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AUTHOR Robinson, Karla Salmon  
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ABSTRACT

Like other industries, television has its own version of the used-car dealership or second-hand store: off-network syndication. Since researchers who study television have rarely investigated the market for these programs, a study examined program and marketplace characteristics to determine which contributes most to the successful syndication of an off-network program. Factors hypothesized to play a role in the success of these programs were analyzed and two models were developed. Marketplace and program-specific criteria were considered as explanatory variables; however, the high multicollinearity of the marketplace data hindered investigation of the impact of many market-related factors. Much of the conventional wisdom regarding television programming was supported by the findings. Programs entering the off-market network generally have had highly successful network runs, both in terms of ratings and longevity (these programs enter syndication with many episodes available). Comedies were more likely to be syndicated than dramas; half-hour shows were preferred over 1-hour shows. Although syndication has become easier, distributors now find it more difficult for a program to achieve high ratings, due to the increase in competing media outlets. This study merely scratches the surface of an area rich with possibilities for future research. No researcher has done an in-depth investigation of the nuts-and-bolts operation of the syndication market since the 1970s. Much needs to be done before communication scholars can truly say that they understand the television industry. (Contains 61 references; 13 tables of data are included.) (NKA)

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Predicting the Success of Off-Network Television Programs in  
the Syndication Marketplace: The Case of Broadcast  
Syndication

by

Karla Salmon Robinson

Department of Communication Studies  
Northwestern University  
Evanston, Illinois

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## INTRODUCTION AND LITERATURE REVIEW

### Introduction

This study examines certain factors that influence the economic and business aspects of the television industry. The process of producing a program and finding a way to show it to the public involves much more than the selection of appropriate content. At root, the television industry operates like many other American industries. Television executives attempt to keep customers (viewers and advertisers) satisfied, fend off governmental regulation (or seek it out when circumstances require), and pay close attention to the bottom line. And like other industries, television also has its own version of the used car dealership or second-hand store: off-network syndication. Once programs have enjoyed their network runs, they live a "second life" as reruns on independent stations, network affiliates, or cable networks. Until recently, researchers who study television have rarely investigated the market for these off-network programs.

#### The Market for Syndicated Television Programs

Broadcasters first used the term "to syndicate" to describe distribution of a product in a broadcasting medium during the early days of radio. During radio's early years, stations depended upon network affiliation for their programming, just as television stations affiliated with ABC, CBS, NBC, and FOX do today. Stations unaffiliated with a network, or unable to make the wired connections necessary to receive network programs,

relied upon transcriptions of shows for much of their programming (Moore, 1979, p. 2-3).

When the television industry began in earnest in the late 1940s and early 1950s, the radio syndication firms already in operation began producing syndicated fare for local television stations. Like their radio counterparts, many of these stations either did not have a network affiliation, or did not yet have wired connection to the network. The technology for recording live television programs had not yet been developed, so in order to put together a schedule, unaffiliated or unconnected stations relied entirely on their own live productions (expensive and difficult to do well) or syndicated fare. Unconnected, affiliated stations aired kinescopes of network programs, transcriptions of poor visual quality created by recording television monitor images with a film camera (Lee, 1990).

Eventually, two shifts occurred. First, broadcasters' love affair with "live" programs gave way to an appreciation of programs created and edited on film, and recorded programs began to replace live shows. Second, Ampex invented videotape technology that allowed live network programs to be recorded on high quality equipment, such that the transcription was identical in quality to the original program (Moore, 1979). Local stations began to purchase the rights to previously aired network programs (called "off-network" or "off-net" programs) rather than first-run shows.

An important reason behind this shift to off-net programs can be found by looking at the financial underpinnings of prime

time. Program producers in the early days of television received network license fees which paid the cost of the program in full. Since the networks had already paid the production costs of the shows during their first appearance on television, distributors of off-network programs could afford to drastically undercut the prices charged by first-run syndicators for their programs. Stiff competition among off-network syndicators, first-run distributors, and feature film salespersons caused falling prices for television product; the supply of programs grew exponentially in a short period of time (Boddy, 1990, p. 178). Those with the lowest costs and best products survived, and many smaller first-run producers disappeared in the shakedown (Moore, 1979, p. 39).

Additionally, off-network programs had substantially better production quality than many first-run syndicated programs. As Boddy (1990) states, many of the syndicated programs of the day were "low-budget [programs] cast with largely unknown talent" (p. 140).

Today, off-network reruns play an important role in the schedule of local television stations and cable networks. Unlike the early days of television, today's television networks rarely cover the production costs of the programs they air during prime time. Firms produce most programs at a substantial deficit (Coe, 1991, 1992; Owen & Wildman, 1992). They find syndicating their programs necessary to recoup their original investment.

Interestingly, even though television syndication plays an integral role in the financial well-being of the television industry, few scholars have investigated the marketplace for

syndicated programs. In this essay, I will examine program and marketplace characteristics to determine which contributes most to the successful syndication of an off-network program.

I have organized this essay as follows: First, I review the relevant literature on television programming and introduce the research questions under investigation. Then, I describe the data set and methodology used in the investigation. Next, I present the results of the analysis and discuss their significance. Finally, I explain the limitations of the study and offer suggestions for future research in this area.

### Literature Review

#### In-depth Studies of Syndication

Academics conducted the earliest in-depth studies of syndication in the 1960s and 1970s, writing the first master's theses, dissertations, and journal articles dealing with syndication. These studies (Lichty, 1962; Hatcher, 1976; Back, 1979; Moore, 1979) mainly described the history of the syndicated program marketplace and provided a look at some of the characteristics of programs during this early period.

More recent published work on syndication includes studies like Hal Erickson's (1989) selective encyclopedia of syndicated programs from all genres of first-run programming. Nancy Lee's 1990 master's thesis described the advent of prime time syndicated programs during the early years of television, describing the structural and technological factors that led to the demise of this genre of programs. Sylvia Chan-Olmsted (1991) analyzed the market for syndicated programs in the 1980s. Her

research focused on the economic and regulatory environment of the syndication marketplace, focusing particularly on production companies that supply and distribute syndicated programs. James Fletcher (1993) provided a background look at the syndication marketplace, concentrating on the sales of feature films to television. He also illustrated how a station manager might analyze the ratings and revenue potential of a particular program. Finally, Roger Cooper (1993) used syndicated programming to test a model of the structural factors which determine the exposure of the audience to television. Cooper breaks the pattern of using only prime time, network data as the basis for a study, instead concentrating on local market data and different day parts.

Industry-based researchers have also expressed interest in studying the market for syndicated programs. Reports such as Stefanidis (1991) and Syndication 1995 (1989) address syndication from an industry point of view, pointing to trends in the program marketplace and local station preferences in the terms of acquisition of these programs.

As can be seen from the above review, the literature on syndication is not large and sophisticated economic and empirical analyses are nonexistent. Researchers generally have conducted descriptive studies, describing the marketplace and its characteristics. The regulation of prime time television and its influence on the syndication business has also received special attention.<sup>1</sup> But none of the above studies investigates factors contributing to the success of off-network programs.



