The Economics of Sports Programming

TERJE GAUSTAD

Good afternoon, ladies and gentlemen. Welcome to the first telecast of a sporting event. I'm not sure what it is we're doing here, but I certainly hope it turns out well for you people who are watching.
Bill Stern, announcing a 1939 baseball game between Columbia and Princeton universities[1]

Sports programming has become increasingly popular over the last few decades, and as television stations scramble for rights to the most popular sports, prices soar. About twenty years ago, in 1980, the Norwegian Football Association earned approximately NOK 1 million a year from all media rights to its soccer games. In 1998 the total media rights revenues reached NOK 40 million[2]. From being a rather symbolic contribution to the association's total revenues, the sports rights revenues now represent one of the most important revenue sources for Norwegian soccer. Other popular sports have experienced similar developments, and in many European countries the rise in demand and prices for sports rights was seen before the Norwegian developments (Baskerville, 1999).

Researchers and scholars have offered likely explanations for this development, including the liberalization of television markets with increased levels of competition between broadcasters and the general increase in transmission capacity (see for example Cowie and Williams, 1997; and Sloane, 1997). It is, however, not the primary aim of this article to explain the sharp rise in sports rights prices, but rather to take a step back and examine the economic characteristics of sports as television content. The aim is to sketch a conceptual framework for analyses of not only the soaring rights prices seen over the last decade or so, but also of the new and difficult problems arising within this field.

Based on theory developed for economic analysis of audiovisual media products in general (see Waterman, 1988; Wildman and Siwek, 1988; Hoskins and Mirus, 1988; Owen and Wildman, 1992; Waterman, 1993), I will attempt to place televised sports in this theoretical framework, and suggest changes and adjustments to these general theoretical models where this seems fruitful for a better economic understanding of sports programming.

I start by looking at the relationship between sports and television, which creates the basis for our object of study, TV sports. Next, I discuss the basic economic characteristics of television programming in general. Special attention is given to its *public good*

element, the following implications for the products' cost structure, as well as the concept of *cultural discount*. I then move on to consider TV sports in particular and discuss areas where this product diverts from other programming categories. The time sensitivity of sports programming and its somewhat special *cultural discount* elements are discussed here. Finally, I address audiovisual media's special form for price discrimination, known as *windowing*, and discuss how it can be applied to time-sensitive content such as TV sports.

Sports as An Entertainment Product – A New Paradigm

The object of study, sports programming, is created in the meeting between sports and television. This is a relationship with long traditions, as sports have always been a part of television. The roots of sports, on the other hand, naturally go indefinitely much further back than the introduction of television. The sports we know today grew out of popular leisure activities, which gradually have been turned into more organized forms of competitive physical activity. From the very beginning, sport has embodied an element of participation and popularity.

The relationship between sports and media goes back to the mid-18th century when newspapers began reporting sporting event results. This was clearly a win-win situation for both parties. Newspapers secured new readers interested in the sports, while the sports organizations gained from the extra publicity that made their events more popular. When televised sports were first introduced, some observers in the sports community saw it as a threat to the traditional win-win relationship between the media and sports. The reason was that sports, to a certain extent, had been commercialized through the broad interest they had achieved from newspaper and radio coverage. Ticket sales from people who had been tempted by the media coverage to actually attend the events represented an important revenue source for the sports organizations. This was "pay-per-view" entertainment long before anything similar would be possible through television. The introduction of television broadcasts, however, made it possible for people to "attend" the events directly from their own living rooms, and sports organizers saw this as a serious challenge to their "pay-per-view" revenues from attendance. However, soon one would see that in the same manner as recorded music gave artists fuller concert halls rather than empty seats, the marketing effects of television transmissions overshadowed any lost attendance from people who chose to follow the sporting event through television (Rowe, 1996).

