exactly how much each consumer is able and willing to pay. Thus, all consumers are turned into **marginal consumers**, and what was once their consumer surplus is now entirely the team's additional profit. When a team perfectly price discriminates, their MR curve = D curve.

[1] **NOTE:** Charging different prices for slightly different products *is not price discrimination* – it is Variable Ticket Pricing.

1.10.2 Quantity Discounts

Theory: Unlike *perfect price discrimination*, teams **often don't know what all fans are willing to pay**. They do, however, know that demand slopes down i.e. as price gets higher (lower), fans demand less (more). **Quantity Discounts** takes advantage of the team's knowledge that fan's *marginal utility* from consuming a sporting event declines with the quantity of games attended. For this reason, teams will adopt the strategy of reducing overall cost by *charging less* when selling tickets **in bulk**. Hence, teams often:

i. Charge less per game for a **season ticket** than for **individual tickets**;
ii. Charge less for **group tickets** than for **individual tickets**.

1.10.3 Segmented Markets – *Third Degree Price Discrimination*

Theory: Sometimes, teams may *know nothing about individual fan demand*, but do know that some groups of fans are **willing and able to pay more than other groups**. For example, teams know that students have less disposable income than adults, and are more sensitive to price changes. Thus, teams will **segment fans** based on their relative – and assumed – financial position, charging adults and non-students a higher price than to students. **Segmented Market Price Discrimination** occurs when a team charges different prices for the same good in different segments of the market.