### Research Questions

I am interested in investigating what factors influence the success of off-network syndicated programs. Broadcasters and program distributors buy and sell the rights to air off-network programs based on many criteria. Specifically, programs with successful network ratings histories, lots of episodes to air, and reasonable prices interest buyers. Factors such as a program's length and genre seem to play a role as well.

In this study, I will investigate several of the program-based characteristics mentioned above. However, the success of a syndicated program cannot involve only the characteristics inherent in the product. Market characteristics such as the level of demand for off-network programs or level of competition from other programs must also play a role in a program's success.

Two main questions drive this study. First, what prime-time programs are sold into off-network syndication, and what are their characteristics? Second, what factors help the program earn high ratings once it has been syndicated? I now outline the factors believed to be related to syndication success which will be used in this study.

### The Meaning of Success

"Success" has many definitions. In economic terms, players in a particular marketplace measure success in terms of profitability. Firms in the television industry keep profit and loss data proprietary, leaving the trade press and other interested observers to speculate on these figures. Since this data remains unavailable, I use two measures of success which

should be positively correlated with profits. One measure of success is whether or not a particular program actually found buyers after its network run; this measure answers the question "Was the program syndicated after its appearance on the network?" A second indicator of success is the ratings performance of successfully syndicated programs; this measure answers the question "How did the program do once it entered the syndication market?" Each of the factors presented below relates to success in terms of one or both of the above definitions. The first set relates to characteristics inherent in the programs; the second set is associated with characteristics of the market for syndicated programs.

#### Factors Related to Program Characteristics

##### Genre.

Many authors have engaged in the practice of studying programs by dividing them into genres. This method supposedly provides insight into the amount of diversity in television programming, under the supposition that more program types available to the viewer equates with more diversity. Each of these investigators (e.g.: Adams, 1988; Albarron, et al, 1991; Bailey, 1970; Dominick and Pearce, 1976; Litman, 1979a; Persky, 1977; Wakshlag and Adams, 1985) utilized a different categorization scheme. By dividing programs into genre categories, researchers seek to determine if the diversity of television programming increases or decreases over time.<sup>2</sup> Many authors who do study the marketplace for syndicated programs end up discussing the concept of diversity, because syndicated

programs are seen as a key source for diversity in television by the Federal Communications Commission. The Prime Time Access Rule (PTAR) was enacted specifically to improve the diversity of both program types and program sources in prime time television.

A significant literature has developed around the practice of repeat viewing of television programs (Barwise, et al, 1982; Barwise, 1986; Goodhardt and Ehrenberg, 1969; Lamude, 1988; Litman, et al, 1989; Tannenbaum, 1985; Webster and Wang, 1992). By repeat viewing, investigators mean the viewing of two episodes of the same program at different times. Evidently, some genres of programs inspire more repeat viewing than others. These researchers have not generally extended this analysis to the realm of off-network program viewership. However, it is possible that the same "repeat viewing" hypothesis applies to reruns airing further into the future than the next day, or next month. Certain program genres may have higher ratings in syndication because viewers enjoy reruns of this program type more than others.

Finally, conventional programming wisdom consistently prefers one genre of programs over all others in the syndication marketplace: comedies. Specifically, many believe situation comedies to be the best syndication properties, because they "generate higher syndication ratings than one-hour shows and provide the station with more flexibility in scheduling" (Blum & Lindheim, 1987, p. 191).

The number of studies utilizing genre as an independent variable and the conventional programming wisdom that comedy

programs are the most successful syndication properties suggests that genre might be important in explaining both types of success.

#### Program length.

As mentioned above, conventional wisdom holds that the half-hour situation comedy has an advantage in syndication, due to its scheduling flexibility. This flexibility comes from two factors: program content and length. Some programmers feel the lighter content of a situation comedy can be programmed more flexibly: one can air this program type in late afternoons, early evenings, or late night. Dramas, with their more adult content, must be aired in the late night hours (Blum & Lindheim, 1987, p. 192).

#### Number of episodes.

Conventional marketplace wisdom also holds that programs must have a minimum number of episodes to be viable syndication properties. Independent stations and cable networks generally "strip" syndicated shows (airing them at a given time each day, Monday through Friday). To eliminate excessive repetition of the same episode, industry watchers frequently claim a program needs at least a four-year run (approximately 88-100 total episodes) on the network (Webster & Lichty, 1991, p. 30). If a stripped program has 100 episodes, the same episode will be played three times per year. It is intuitively obvious that the number of episodes available for a program should be positively related to its success in syndication (under both definitions of success). In fact, Tannenbaum (1985) found that, given the opportunity to watch the same episode of a program one week after its original

air date, over 40 percent of the audience in a particular market chose the repeat.

Network ratings.

Another program characteristic hypothesized to aid in predicting the success of an off-network program is the rating achieved by the program when it first aired on the network. It seems obvious that programs that were popular during their network runs will be popular in off-network syndication. Litman (1979b) tested a related hypothesis when he attempted to predict the television ratings for theatrical movies, using measures of their success in the theaters. The rental revenues (as direct measures of attendance, roughly equivalent to an audience rating) explained the largest portion of the variation in his equation.

Many off-network programs appear to have capitalized on their network success by garnering premium prices from local stations (The Cosby Show and Roseanne are recent examples). However, some programs, notably Star Trek (the original series) have had much success in syndication, when the program's network ratings were not very high.

Number of years in syndication.

Though there are exceptions to this rule, most syndicated programs seem to have a limited life in syndication. Recent product generally garners higher ratings than older programs that have been in the syndication market for some time. As new, highly-rated network programs enter syndication, they replace the older programs in station line-ups. It may be possible to

identify a point when an off-network program becomes ripe for replacement by something newer.

Production budget.

The production cost of network programs is hypothesized to influence the syndication market. Programs with relatively high budgets, and therefore presumably higher production values, should be more attractive properties. It is important here to highlight an economic fact of life in television program production: nearly all prime-time series are produced at a deficit. The producer receives a license fee from the network for the rights to air each episode of the program during its network run. This license fee fails to cover the total production costs of each episode (Coe, 1991, 1992; Owen & Wildman, 1992). The producer makes up that deficit only if the program sells well in the market for off-network programs.

Due to the "public good" nature of television programs, they can be viewed over and over again without "using up" the entertainment value of the product. The syndication market provides program producers with additional revenue from the original product, without incurring the additional costs of producing new episodes. Economic theory tells us that a producer, knowing that success in this future "window" is not a given, will try to make his or her program more competitive in the syndication marketplace. This often involves increasing program budgets and producing the program for a deficit, anticipating profits in the long run. Accordingly, we should discover that the programs which are successful in syndication

will have higher program budgets than those that are not successful. As a matter of econometric analysis, however, the budget should also affect the network rating, and the network rating might therefore pick up the budget effect in the regression.

#### Syndication before a program leaves the network.

Distributors of successful network shows have a difficult decision to make with regard to when to syndicate the program. As mentioned above, over the past decade network license fees consistently have not completely covered programs' entire production costs. Therefore, planning a program's entry into syndication becomes crucial to its success in terms of generating profits for the production company. It might be the case that airing a program in syndication detracts from its success in the network run; conversely, the network airings of new episodes may cause viewers to reject repeats for the originals. Simultaneous airings may cause viewers to tire of the program more quickly; or, both network and syndication airings may benefit from simultaneous promotional efforts.