Even if the relationship between sports and television goes back to the very beginning of television and has gradually developed into the kind of TV sports offered today, televised sport has always been a spin-off product (Rowe, 1996). The broadcasters transmitted to their viewers events that were arranged with little thought for the television transmission, and the traditional "non-commercial" values of the sports dominated. The product was only to a minor – and necessary – degree affected by and adjusted to commercial interests.

This seems to have changed with the enormous growth in revenues from sales of television rights. With sports' increasing dependency on television revenues came a shift in paradigm from understanding sports as an ideal activity based on its non-commercial roots, toward increasingly viewing sports as entertainment products. This change followed the development of the television markets and came to the United States in the 1960s, and to most European countries in the 1980s and 1990s. While the value of sports previously rested on the quality and span of the sport activities in them-

selves, it is now under the new paradigm based on how well the sport is suited for television transmission. This is not a change in paradigm in the strict sense that the new paradigm replaces and excludes the old. Rather, the "sports-as-entertainment-products" paradigm has been squeezed in and exists side by side – and in constant conflict – with the traditional sports paradigm.

Media-Adjustment and Media Created Sport

The entry of the "sports-as-entertainment-products" paradigm has resulted in two tendencies observed internationally in televised sports. First, there has been a trend toward adjusting the sports so that they best fit the needs of broadcasters and TV viewers. Among the most common adjustments are to modify the schedule of the events, change rules to avoid too much overtime, as well as weed out "boring" segments that may tempt viewers to change the channel. A good illustration of such television-driven modifications of traditional sports is described by Thomas (1997), who analyses a five-year deal media-giant Rupert Murdoch's News Corporation entered into with the British Rugby League in 1995. Based on this agreement – which had a financial framework of £87 million – it was decided to implement significant changes in the organizational structure of the sport. Among these were the decision to change the season from winter to summer to avoid competition from soccer; a new international top level league was set up; in some areas two or three smaller clubs were merged into a stronger club (even if one later had to reverse this process due to stronger than expected conflict with loyal fans); and as a part of a strategy to establish clubs in the larger metropolitan areas a new club was set up in Paris.

Established sports adjusting to new sports paradigms is, however, not a completely new phenomenon, and should be seen as an integrated part of a sport's natural development. Similar changes occurred toward the end of the 19th century when the "sport-as-a-game" paradigm gradually gave in to the "sport-as-an-organized-competition" paradigm. Scully (1995) describes how sports such as baseball, where each game in the early days could last for days, was adjusted so that each game would fit into a one-day program. This was done to accommodate easier organization of tournaments, and it also made the sport more attractive for spectators to follow.

The other tendency seen in the wake of the "sports-as-entertainment-products" paradigm is that the idea of a sport as a television-based entertainment product also opens up the possibility to create new sports shaped primarily to satisfy the needs of broadcasters. One example of this is the forms of extreme sports organized by the X-Dream company. When this company launched a pan-European sports channel it needed the kinds of sports that attract younger audiences. The prices for such rights among the ordinary and established sports were prohibitively high, and the company thus created its own variation of extreme sports at relatively low production costs (Gosling, 1999). To what extent these new media-created sports will survive shifting demand among television audiences remains an open question.

Basic Economic Characteristics of Television Programming

Based on the "sports-as-entertainment-products" paradigm we may say that televised sport is an audiovisual media product in the same manner as TV news, game shows, TV drama, movies, etc. Each of these categories of television programming has certain traits and qualities that must be considered in economic analyses of these products, but

they still all share a set of basic economic characteristics setting them apart from "normal" goods such as pizza or soap.

The first step toward developing a better understanding of the economics of televised sports is thus to identify and discuss these shared characteristics.

The Public Good Elements

One of the most important economic characteristics of audiovisual media products is their strong public good element. A public good is defined as a good or a service where one consumer's consumption does not reduce the amount of the good or service available for consumption by others. A lighthouse is a good example of a public good. One ship's use of the lighthouse does not in any way reduce the *amount of* lighthouse available to other ships. We say that the product is non-rival. Furthermore, the owner of the lighthouse cannot select a group of ships that may use it and exclude others. We call this type of product non-excludable. A private good, on the other hand, can only be used by several consumers if it is split up in smaller pieces. If you eat a whole ice cream cone, nobody else can eat it. The product is rival and excludable.

Television programming has, like other media products, both public good and private good elements. The performance in itself, which is caught on video or film or transmitted directly, is a public good. The physical medium and transmission capacity, however, are private goods. One television viewer's consumption of the evening news or *The Godfather* does not reduce the amount of news or movie available for other viewers. These products will thus always be non-rival. Whether the product is non-excludable depends on the specific situation in which it is consumed. If *The Godfather* is shown on a television channel that is not encrypted or coded, it is non-excludable, but if it is shown on an encrypted pay TV service it is excludable since not all viewers have access to this channel. The strength of the public good element will thus vary. However, when a television channel transmits the evening news, the same channel cannot transmit any other program at that exact time, so the transmission capacity is a private good that program suppliers must compete for. Similarly, when one TV station has a high-quality tape of *The Godfather*, no other TV station can use this copy of the tape. The physical medium – the tape – is thus a private good.

Televised sports, and television programming in general, are different from most other products in that they have a relatively strong public good element. The value of a television program for a viewer is determined almost exclusively by the product's public good element: How good the story the program is based upon is, how talented the writers are, and the quality of the actors, anchors, camera-crew, etc. The value of this element to one viewer is not affected by the fact that other viewers also watch the program. For TV sports such as televised soccer matches, the value to the viewer is dependent on such elements as the quality of the players, the uncertainty of outcome, and the quality of the coverage (placement of cameras, good commentators, etc.). These are the factors that determine the value of televised sports' public good element.

For a private good, its rival character will impose strict limitations on the price at which the producer is willing to sell it. In general, such goods will not be sold unless the price per unit covers at least its production and distribution costs. A television program producer, however, will at least in theory not refrain from selling his program to one extra viewer even if that viewer pays a lower price than the average production and distribution cost per viewer. Due to the product's non-rival character, the revenues from

each new viewer represent a net addition to the overall profits as long as distribution costs are covered.

This phenomenon is probably most easily seen in the international trade in audiovisual products such as television programs. As an example, let us assume that the Italian series A soccer matches, which in Italy are broadcast live on the pay TV service Tele+ with highlights on the public broadcaster RAI (Baskerville 1999), are sold to the Norwegian public broadcaster NRK for transmission in the Norwegian market. In the home market these matches are sold for an average of x lire per television viewer. Even if NRK should only pay one tenth of that for each of its viewers, the total value of the NRK-contract would be a net gain for Italian soccer (if we assume that the satellite transmission costs to Norway are marginal compared to the value of the contract). Sales to mini-markets such as Iceland will also be interesting to the Italians as long as the value of the contracts exceeds satellite transmission costs. The strong variations found from market to market in the price for a television program show that price primarily reflects the value viewers and broadcasters in different markets place on the program, rather than the "production value".

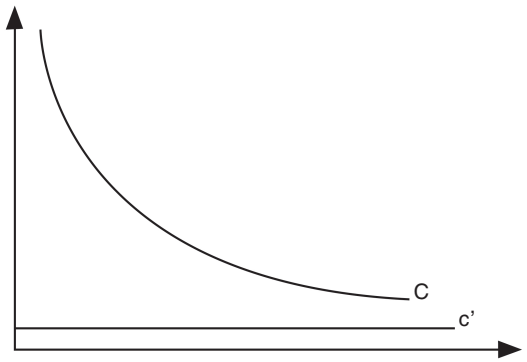
The Cost-Structure of Television Programs

A closely related and basic economic feature of most media products is their low marginal cost of distribution compared to the relatively high first-copy cost of production (Waterman, 1993). For audiovisual products this effect is particularly strong. The first-copy cost is related to the public good element of a media product, while the marginal distribution cost is related to its private good element. High first copy costs and low marginal distribution costs create substantial economies of scale that can be utilized by distributing the product to the largest possible audience.