#### Factors Related to Market Characteristics

##### Number of independent stations.

While network-affiliated stations run some off-network programs, program distributors rely heavily on independent stations to purchase the rights to these programs. As the number of independent stations increased, particularly through the 1980s, the number of outlets for syndicated programs of all types increased. Therefore, this analysis includes the number of U.S.

independent stations annually as an index of this component of the market for off-network programs. With an increase in the size of the aftermarket naturally comes increased demand. This increase in demand should be reflected in the success measure of off-network syndicated programs.

When considering the impact of the number of independent television stations on the ratings of syndicated programs, the influence of these stations could be quite different. More stations means more competition for viewers, and smaller ratings for all stations. On the other hand, marginal programs which previously found it difficult to get reasonable levels of coverage may have greater coverage now. In recent years, the television audience has been divided up into smaller and smaller segments, with new entrants like cable television networks taking a share of the over-the-air audience (Webster & Lichty, 1991).

#### Influence of cable television.

In the 1980s, the marketplace for syndicated programs was also affected by the rising number of cable networks. Waterman and Grant (1991) found that rather than producing full schedules of original programs, most basic cable networks relied on off-network series and theatrical movies for a significant percentage of their programming. Many off-network programs have recently been acquired by basic cable networks (Walley, 1992; Brown, 1992; "Cable gets 'L.A. Law,'" 1989). Consequently, cable networks also have contributed to an increased demand for off-network programs.



Independent of the raw number of basic cable networks, another aspect of cable television may influence the success of off-network programming. In the early years of cable television, researchers such as Park (1972) demonstrated that cable technology could help UHF stations to achieve parity with VHF stations by eliminating the perceived quality difference between the two types of signals. Since most UHF stations are independent stations filling a majority of their schedules with syndicated programs, an improvement in the reception of UHF stations should influence the success of off-network programs.

On the other hand, cable has demonstrably decreased the audience for broadcast stations (Webster and Lichty, 1991). Broadcast stations now compete for audience with cable stations in over 60% of all television households. Increasing audience fragmentation may make it difficult for programs to achieve high ratings in syndication, whether airing on broadcast stations or a cable network.

#### The influence of advertising revenues.

Another way to measure the marketplace for syndicated programs is to examine the advertising market. Local station revenue streams are highly dependent upon the advertising industry. Income from advertising pays for the acquisition of syndicated programs. Also, a special type of syndication, barter syndication, relies on upfront participation from advertisers (Stefanidis, 1991).

#### Competition from other off-network programs.

One off-network program does not enter the market for syndicated programs alone. When one program becomes available, usually a program of a similar genre, length, even number of episodes will also be coming on the market. It seems reasonable to expect that fluctuations in the amount of this type of competition will affect a program's chances of making it into syndication.

## DATA ANALYSIS AND RESULTS

### Introduction

This analysis will explore the factors that contribute to the performance of off-network syndicated programs. I develop two models of syndication success. The first model attempts to predict the likelihood of a particular program being syndicated, given certain program and market characteristics. The second model uses similar characteristics to predict the ratings success of a program once it has been syndicated.

### Description of the Data Set

#### Prime time, off-network programs.

Only series that appeared on one of the three major broadcast networks (ABC, CBS, NBC) in the prime-time hours (8:00pm to 11:00pm, E.S.T.), during the fall seasons from 1970-1990 are included in this study. Which programs fell into this category was determined by utilizing the schedules provided in Brooks and Marsh's The Complete Directory to Prime Time Network TV Shows (1992). Programs that never appeared on a fall schedule are not included. However, programs that were mid-season

replacements and then continued on the network during the following fall schedule, are part of this data set.

Several programs were disqualified from this analysis because of irregularities in their post-network histories. For example, some programs appeared on a network, were cancelled by the network, and proceeded to first-run syndication (that is, new episodes were created after the on-network life of the program). These programs could not be included because syndicated ratings data do not consistently differentiate between off-network and first-run episodes; my interest here is only in the performance of off-network episodes.

Additionally, tracking the performance of network movie nights into syndication is virtually impossible, and all "movie nights" have been disqualified as well. Also, programs which had no reasonable chance for syndication (because, though they had not been cancelled, they had not been on the air for a long enough period of time) were removed from the analysis. (This includes programs only from the 1988, 1989, and 1990 seasons.) Several programs which have since become highly successful in syndication fell into this category. Finally, since Nielsen has not traditionally reported program-by-program ratings for shows syndicated to cable, the off-network programs appearing in only in cable syndication could not be included.<sup>3</sup>

#### Dependent Variables

In investigating the success of off-network programs, this analysis utilizes two different dependent variables--the likelihood of a program being syndicated and the program's

syndication ratings--both of which contribute to the success as measured by earnings. Many of the programs in this data set were never syndicated, and I wanted to see if the shows that made it have any characteristics as a group that differentiate them from those that never saw off-network airplay. The programs which reached syndication will be identified through their appearance in ratings reports; the performance of the programs that were syndicated is measured by their national syndication ratings.

November issues of Nielsen Media Research's Report on Syndicated Programs [ROSP] were consulted to determine which prime time programs were syndicated after they left the network. Whether or not a program was syndicated is represented by the variable YESSYND, which has a value of 1 if it appeared in a November ROSP, or 0 if it did not appear.

Syndicated ratings were also acquired from Nielsen Media Research, utilizing their November ROSP from the years 1971-1990.<sup>4</sup> Nielsen produces an Average Audience percentage (AA%) figure for syndicated programs as well, which is directly comparable to the ratings figure reported for network prime time programs. Therefore, this figure was chosen to represent the syndication performance of the programs in the study, and is represented by the dependent variable SYNDRAT.

#### Independent Variables

In this investigation, two groups of independent variables are hypothesized to affect the success of an off-network program. The first group of variables influencing the success or failure

of a particular program deals with the market structure of the television broadcasting industry.

While network-affiliated stations run some off-network programs, program distributors rely heavily on independent stations to purchase the rights to these programs. As the number of independent stations increased, particularly through the 1980s, the number of outlets for syndicated programs of all types increased. Therefore, it is reasonable to hypothesize that including a yearly measure of the number of independent stations in the analysis would indicate in part the size of the aftermarket for off-network programs. Independent variable INTV is the number of U.S. independent television stations in operation each year. This data comes from INTV--Association for Independent Television Stations (INTV, 1989).

Another marketplace variable that may be useful in explaining the syndication success of off-network programs is the annual revenue of the advertising industry, ADREV. The advertising industry invests in syndicated programming in two important ways: by purchasing advertising time on independent stations and cable networks (where off-network programs are most likely to air), and by purchasing minutes within bartered programs. Advertising revenue data comes from McCann-Erickson (1976, 1982, 1992), and is stated in standard 1982 dollars. The figures for other years were adjusted using the Consumer Price Index implicit price deflators published in the annual Economic Report of the President (1991).