The cost structure is illustrated in Figure 1 below. The relatively high first-copy cost gives high average costs at low volumes – when the program is consumed by a small number of viewers. Low marginal distribution costs (c'), however, create an average cost curve that falls quickly at small volumes and flattens out at higher volumes.

Given that the producer is able to sell the program for the same fixed price to all buyers, it is clear that the producer's profit increases with the size of the audience. For each extra consumer, average cost goes down and the marginal profit will thus increase.

Figure 1.



The assumption of equal price for all buyers will, however, be neither realistic nor desirable in all situations. In the example from Italian soccer we saw that the producer does not always have to sell extra units at a constant price for sales to be profitable. In the discussion of windowing below, it is also shown that keeping a fixed price is not desirable.

Furthermore, it is important to note that the production costs, or the first copy cost itself, can be regarded as sunken costs as soon as the program, or in our case the sports program, is produced. Evaluations of the offers from potential buyers should therefore be considered in relationship to the distribution costs (marginal costs) related to the transaction itself rather than the combined production and distribution costs. From such evaluations any sale is desirable as long as the distribution costs related to the transaction are covered. If the producer is only able to obtain offers where the prices are equal to or only marginally above the distribution costs, the production will of course create a deficit for the producer, even if the sales contribute to reducing that loss.

Established sports will thus have an advantage compared to media-created sports, as the production costs of the established sporting event can be considered a sunk cost, allowing the organizer to consider offers from television broadcasters against the distribution costs only. Sports created especially for the media, however, exist primarily as a source for television coverage, and offers should thus be evaluated against the average costs based on both production and distribution costs. When such assessments show a deficit, the basis for the existence of the whole sport is lost.

Even if certain adjustments of this simple cost evaluation are necessary to achieve a level of realistic detail describing real situations in the media sector, it illustrates the fundamental cost situation that is the basis for such adjusted descriptions.

Cultural Discount and the Value Lost in Trade

A media product sold both within and outside its home market will, *ceteris paribus*, achieve a lower level of popularity and demand outside the home market than within, due to cultural differences. The loss created when a media product is exported outside its home market is known as *cultural discount* (Wildman and Siwek, 1988; Collins, 1990; Waterman, 1993). Returning to our example of Italian soccer: The average Norwegian viewer will put a lower value on the Italian Series A matches than will the average Italian. The Italian Series A matches thus suffer a cultural discount when exported from Italy to Norway.

Media economists have traditionally considered cultural discount in connection with trade in film and television programs between nations. However, cultural discount is not necessarily dependent on definitions of the home market tied to national borders. It can follow from a number of cultural phenomena such as language and religion. These cultural differences may, but do not necessarily, follow national borders. The degree of cultural discount depends on the cultural distance between the home market and the export market. Assessments of such cultural distances or differences should be made dependent on the nature of the product in question. A local television station in one part of a country may find that the programs it produces will suffer from a significant cultural discount if offered to local station in another part of the country. We might, however, assume that a soap series produced in Venezuela only will suffer a minor cultural discount if it is exported to Argentina.

The importance of this phenomenon for televised sports is discussed in chapter 4 below.

Special Characteristics of Sports as Television Content

Televised sports differ from most other forms of television programming in certain key areas. Applying conclusions drawn from general economic analyses of television programming to sports programming without considering these special features may thus produce false results. Of these special economic features for TV sports, the two most important are discussed here: First, its special qualities with regard to time sensitivity and durability and, second, the factors which determine the degree of cultural discount for sports programming.

Televised Sports: A Time-Sensitive Product

While it is not crucial for a viewer's interest in such television programming as film, drama, documentary or entertainment that the program is shown a week or even a year after it is produced, this time aspect is essential for the valuation of most sports programming. Yesterday's soccer match will, for most, be a relatively unattractive program choice as the results have already been published in the newspapers. Even minor shifts in the transmission time from the time the event is actually taking place may result in a substantial loss of value. Let us say you are watching a soccer game between your home country and another nation, and that it is for some reason televised with a one-hour delay on the channel you are watching, while your neighbor is watching it live on a pay TV service. If you catch your neighbor singing "we are the champions" during the half time break on your channel, the second half of the game will definitely be of lesser value for you than it was to your neighbor.