In the 1980s, the marketplace for syndicated programs was also affected by the rising number of cable networks, since they have contributed to an increased demand for off-network programs. Independent variable CABLENET represents the number of national basic cable networks operating each year, as reported by the National Cable Television Association (1992). As mentioned above, cable penetration may also have an effect on the success of syndicated programs. CABLEPEN, the percentage of U.S. television households receiving basic cable television, also comes from a publication of the National Cable Television Association (1992).

Because each program entering the syndication marketplace competes with other new entries, a variable designed to measure competition was created. COMPRAT is the average syndication rating received by off-network programs of the same genre during the year previous to the first year the program became available. (The genre information comes from the four category system described below; the numbers and ratings come from the data found in this data set.)

The second group of variables influencing the success of an off-network program reflects characteristics inherent in the programs themselves. As discussed above, researchers investigating questions about television programming frequently divide programs into genre categories. Brooks and Marsh's (1992) classifications were used as a starting point for a program categorization scheme. All programs were put into one of their 35 categories. To produce a more parsimonious coding scheme, all

program categories were collapsed into four: comedy, drama, non-fiction, and variety. (The Appendix illustrates how the 35 categories were collapsed into the four remaining groups.) These categories are reflected in four dummy variables, entitled COMEDY, DRAMA, NONFICT, and VARIETY. Since the comedy format is the most prevalent, it will serve as the reference category and fall into the constant in the regression analysis.

I also constructed independent variables to represent the length of the program. Variables LENGTH30, LENGTH60, and LENGTHLON will represent 30-minute, 60-minute, and longer-than-60-minute programs, respectively. Since 30-minute programs are most prevalent, this category will serve as the reference category, and fall into the constant in the regression analysis. The length of each program was taken from Brooks & Marsh (1992).

Conventional programming wisdom posits that the ratings a program achieves during its network run will be linked to its success in syndication. Ratings for the programs during their network runs were acquired from Nielsen Media Research. The rating figure utilized was the year-end average rating, reported by Nielsen in year-end reports and bi-weekly "Pocketpieces." This figure, referred to by Nielsen as the "Average Audience %" or "AA%", represents the average rating the program achieved during a season.<sup>5</sup> Each program's year-end rating for each year it appeared on network television was averaged to get a cumulative average rating. This is the rating that appears for the program under the variable name AVGNETRT. NETRTYR1 is the

rating the program achieved during its first year on network television.

Given the emphasis placed by programmers on the number of episodes a property has available, the number of episodes is also included as an independent variable, coded EPISODES. Episode data was culled from two sources. For approximately 95 percent of the programs, episode data was obtained from the "Series" volume of the 1990 edition of the Television Programming Source Book. For all other programs, episode data was found in the lists of programs available for syndication appearing annually in Variety.

The production cost of network programs is hypothesized to influence syndication success. Since the actual cost of production per episode is proprietary information, annual per-episode license fees were used as a proxy for production costs. The source for the data in this variable is Variety, which annually publishes the license fees each network pays to the producers of its prime time programs. Typically, there is a difference between the license fee paid by the network and the actual production cost of a program. A separate analysis, conducted with deficit data from Channels magazine ("Returning," 1986; "Charting," 1987; "Deficits," 1988; "At what cost?" 1989; "Prime time's," 1990), showed a very close relationship between license fees and production costs, as illustrated in Table 1. The closeness of the relationship between the two measures gave me more confidence in using license fee data as a proxy for true production cost data in this study.



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Table 1 about here

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The license fee data appear in the analysis as independent variables LFEEHFHR and LFEEFRYR. LFEEHFHR refers to the average license fee the program received over its entire network history. This figure is standardized over all programs to represent the amount paid per half-hour.<sup>6</sup> LFEEFRYR represents the standardized license fee the program received during its first year on the network. Both figures appear in constant 1982 dollars, utilizing the CPI implicit price deflators published in the Economic Report of the President (1991, p. 290).

To allow for exogenous trends in the relationships and data over time, time variables were created. The first, TIME, represents each year in the sample period, such that 1971 equals 1, 1972 equals 2, and so on. As discussed earlier, most syndicated programs seem to have a limited life in syndication. A second time-related variable, YRSINSYN, represents the length of time in years each program appears in syndication. This variable is calculated from from Nielsen's ROSPs. The first year a program appears in the ROSP is coded 0, the second year it appears is coded 1, and so on.

Finally, some programs were syndicated during their network run (i.e., a distributor syndicated the program before it completed first-run production on the network). The variable ONNETSYN was created to account for any effect of simultaneous network production. ONNETSYN is a dummy variable, coded 1 if the program was syndicated during its network run, 0 otherwise.

These data points were coded by comparing the schedules found in Brooks and Marsh (1992) to the Nielsen ROSP data.

For the purposes of this analysis, two types of regression models are most appropriate. I use one model to investigate factors affecting the likelihood of syndication for an off-network program; the other model is used examines factors influencing syndicated program ratings.

#### What Factors Contribute to the Syndication of a Prime-time Network Program?

This analysis investigates the syndication of prime-time network programs over a twenty-one year time span. Though the observations in this analysis come close to a census of all possible network prime-time programs, many programs could not be included in this analysis due to missing data on one or more data points, or other problems as specified above.

#### Problems with Multicollinearity

Before the results of these analyses can be presented, I must first address a difficulty which presented itself early on in the data analysis. Several independent variables, namely those that represent market characteristics, were highly collinear with one another. I diagnosed this problem by regressing each independent variable on all of the others, as recommended by Hanushek and Jackson (1977). These regressions yielded R-squared terms well above .95, indicating a high level of multicollinearity in the data.<sup>7</sup> For this analysis, the time series nature of the data is the source of the multicollinearity. Each of the "offending" variables--the number of independent

television stations, the level of cable penetration, the amount of advertising revenue, and the time variables--was measured and included in the data on a yearly basis. The strength of the multicollinearity was somewhat surprising, however.

Econometricians recommend several remedies to the problem of multicollinearity.<sup>8</sup> Given the nature of these particular analyses, and the nature of the collinearities, I decided that the best course of action was to eliminate the independent variables measuring cable penetration, advertising revenue, and the number of independent television stations in operation from the analysis. Since each of these variables seemed to be so highly related to the variables measuring time, the time variables will serve as a stand-in for the market-level data.

Admittedly, the time variables serve as inadequate stand-ins for the marketplace variables. Hypotheses advanced above cannot be investigated, since these variables were assumed to have unique, independent influences on the dependent variables. Future analyses may reveal a way to include measures of these market characteristics that are not so highly collinear that they cause problems with hypothesis testing.

#### Description of Programs in LOGIT/PROBIT Analysis

Dramas make up the largest proportion of programs under investigation, 252 out of 507, or 49.7 per cent. Comedies are 200 of the shows under study, and non-fiction and variety make up the remainder of the data set, at 18 and 37 programs per category, respectively.

Table 2 about here

Even given the discrepancy between the raw numbers of programs, virtually the same number of dramas and comedies were syndicated in the off-network market, illustrating that comedies, in general, have a higher chance of being syndicated. A very low percentage of non-fiction and variety programs entered syndication, figures which seem to support the conventional wisdom that these genres of programs do not do well in the off-network market.<sup>9</sup>

Table 3 about here

A LOGIT/PROBIT Model Predicting Whether or Not a Program Gets Syndicated

As detailed above, theory and conventional wisdom predict that certain factors play an important role in whether or not a program gets sold in the off-network market. Each of these factors has been included in a LOGIT and PROBIT analysis.