On this basis some have drawn the conclusion that televised sports are products that only have significant value to the viewers in "real time" – while the actual event is taking place (Cowie and Williams, 1997). Such a conclusion may be somewhat too strong in certain cases, but there is no doubt that televised sports, along with news, are among the least durable forms of television content.

This time sensitivity has to do with the *uncertainty of outcome* element in sports. After the event has occurred and the results are known, the excitement is lost and with it much of the value of the program. However, we may assume that in most cases other elements than uncertainty of outcome also contribute to the overall valuation of the sports broadcast. Such elements may include the sporting performance itself, general interest in the athlete, etc. How dependent the valuation of a sports program is on time sensitivity varies with the relative weight each of these factors are given in the evaluation of any given program. The value of sprint final competition, for example, may rest heavily on the uncertainty-of-outcome element and the demand for this program will thus decline rapidly after the event has taken place. On the other hand, one may assume that other elements than the uncertainty of outcome are given relatively more weight in the evaluation of a freestyle snowboard competition or figure-skating, making these programs less time-sensitive.

A "Unique" Product

Most sports programs are difficult to copy or substitute, compared with other forms of television programming. The movie "Mission Impossible" may quite easily be substituted with a James Bond-movie, CNN's international news service can be replaced with BBC's service, and so on, but it would be considerably more difficult to find good alter-

natives for the Olympics or the Super Bowl. TV sports represent a content category where the products are more heterogeneous than what is found within most other categories. In the short run it is thus more difficult for the media to find good substitutes for attractive television sports rights, and each sports organization will encounter difficulties in trying to adjust supply to changes in the quantity demanded by the media. The result is a quite inelastic supply that produces significant price adjustments for sports rights when there is shifting demand. This uniqueness may also be reflected in competition policy. UK's competition authorities have, for example, defined the relevant market for Premier League's television rights as that of only this league's rights since no other leagues or sports were considered real substitutes (Henriksen, 1999).

In the longer run, the availability of real substitutes will be better. Through active branding strategies, new sports may achieve higher popularity and the viewers may also be better acquainted with new sports that could serve as substitutes for established and popular television sports.

Televised Sports and Cultural Discount

In the media economic literature on international trade in films and television programs, language is the most commonly used variable to operationalize cultural discount (see for example Wildman and Siwek, 1993), and cultural discount is usually considered in those cases where products are exported from one linguistic market to another. There are, of course, good reasons why language has become such a prominent element in the cultural discount discussions. For most categories of television programming, language is the basis for creating meaning and understanding the content, and foreign language productions are thus either subtitled or dubbed, which, *ceteris paribus*, makes the programs less competitive against national productions. Furthermore, there is quite often strong correlation between language and other cultural differences.

However, for televised sport language is not a good indicator for cultural discount. As Cowie and Williams (1997) argue, no other forms of television content are less dependent on language (except perhaps music videos and pornography). This does not mean that TV sports are exempt from cultural discount effects, as a number of other cultural factors play a part, but compared to other genres TV sport has a unique opportunity to cross linguistic barriers.

The local and traditional compositions of sport interest are probably among the strongest elements determining cultural discount for sports programming. These elements include viewers' awareness and knowledge about different sports. British cricket would probably suffer from considerable cultural discount if sold in the Norwegian market, while the effect would be smaller for sales in the Indian market. Furthermore, the viewers' knowledge of and interest in the athletes in each sport is important for cultural discount. One would for example expect that English soccer, which has been broadcast in the Norwegian market for years, suffers less from cultural discount in Norway than does Swedish soccer, even if Sweden is culturally and geographically much closer to Norway. But Swedish soccer has suffered from too small a presence on Norwegian television. Norwegian viewers know the English teams and players but lack such knowledge about the sport in their neighbor country. The fact that a number of Norwegian soccer players have been exported to English teams would probably further diminish the degree of cultural discount.

While language is a variable that should be considered fixed, awareness and knowledge of different sports and athletes represent much more flexible variables. We may thus conclude that TV sports, though they suffer some cultural discount effects in the short run, only suffer relatively minor effects in the longer run.

Windowing

In discussing the cost structure above, it was argued that Italian soccer organizations always should sell, even to mini-markets such as Iceland, as long as the contract price exceeds the distribution costs of the transaction. This is a particular case of a phenomenon known as *windowing*.

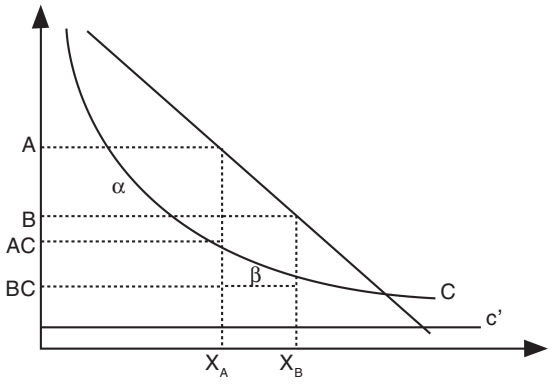
Windowing is common for most audiovisual products and follows naturally from these products' strong public good element (Owen and Wildman, 1992). The producer's average costs will, as shown above, decline for each new consumer, and for any given price it will thus be in the producer's interest to sell to as many as possible. In the Italian soccer example it was demonstrated how this is done through exports, but through windowing the home market may also be expanded.

Windowing is best understood as – and is also a case of – price discrimination. The goal is to make each viewer, or each consumer, pay the highest price that viewer is willing to pay for the product, and at the same time, sell to as many viewers as possible. The problem with setting one price for all buyers within the home market, or any other geographically defined market, is that for almost any given price there will always be some willing to pay an even higher price. The difference between the maximum price the buyer would be willing to pay and that set by the producer represents a loss of potential revenues for the producer. At the same time, for almost any given price there will always be a number of potential buyers not willing to pay this price, but who would still be willing to pay a price above the producer's average cost. The difference between the price these potential buyers would have been willing to pay and the average cost also represents a loss of potential revenues.

The theoretically optimal solution would be to ask each and every consumer to pay the maximum amount they are willing to pay. As this would be practically impossible, one may choose to settle for a system dividing the consumers into groups according to their willingness to pay. Figure 2 illustrates how the ability to segment consumers into such groups increases the producer's profits. Let us first assume that the producer can only set one price and chooses price A. At this level he will be able to sell X_A units, and his profits will equal the area marked a [(A-AC) * X_A]. Let us now assume that the producer in addition can set a second price B, but that the original buyers still pay price A. At the price level B a new group of buyers $X_B - X_A$ will emerge, and the producer's profit from these will equal the area marked b [(B-BC) * ($X_B - X_A$)]. This profit will be a net addition to the producer's total profits, thanks to the producer's ability to segment the buyers into two separate groups.

As seen in this example, it is a prerequisite for effective windowing that the producer be able to make the group with the highest willingness to pay stay at price A. If the product is freely offered for both price A and B, all buyers will naturally choose to buy at price B, which would not give an optimal solution for the producer since (B – BC) * X_B is less than $\alpha + \beta$.

Figure 2.



For most television programming the audience is segmented along two dimensions, ensuring that those with the highest willingness to pay actually pay the highest price. These dimensions are *time* – the viewer's willingness to wait – and *quality* – the viewer's sensitivity for quality. To illustrate, let us assume that a television movie is first shown on pay TV (the first window) and one year later on advertising based free TV (the second window). Viewers willing to pay the highest price for this film will choose to see it on pay TV for two reasons: They do not want to wait for it to appear on free TV (time), and they want to see it without the interruption of advertising breaks (quality). It is not possible for viewers with one or both of these preferences to view the film for free. The segmentation is thus functional.