In the first model, investigating the likelihood of syndication, the dependent variable is a dichotomous (or "dummy") variable reflecting whether or not a program is syndicated. Ordinary Least Squares (OLS) regression is inappropriate for analyses with dichotomous dependent variables.<sup>10</sup> In this instance, a non-linear model seems much more likely to accurately reflect the reality represented by the data. For my purposes, LOGIT and PROBIT statistical techniques will be used to estimate

the coefficients for the likelihood of syndication model. These probability models have many attractive features. Problems with probabilities lying outside of the 0-1 range do not occur, and the relationships between probabilities and independent variables are not required to be linear (Gujarati, 1988, p. 480). Results of both LOGIT and PROBIT regressions will be reported.<sup>11</sup>

Table 4 shows a tabular representation of the LOGIT and PROBIT regressions described above.

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Table 4 about here

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The results of both the LOGIT and PROBIT regression analyses are reported in Table 5 below.

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Table 5 about here

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The LOGIT and PROBIT coefficients are not much different from one another, except in terms of magnitude (LOGIT coefficients generally are larger than PROBIT coefficients by a magnitude of 1.8 [Aldrich & Nelson, 1984]).

The LOGIT/PROBIT coefficients can be interpreted in terms of sign and relative magnitude; however, one must be careful when interpreting the magnitudes, since these figures do not directly represent "a unit increase (decrease)" in the dependent variable. Instead, the coefficient values for each variable add or subtract from the probability of the dependent variable (in this instance, YESSYND--the likelihood of a program airing in off-network syndication) equalling 1.

It is important to note that the intercept, listed first, represents the reference category for two groups of dummy variables, genre and length. Therefore, the intercept coefficient represents comedies that are 30-minutes long. At first, this highly significant, negative coefficient is somewhat puzzling. By looking at the raw numbers, we see that the comedy as the genre with the best odds of being syndicated. However, no genre has a better than fifty percent chance of being syndicated. All of the genre variables--DRAMA, NONFICT, and VARIETY--have significant, negative coefficients.

The coefficients for the length variables--LNGTH60 and LNGTHLON--seem puzzling as well. Though conventional wisdom suggests that longer programs should not be as likely to be syndicated, both of the length variables produce positive, significant coefficients. Since the LNGTHLON coefficient represents only three observations, one of which was successfully syndicated, the positive result can be discounted as spurious. Understanding the positive coefficient for the variable representing programs of 60 minutes in length presents some difficulties, given the interaction term of COMEDY60. This term separates out the different influences of genre and length; the negative coefficient indicates a negative influence on the probability of programs of this type being syndicated. Given the state of theory in this area, the LNGTH60 coefficient's positive sign must remain unexplained.

The only variable whose coefficient does not approach significance, LFEEHFHR, also has a negative sign. Economic

theory leads the researcher to the conclusion that a program's license fee, which earlier was proven to have a close relationship to the actual budget of the show, should positively influence the chances of a program in the off-network market. However, this analysis lends no support to this hypothesis.

The number of episodes, EPISODE, and the average rating a program achieved during its network run, AVGNETRT, both have positive and highly significant influences on a program's potential for syndication. Programs with a high number of episodes and high average network ratings have a higher likelihood of appearing in off-network syndication.

The variable representing time in this regression, TIME, approaches significance, and is positive in sign. The positive sign indicates that programs available for syndication in later years have a better chance of being syndicated than those which came available in the earlier years of the analysis.

Unfortunately, I cannot separate out the causes of this advantage, because variables for growth in independent television stations, cable television, and advertising revenue were removed from the analysis due to the multicollinearity problem. The TIME coefficient does lend some weak support to the notion that off-network programs have a better chance of syndication when the number of outlets available to distributors of these programs increases.

Next, let us consider a measure of "goodness-of-fit" for these models. As Hagle & Mitchell (1992) point out, a consensus has not yet been reached on one statistical method for measuring

the goodness-of-fit of a particular LOGIT or PROBIT equation.<sup>12</sup> Commonly, authors use a table of actual versus predicted outcomes to assess the worth of a LOGIT/PROBIT model. Computer-generated probabilities for each program are recoded, such that any probability less than .50 is coded as a 0, and probabilities greater than or equal to .50 are transformed to a 1. After such a transformation, one can compare the predictions to the actual results. Such comparison tables are provided below for both the LOGIT and PROBIT regressions.

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Table 6 about here

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Table 7 about here

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Comparing the two tables shows once again how similar LOGIT and PROBIT results are. Only five programs were predicted differently by the two regressions; each one achieved close to a 91 "percent predicted correctly" rate. This figure must not be confused with an R-squared term, the coefficient of multiple determination in an OLS regression. The "% predicted correctly" term merely indicates what percentage of the outcomes of the total sample was predicted correctly by the model. It should be compared to 67.65%, which is the percentage of the total sample falling into the modal category, 0 (not syndicated). If we had a list of programs before us, and no other information, we would be right 67.65% of the time if we simply guessed that each program was not syndicated. With the help of the models, we can predict



outcomes more accurately: Our predictions would be correct 90.93% of the time with the LOGIT model, and 90.73% of the time with the PROBIT model.

The descriptive statistics for the observations in the LOGIT/PROBIT analyses show some interesting points.

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Table 8 about here

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Looking at the means for the two categories of programs (programs that were syndicated and those that were not), we see that the AVGNETRT for programs that were syndicated is much higher than that for the non-syndicated shows. The disparity between the two groups is most marked when looking at the EPISODE variable; programs that were syndicated had a mean number of almost 109 episodes available, while the programs that were not syndicated had a much lower mean of about 23 episodes available. The license fee variable LFEEHFHR does show a difference in the means for the two groups, and this difference is in the anticipated direction--programs that were syndicated received a higher mean license fee from the networks than programs that were not syndicated. However, the difference between the groups is not statistically significant, as noted in the above discussion of the coefficients in each equation.

By looking at the correlation matrix for these variables, we can identify more interesting relationships.

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Table 9 about here

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Most of the correlations present among these variables fall well below the .80 level, which would indicate problems with multicollinearity. The correlations which are somewhat high include the correlation between EPISODE and AVGNETRT, LNGTH60 and DRAMA, and TIME and LFEEHFHR. The EPISODE/AVGNETRT correlation makes sense: Programs that do well in their ratings have a better chance of staying on the network long enough to garner high numbers of episodes, and shows with low ratings will likely be cancelled early in their runs. Given that 93% of all dramas are 60 minutes in length, the high correlation between the DRAMA and LNGTH60 categories also seems reasonable. The time-dependent nature of both TIME and LFEEHFHR may help explain the correlation between these two variables. Even though the LFEEHFHR data was deflated to constant 1982 dollars, an upward, time-related trend exists in the fees programs receive. Therefore, any time-related variable will have some correlation to the license fee variable.

In summary, the LOGIT/PROBIT models predict with 90% accuracy which programs will be syndicated, given the data on the variables relevant to program genre, length, network rating, number of episodes, license fees, and year available for syndication.

Factors Contributing to the Syndication Ratings of a Prime-time  
Network Program: An OLS Regression

Once a program reaches off-network syndication, can we predict how well it will do in terms of syndication ratings? An OLS regression model was developed to explore the influence of

characteristics of programs and the program marketplace on a program's success once it is syndicated.

For investigating success in terms of the ratings a program achieves in syndication, OLS regression is appropriate. The second statistical model contains a continuous dependent variable (rating in syndication), and continuous and dummy independent variables. I utilized only those programs which were successfully syndicated in estimating this regression equation.

The particular time period under investigation has many interesting characteristics. Important changes in the way programs were syndicated occurred during the past two decades. In order to account for the passage of time, the OLS regression will take the form of a time series analysis. Each program will have multiple representations in the data set, one for each year it appears in syndication. All relevant independent variables will then be coded for that particular year. To account for the effect of time, the TIME variable described above will be utilized. Also, to investigate the hypothesized relationship between the amount of time a program has been syndicated and its syndication rating, YRSINSYN will be included in the regression.

What follows is a tabular representation of the OLS regression described above.

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Table 10 about here

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Eight network programs that did reach syndication were eliminated from this part of the analysis. The N's within three

categories were so small (one program in LENGTHLON, three programs in NONFICT, and four programs in VARIETY) that they were removed. The OLS regression was conducted with and without these eight programs, and only slight differences were noted between the two analyses, as shown in the comparison table below.

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Table 11 about here

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Analysing the results from the regression without the eight programs, the intercept, again representing the reference categories of comedy and 30-minute program, has a large, highly significant, positive coefficient. Comparing this coefficient with the negative one for the DRAMA variable, we see that comedy programs achieve higher ratings than dramas. The variable LENGTH60 also has a negative, significant coefficient, which is expected given the high percentage of hour-long drama programs.

The variables representing ratings figures, COMPRAT and NETRTYR1, have some interesting coefficients. The COMPRAT coefficient, while only approaching significance, is negative, as expected: the higher the previous year's average syndication rating of programs of the same genre, the lower a new program's rating will be. The NETRTYR1 coefficient's negative sign contradicts the hypothesized relationship; programs with higher first-year ratings were hypothesized to have higher syndication ratings than those with lower first-year ratings.

The highly significant, positive coefficient for EPISODES supports the hypotheses advanced above, that a high number of episodes not only influences whether or not a program gets

syndicated, but also helps a program to achieve higher ratings. ONNETSYN, another fairly large, highly significant, positive coefficient, supports the contention that programs syndicated during their network runs have significantly higher ratings than those syndicated after their run ends.

The TIME variable has a highly significant, negative coefficient, which means that programs syndicated in the later years of the analysis achieve lower syndication ratings than those that appear earlier in this time period. The growth in alternative media outlets (such as cable television and VCR penetration and usage) has contributed to the decrease of ratings for network programs (Webster & Lichty, 1991); the same factors could explain the negative coefficient of TIME in this analysis.

This regression includes two variables representing the number of years programs air in syndication, to test the hypothesis that the ratings programs earn vary over the syndication life of the show. YRSINSYN yielded a highly significant, negative coefficient, supporting the hypothesis that the longer a program airs in syndication, the less popular it becomes. The YRSSQ term was included in the analysis to test for a curvilinear relationship between YRSINSYN and SYNDRAT; the curvilinearity does exist, and can be expressed as a downward-sloping, convex curve.

Just as in the LOGIT/PROBIT analyses, the OLS regression produced an insignificant coefficient for the variable representing program license fees, LFEEFRYR. This result is puzzling, due to the theoretical support for higher budgeted

programs garnering higher ratings. Again, this may be an artifact of the coding method; in this case, the program's first year license fee was used to approximate the program's budget.

To ascertain goodness-of-fit with this model, we can look at the adjusted R-squared figure, .683. This term indicates that over 68 percent of the variance in a program's syndication rating can be explained by the variables within the equation. The highly significant F-statistic of 220.54 refutes the null hypothesis that all of the coefficients of the variables in the equation are equal to zero.

Studying the descriptive statistics of the OLS model also reveals some interesting relationships among the data.

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Table 12 about here

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Table 13 about here

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The descriptive statistics for EPISODES, found in Table 12, show the mean number of episodes for successfully syndicated dramas and comedies to be 132, which works out to five network seasons of episodes. This figure exceeds the four year network run conventionally accepted as necessary for syndication.

Looking at the correlation matrix for the OLS regression, we see only three potentially high correlations. The .85 correlation between LENGTH60 and DRAMA is not unexpected, given what we observed in the LOGIT/PROBIT regression. The -.66 correlation between TIME and COMPRAT also makes sense, because,

again, both variables are time-dependent. The negative correlation is reasonable because, as time increases within the data, the magnitude of the COMPRAT numbers decreases. Finally, the YRSINSYN and YRRSQ variables' correlation exceeds .93, which makes sense because one is the square of the other.

In summary, this OLS regression uses variables representing factors inherent in the programs (budget, genre, length, number of episodes, network rating, and network status when syndicated), and market factors (ratings of competing programs, number of years a program airs in syndication, time) to predict the rating a program will achieve in syndication.

#### CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

One aspect of the television industry that has received little scholarly scrutiny served as the subject of this study. As mentioned in the introduction, and supported by the literature review, scholars in communication rarely recognize the importance of an aftermarket for prime-time, network programs in their analyses of television in the United States.

This study examined factors hypothesized to play a role in the success of off-network, syndicated programs. Success was defined in two ways: reaching off-network status, and attaining high ratings in syndication. Marketplace and program-specific criteria were considered as explanatory variables; however, the high multicollinearity of the marketplace data hindered investigation of the impact of many market-related factors.

Much of the conventional wisdom regarding television programming was supported by this analysis. Programs entering

the off-network market generally have highly successful network runs, both in terms of ratings and the number of years the program lasts before cancellation or calling it quits. These programs enter the market with large numbers of episodes, equivalent on average to a five year network run. Comedies were more likely than dramas, and half-hour programs more likely than hour-long programs to be syndicated. Through the 1970s and 1980s, it became easier for a program to get syndicated, due to the proliferation of outlets.

Interestingly, though syndication became easier, distributors now find it more and more difficult for a program to achieve high syndication ratings, also due to the increase in media outlets competing for viewers. As the length of time a program airs in syndication increases, the ratings the program achieves decline; programs do seem to have a limited shelf-life. When a program can provide a large number of episodes, it receives higher syndication ratings. This probably stems from the higher overall popularity of the program, and the lower number of repeats viewers will be subjected to. Comedies garner higher ratings than dramas, and half-hour programs do better than hour-longs.

This investigation has produced results that offer empirical support for many received ideas about what makes syndicated programs successful. This study, however, merely scratches the surface of an area rich with possibilities for future research.