As pointed out in section 4 above, televised sport is a very time-sensitive form of programming. This is reflected in the generally low level of windowing applied to TV sports. To the extent that windowing is used at all, the time span between the live broadcast (first window) and the replay (second window) has been very short (Owen and Wildman, 1992). Soccer matches are, for example, rebroadcast late at night the same day they were broadcast live.

Note that in the television movie example above, the segmentation along the time and quality dimensions are dependent on each other. One cannot choose the combinations of early (premiere) and low quality (ad-breaks), or late (delayed) and high quality (no ad-breaks). For TV sports, which undeniably suffer restrictions in the form of significant value lost along the time dimension, it would be useful to find new ways of windowing allowing segmentation of viewers along the quality dimension for each point on the time axis. Increased possibilities for more useful and effective forms of windowing along these lines are expected to emerge with the implementation of digital television. Trials have already been conducted in the coverage of Formula 1 motor sport, where the viewer can choose between two forms of live coverage: Traditional coverage and a more expensive version where the viewer throughout the race is fed more camera angels, cameras placed in each driver's car, etc. (Lyons, 1999). In this case, viewers are segmented along the quality dimension without compromising the value of live coverage on the time-axis. With such possibilities of independent segmenting along the two dimensions we could easily produce for windows:

Window 1: Live – Multi-Camera

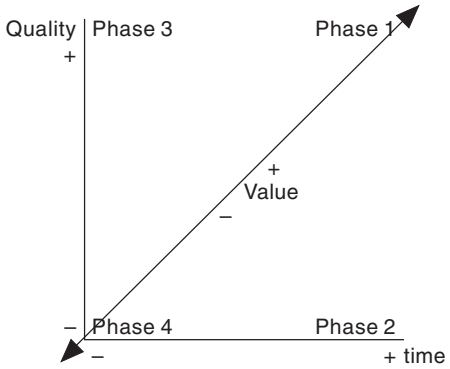
Window 2: Live – Traditional Cameras

Window 3: Delayed – Multi-Camera

Window 4: Delayed – Traditional Cameras

This independent form of windowing along the time and quality axis is illustrated in Figure 3 below.

Figure 3.



As the availability of more windows generally generates higher revenues and profits (Owen and Wildman, 1992), a development toward more flexibility in windowing independent of the time dimension would be of a relatively higher value for televised sports than for other programming since TV sports have a disadvantage, compared to most other forms of programming, in its time sensitivity.

Concluding Remarks

The analysis of the basic economics of televised sports presented in this article contributes to creating a basis for empirical research. At the same time it may be helpful for analysts and practitioners in the market of sports rights in making more solid market analyses and forecasting further developments in this market.

By incorporating televised sports into existing media economic theory and adjusting for those factors that set it apart from other categories of television content, we see that the public good element and cost structure of TV sports create a strong incentive for expanding potential television audiences through attracting new groups of viewers and sales to new markets. As soon as a sports program is produced, all revenues from new groups of viewers and new markets will represent an almost net gain to the producer's overall profits. The development and introduction of digital television will result in a dramatic increase in transmission capacity (Owen, 1999), and this development, coupled with the scale economics of televised sports, is likely to create a substantial increase in the overall volume of sports programming available to viewers. There will be more products on the market for viewers to choose among, and thus stronger competition between the sports organizations for the attention of the most attractive media outlets and viewers.

The incentive for export embedded in the economic nature of the product is reinforced by the unique position held by TV sports as an entertainment product relatively independent of language. While linguistic barriers create efficient limits to exporting of other forms of television programming, particularly for non-English language content, the export of sports programming is only limited by less efficient cultural barriers such as knowledge of a sport and its athletes. These barriers are furthermore even less efficient in the longer run since the sports organizations and media can actively work to fill such knowledge gaps.