An important limitation of this study, which points to a potentially fruitful area of research, is that some structural



factors which predict viewing of programs were left out of the analysis (Cooper, 1993). Factors such as lead-ins, lead-outs, competition on other stations, and time periods of airing could not be included in this national-level study. Much could be learned from examining these factors as predictors of watching syndicated television.

No researcher has done an in-depth investigation of the nuts-and-bolts operation of the syndication market since the 1970s. Since this time, numerous technological advances have changed the face of the television industry. New media outlets proliferated; new distribution methods now exist, such as satellite delivery of programs to stations, and pay-per-view cable for delivery to the home.

Investigators have not examined the deficit financing of network television programs, which bears directly on syndication due to most producers' reliance on syndication revenues to realize positive make profits on programs. International syndication of television programs now provides distributors and producers with new revenue streams. In the case of Baywatch, a network program cancelled after one season returned to the air in first-run syndication when it proved popular in Europe. Few media scholars have considered the financial underpinnings of the television industry in any detail.

First-run dramatic syndication has recently made a stunning comeback. Over the past ten years, game shows like Wheel of Fortune and Jeopardy!, and talk shows like Donahue and Oprah Winfrey were the mainstays of first-run syndication. These

programs, which are cheap to produce, garnered high ratings and made millions for their distributors. Long ago the centerpiece of the syndication industry, first-run, fictional programs again appear at the top of the Nielsen Cassandra ratings. The success of Star Trek: The Next Generation has spurred many producers to enter first-run syndication, where the hour-long drama is making a dramatic return (Freeman, 1992; McClellan, 1993).

Cable television's basic and premium channels now serve not only as distribution outlets for off-network syndication, but as the source of so-called "off-cable" programs, which aired first-run on cable networks.

Several authors have considered the policy implications of the syndication market, but not recently, even though the Federal Communications Commission only one year ago dramatically changed the Financial Interest and Syndication Rules (Mermigas, 1992). Also, rumors persist that some commissioners wish to make changes in the prime time access rule.<sup>13</sup> If these policy-makers have better information on how programs successfully enter syndication, better policies may result.

All of these developments in areas both tangentially and directly related to the syndication market make the lack of scholarship in this area a truly remarkable gap in the literature. Obviously, much needs to be done before communication scholars can truly say that they understand the television industry.

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Table 1

Correlation Between Measures of Production Costs

Year	Correlation between license fee and total production cost per episode
1986	.942
1987	.988
1988	.908
1989	.911
1990	.908

Table 2

Genres and Lengths of Programs in LOGIT/PROBIT Analysis

Genre	30 min.	60 min.	>60 min.	Total
Comedy	180	20	0	200
Drama	14	235	3	252
Nonfiction	4	14	0	18
Variety	5	32	0	37
Total	203	301	3	507

Table 3

Percentage of Programs Syndicated by Genre

Genre	N	# Syndicated	% Syndicated
Comedy	200	78	.39
Drama	252	79	.3135
Nonfiction	18	3	.1667
Variety	37	4	.1081
Total	507	164	.3235

Table 4

Variables Included in LOGIT and PROBIT Regression Equations

Dependent Variable	Independent Variables	Type of Variable
YESSYND (dummy variable)	AVGNETRT CABLENET CABLEPEN LFEEHFHR EPISODES DRAMA LENGTH60 LNGTHLON NONFICT VARIETY	continuous continuous continuous continuous continuous dummy dummy dummy dummy dummy



Table 5

Comparison of LOGIT and PROBIT Results, Dependent variable =YESSYND

Variable	LOGIT		PROBIT	
	Coefficient	2-Tail Sig.	Coefficient	2-Tail Sig.
(intercept)	- 7.0206408	.000	-3.9438261	.000
AVGNETRT	0.2222357	.001	0.1261307	.000
COMEDY60	- 3.8499379	.019	-2.0450979	.009
DRAMA	- 3.8109781	.008	-1.9915092	.003
EPISODE	0.0569026	.000	0.0271590	.000
LFEEHFHR	- 0.0031723	.339	-0.0013890	.397
LNGTH60	4.3214113	.002	2.2419907	.001
LNGTHLON	4.0769943	.046	2.2033166	.041
NONFICT	- 4.8570961	.007	-2.3720017	.004
VARIETY	- 9.9414452	.000	-4.4624279	.000
TIME	0.1031393	.021	0.0611481	.005
% Pred. Corr. LOGIT: .9093		% Pred. Corr. PROBIT: .9073		

Table 6

Comparison of LOGIT Model's Predictions to Program's Appearance  
in Syndication by Genre<sup>a</sup>

Genre	Predicted correctly		Predicted incorrectly	
	Predict 1 Actual 1	Predict 0 Actual 0	Predict 1 Actual 0	Predict 0 Actual 1
Comedy	66	119	3	12
Drama	60	169	4	19
Nonfiction	2	14	1	1
Variety	1	30	3	3
Total	129	332	11	35

Note. % predicted correctly = .9093.

<sup>a</sup>"Predict 1" means that the model predicted the program would be syndicated (a probability rating of .50 or above), while "Predict 0" means that the model predicted the program would not be syndicated (a probability rating of .49 or below). "Actual 1" means the program was syndicated, "Actual 0" means it was not.

Table 7

Comparison of PROBIT Model's Predictions to Program's Appearance  
in Syndication by Genre<sup>a</sup>

Genre	Predicted correctly		Predicted incorrectly	
	Predict 1 Actual 1	Predict 0 Actual 0	Predict 1 Actual 0	Predict 0 Actual 1
Comedy	65	120	2	13
Drama	58	170	3	21
Nonfiction	2	14	1	1
Variety	1	30	3	3
Total	126	334	9	38

Note. % predicted correctly = .9073.

<sup>a</sup>"Predict 1" means that the model predicted the program would be syndicated (a probability rating of .50 or above), while "Predict 0" means that the model predicted the program would not be syndicated (a probability rating of .49 or below). "Actual 1" means the program was syndicated, "Actual 0" means it was not.

Table 8

Descriptive Statistics for LOGIT/PROBIT Analyses

Variable <sup>a</sup>	Mean D.V.=1 <sup>b</sup>	Mean D.V.=0	Mean All	Stand. Dev.	Max.	Min.
AVGNETRT	16.99	12.93	14.24	3.78	29.6	4.6
EPISODE	108.98	23.25	50.98	56.79	402.0	4.0
LFEEHFHR	292.82	266.23	274.83	72.13	802.9	120.8

<sup>a</sup>Descriptive statistics only provided for variables which are interval level.

<sup>b</sup>The column "Mean D.V.=1" denotes the means for those variables for the programs which were syndicated. "Mean D.V.=0" gives the means for the programs which were not syndicated.

Table 9

Correlation Matrix for Variables in LOGIT/PROBIT Analysis

	A V G N E T R T	C O M E D Y 6 0	D R A M A	E P I S O D E	L F E E H F H R	L N G T H 6 0	L N G T H L O N	N O N F I C T	V A R I E T Y	T I M E
AVGNETRT	1									
COMEDY60	-.05	1								
DRAMA	-.15	-.21	1							
EPISODE	.61	-.04	-.06	1						
LFEEHFHR	-.09	.07	.09	.18	1					
LNGTH60	-.14	.17	.67	-.10	-.10	1				
LNGTHLON	.05	-.02	.08	-.01	-.12	-.09	1			
NONFICT	-.15	-.04	-.19	-.05	-.10	.07	-.01	1		
VARIETY	.15	-.06	-.27	.03	-.14	.15	-.02	-.05	1	
TIME	-.32	-.10	.01	-.04	.60	.01	-.10	.12	-.21	1

Table 10

Variables Included in OLS Regression Equation.

Dependent Variable	Independent Variables	Type of Variable
SYNDRAT (continuous variable)	ADREV	continuous
	CABLENET	continuous
	CABLEPEN	continuous
	COMPRAT	continuous
	DRAMA	dummy
	EPISODES	continuous
	INTV	continuous
	LFEEFRYR	continuous
	LENGTH60	dummy
	LNGTHLON	dummy
	NETRTYR1	continuous
	NONFICT	dummy
	ONNETSYN	dummy
	TIME	continuous
	VARIETY	dummy
	YRSINSYN	continuous

Table 11

OLS Regression Results, Dependent Variable is SYNDRAT

Variable	Regression with eight programs		Regression without eight programs	
	Coefficient	2-Tail Sig.	Coefficient	2-Tail Sig.
(intercept)	5.7388132	.000	5.9329262	.000
COMPRAT	-0.0705309	.032	-0.0603113	.077
DRAMA	-0.6242436	.015	-0.5305322	.046
EPISODES	0.0065983	.000	0.0064935	.000
LENGTH60	-0.6525670	.010	-0.6756699	.010
LFEEFRYR	0.0014317	.218	-0.0004030	.751
NETRTY1	-0.0530321	.003	-0.0478551	.011
NONFICT	-0.9942192	.088	NA	NA
ONNETSYN	1.3342759	.000	1.3280715	.000
TIME	-0.2140015	.000	-0.1989188	.000
VARIETY	-0.7913881	.070	NA	NA
YRSINSYN	-0.3238990	.000	-0.3306622	.000
YRSSQ	0.0155857	.000	0.0149394	.000
AR(1) <sup>a</sup>	0.6538062	.000	0.6533916	.000
R-squared	0.6866		R-squared	0.6861
Adj. R-squared	0.6831		Adj. R-squared	0.6830
F-statistic	195.4799		F-Statistic	220.5418
Durbin-Watson	1.9726		Durbin-Watson	1.9865

<sup>a</sup>The AR(1) variable represents the correction for autocorrelation derived by using the Cochrane-Orcutt procedure.

Table 12

Descriptive Statistics for OLS Analysis

Variable <sup>a</sup>	Mean	Stand. Dev.	Max.	Min.
COMPRAT	1.8233	1.5104	13.3	0.0
EPISODES	132.9234	69.1348	402.0	15.0
LFEEFRYR	254.5865	57.6263	641.8	160.2
NETRTYR1	19.0667	4.3052	33.7	7.2

<sup>a</sup>Descriptive statistics only provided for variables which are interval level.



Table 13

Correlation Matrix for OLS Analysis

	C O M P R A T	D R A M A	E P I S O D E S	L E N G T H 6 0	L F E E F R Y R	N E T R T Y R 1	O N N E T S Y N	T I M E	Y R S I N S Y N	Y R S S Q
COMPRAT	1									
DRAMA	-.36	1								
EPISODES	.07	-.06	1							
LENGTH60	-.35	.85	-.09	1						
LFEEFRYR	-.17	.19	-.10	.20	1					
NETRTYR1	.12	-.28	.40	-.25	-.32	1				
ONNETSYN	-.13	-.12	.16	-.06	-.02	-.09	1			
TIME	-.66	.01	-.06	.06	.19	-.08	.28	1		
YRSINSYN	-.22	-.08	.28	-.13	-.16	.18	-.15	.38	1	
YRSSQ	-.17	-.09	.26	-.13	-.14	.16	-.16	.34	.93	1

## Appendix

Genre Classification Scheme

## COMEDY includes:

Comedy  
 Comedy/Adventure  
 Comedy Anthology  
 Comedy/Drama  
 Police Comedy  
 Situation Comedy

## DRAMA includes:

Adventure  
 Adventure/Drama  
 Adventure/Foreign Intrigue  
 Courtroom/Legal Drama  
 Detective Drama  
 Drama  
 Dramatic Anthology  
 Fantasy Adventure  
 Fantasy Anthology  
 Fantasy Drama  
 Medical Drama  
 Military Drama  
 Musical Drama  
 Newspaper Drama  
 Occult Anthology  
 Police Drama  
 Political Drama  
 School Drama  
 Science Fiction  
 Suspense Anthology  
 War Drama  
 Western

## NONFICTION includes:

Animals/Wildlife/Nature  
 Audience Participation  
 Documentary  
 Informational  
 Humor/Quiz  
 Magazine  
 News  
 Public Service  
 Sports

## VARIETY includes:

Comedy variety  
 Music variety  
 Variety

## Footnotes

1 It is impossible in this study to make statements regarding the influence of PTAR for two reasons. First, the data set only represents programs airing after the rule went into effect. Secondly, this study only analyzes the success of off-network programs; the market for both first-run and off-network properties felt the effects of PTAR.

2 Owen (1978) questioned the validity of this practice, claiming that these diversity measures ignore structural aspects of the television viewing environment.

3 A complete list of all programs appearing in (and rejected from) the data set can be seen in the author's master's thesis ("author", 1993).

4 Nielsen personnel recommended the November report as the one most likely to give an accurate picture of the syndication programming on television for each season.

5 An AA% figure was retrieved for each program for every year it appeared on the network. This means that if a program appeared on network television previous to 1970, the figure for each year's appearance was also retrieved.

6 An example may help to simplify the explanation of the coding of this variable. Say the license fee for a 1982 hour-long program is \$1,000,000. The LFEEHFHR figure would be \$500,000 (because this particular program's fee is already expressed in 1982 dollars). The total amount paid for the one-hour program would equal LFEEHFHR \* 2.

7 Here are the results of these regressions:

Dependent variable	R-squared statistic
ADREV	.972
CABLEPEN	.987
INTV	.952
TIME	.988

8 For an in-depth discussion of some remedies to multicollinearity, refer to Kennedy (1992) and Gujarati (1988).

9 This trend may be changing, with the success of certain "reality" based (non-fiction) programs in syndication (such as "Unsolved Mysteries" on Lifetime cable network and "Cops" in off-network syndication).

10 For a more detailed discussion regarding the pitfalls of OLS estimation with dichotomous dependent variables, refer to Aldrich and Nelson (1984).

11 It is common in econometric literature to report both LOGIT and PROBIT regression results. The choice of which one to use is generally one of computational convenience; the most important difference between the two (outside of the actual method of computation) is the form of the sigmoid curve to which the data is fit. See Gujarati (1988) or Hanushek and Jackson (1977) for a more detailed description of the differences.

12 Hagle and Mitchell (1992) provide an excellent review of the typical "pseudo-R-squared" statistics authors use, and how they are computed.

13 However, with the change in commission make-up due to the new administration, it looks like the prime time access rule will not be reconsidered in the near future (Jessell, 1993).