Sports programming is very time-sensitive compared to other categories of programming. The degree of time-sensitivity is, however, dependent on how strong the uncertainty-of-outcome is for each sport. Strong uncertainty-of-outcome makes the sport an attractive television product in "real time", but it also makes it relatively uninteresting as delayed programming. Weaker uncertainty-of-outcome will contribute to prolonging the program's life span.

The strong time sensitivity of sports programming has limited the opportunities for windowing and thus made it very difficult to segment viewers for price discrimination. In a digital television environment, the possibilities for product differentiation with regard to quality will be better, and this opens for windowing of sports programming less dependent of time. If sports organizations succeed in finding effective means of time-independent windowing they will be able to tap into a considerable, and so far almost untouched, source of revenue.

The theoretical framework presented in this article should be tested empirically. To develop testable hypotheses from the relatively concrete theoretical conclusions drawn here should not be problematic. Such empirical research would strengthen the theory and also create a basis to expand, adjust and improve the framework presented here.

Notes

1. From Cox (1995).
2. Figures from the Norwegian Football Association's annual reports.

References

Baskerville Communications Corporation (1999) *Global TV: Sports Rights* (2nd edition), London: BCC.

Collins, R. (1990) *Television: Policy & Culture*, London: Unwin Hyman.

Cowie, C. and Williams, M. (1997) "The Economics of Sports Rights" in *Telecommunications Policy*, vol. 21, no. 7, p. 619-634.

Cox, P.M. (1995) "Flag on the Play? The Siphoning Effect on Sports Television" in *Federal Communications Law Journal*, vol. 47, no. 3, p. 571-591.

Gosling, A. (1999) "X-Dream's Launch of a Pan-European Sports Channel", presentation by the Marketing Director of X-Dream International at the International Sports Broadcasting Rights conference in London, March 25, 1999 – not published.

Henriksen, T. (1999) " Vinn eller forsvinn – kampen om kringkastingsrettane til populære sportsarrangement" in *Konkurranse*, no. 2.

Hoskins, C. and Mirus, R. (1988) "Reasons for the US Dominance of the International Trade in Television Programmes, in *Media, Culture, and Society*, vol. 10, p. 499-515.

Lyons, P. (1999) "The Changing Sports Broadcasting Landscape in the UK", presentation by the Head of Development of United Sport at the International Sports Broadcasting Rights conference in London, March 25, 1999 – not published.

Owen, B.M (1999) *The Internet Challenge to Television*, Cambridge, MA: Harvard University Press.

Owen, B.M. and Wildman, S.S. (1992) *Video Economics*, Cambridge, MA: Harvard University Press

Rowe, D. (1996) "The Global Love-Match: Sport and Television" in *Media, Culture & Society*, vol. 18, p. 565-582.

Scully, G.W. (1995) *The market Structure of Sport*, Chicago, Il: Chicago University Press.
Sloane, P. (1997) "The Economics of Sport: An Overview" in *Economic Affairs*, vol. 17, p. 2-6 (September 1997).
Thomas, D. (1997) "The Rugby Revolution: New Horizons or False Dawn?" in *Economic Affairs*, vol. 17, p. 19-24.
Waterman, D. (1988) "World Television Trade: The Economic Effects of Privatization and New Technology" in *Telecommunications Policy*, vol 12, no. 2, p. 141-151.
Waterman, D. (1993) "World Television Trade: The Economic Effects of Privatization and New Technology" in *The International Market in Film and Television Programs* (ed.: Noam. E and Millonzi, J.C.), Norwood, NJ: Ablex Publishing Company.
Wildman, S. S. and Siwek, S.E. (1988) *International Trade in Films and Television Programs*, Cambridge, MA: Ballinger Publishing Company.
Wildman, S.S. and Siwek, S.E. (1993) "The Economics of Trade in Recorded Media Products in a Multilingual World: Implications of National Media Policies: in *The International Market in Film and Television Programs* (ed.: Noam. E and Millonzi, J.C.), Norwood, NJ: Ablex Publishing Company.