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Recoupment on Subsidised Feature Films and Television Programs: The Canadian Experience

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Given the difficulty Canadian film and television producers have in competing against imported US products, Canada provides direct support for domestic production. But little is known about the project specific outcomes of such subsidies. The current study examines the performance of projects that are subsidised by Telefilm Canada, which is the main Canadian government agency responsible for promoting the development and production of Canadian feature films and television programs. It analyses both the overall project and the Telefilm specific recoupment achieved by a sample of Canadian motion pictures and television programs that have received TFC subsidy.

Introduction

Each feature film and television program is a unique product. With high costs and high risks involved, the mix of ingredients for financially successful movies and television programs is the Holy Grail of Hollywood, as well as the production industries in countries outside the United States (US). While some producers may place great reliance on their experience or intuition as to what is required to make a blockbuster movie or high rating TV show, most empirical studies of the issue have focused on the characteristics of products which have been completed and released to the market. They have been largely confined to Hollywood movies and have generally used publicly available box office data as their measure of financial success.

Garrison (1971) examined 62 Columbia Pictures Inc. movies released between 1966 and 1968, and found significant positive effects for the director, film length and some content variables. Simonet (1977) found the most important participant track record variable was the director's prior box office record. However, the result was reversed when a single film, namely *The Ten Commandments* was excluded, suggesting larger samples are necessary if one is to obtain reliable results from exploratory research. In his study of movies released during the 1970s, Litman (1983) found box office success was significantly related to size of the production budget, critics' ratings, use of a major distributor, Academy Awards and Christmas release. However, a subsequent study of 1980s movies (Litman and Kohl, 1989) revealed no significant relationships for either Christmas release, Academy Awards or size of production budget, but did find that the sequels to previously successful movies and the use of superstar actors and famous directors were related to high box office returns.

From their study of the effects of Academy Awards over a 30-year period up to and including the 1970s, Smith and Smith (1986) concluded, consistent with Litman and Kohl, that the characteristics of successful films had changed over the years. Prag and Casavant (1994) found movie 'quality' (estimated using critics' ratings and marketing expenditures) are important determinants of a motion picture's financial success, but there were also strong associations between marketing expenditures, production costs and presence of stars.

The current study adopts a somewhat different approach to previous work in the area. It extends the empirical examination to television programs, and is concerned with film and television projects that are subsidised by government, usually via a statutory agency. Whereas most of the studies mentioned above have been conducted without access to inside information and have generally used publicly available box office data as a measure of financial success, this study is based on a rich set of data made available to the authors by Telefilm Canada (hereafter 'TFC') which is the main Canadian government agency charged with the responsibility of promoting the development and production in Canada of feature films and television programs. Accordingly, this study focuses on the financial returns earned by Canadian motion pictures and television programs that have received TFC subsidy. It has relevance, however, to other countries with film and TV production industries trying to compete against US imported products.

In common with many other countries, Canada has difficulty competing against feature films and television programs produced in the US. There are a number of reasons for the US dominance of this market. Because of the 'public good' nature of films and television programs, they can be sold by US producers into foreign markets for a price which is not only below their US cost of production, but also below (sometimes substantially) the cost of production of the 'equivalent' product in the foreign market: this makes it difficult for producers in other countries to compete effectively on *price*. As well, the very large US domestic market allows the optimal (profit-maximising) production budgets for films and television programs to be greater than those for non-US productions: this makes it difficult for other countries to compete on *quality* (Hoskins et al, 1997, 42).

The competitive advantage enjoyed by the US provides a case for intervention by governments in Canada and other countries to support the domestic production of feature films and television programs. Such intervention has the potential to generate employment for those engaged in the development and production of films and television programs, but also to provide indirect benefits to the general public in those countries in terms of the opportunity of being exposed to indigenous films and television programming. In the absence of government intervention there will be a form of *market failure* with the private sector producing less than an optimal quantity of domestically produced film and television output. Government intervention in film and television production can take several forms including tax incentives, direct investment and international co-production treaties. In Canada, since the mid-1980s the emphasis has switched from tax incentives to direct investment and support for international co-production. This study is mainly concerned with direct investment in film and television projects by TFC.

Direct financial support for the production of Canadian feature films has been provided by the Canadian national government since 1968 when it established the Canadian Film Development Corporation (CFDC). In 1983 the CFDC was renamed Telefilm Canada and its mandate was expanded to include the financing of Canadian television programming. The level of funding for TFC was increased in 1986 with the setting up of the Feature Film Fund, and again in 1988 when the Feature Film Distribution Fund was established. Funding to TFC reached a peak in 1989-90 with a parliamentary appropriation of $146 million. Since then TFC funding has been reduced in line with cutbacks across many areas of Canadian government expenditures. There was a 25 per cent reduction in TFC's parliamentary appropriation between 1989-90 and 1995-96 (Mandate Review Committee, 1996, p.213), and the appropriation for 1996-97 was $92.4 million. The production of Canadian audio-visual works was also supported by the National Film Board (NFB), which specialises in documentary and animation productions. Funding to the NFB is considerably less than that for TFC, and around 23 per cent of its funding was spent on feature films, made-for-television dramas, and educational and short films (Mandate Review Committee, 1996, p.165). A number of Canadian provincial governments also provided direct funding for film and television production, although on a relatively small scale during the period under examination.

The primary mandate of TFC is to provide funding to independently produced feature films and television programs on a project-by-project basis. TFC financial support can take the form of direct equity investment, loans and loan guarantees, advances and lines of credit. In the 30 years up to 1998, TFC contributed to the production of approximately 600 feature films and 1350 television programs and series (Department of Canadian Heritage). *Ex ante* TFC funding provides downside risk protection, as it reduces the size of the loss for other investors associated with any level of revenue generation below cost; while *ex post* it provides a subsidy for projects that fail to recoup all investment costs. If government agency investments are made partially or wholly subordinate to that of other investors, the latter may recoup all of their investment while the agency bears the losses (see further below) (Hoskins et al, 1997, 95-96).

TFC will contribute to the cost of a Canadian television program only if a Canadian broadcaster has made a formal commitment to broadcast it and to pay a share (generally between 20-30 per cent of the production budget) for the broadcast *licence fee*. TFC provided in this period up to 49 per cent of the production cost in the form of high risk investment, the percentage varying depending on the extent to which the key creative roles are occupied by Canadians as determined by a 10-point assessment system. From 1989-90 to 1994-95 direct TFC investment covered, on average, 31 per cent of the production budget for supported English-language television programs, and 35 per cent for French-language programs. For film producers to qualify for TFC support through the Feature Film Fund, they must have a 'minimum guarantee' commitment from a Canadian film distributor which ensures that the supported film will be shown in theatres within a year of production, and will return a minimum specified amount of revenue to the producer (Mandate Review Committee, 1996, p.201).

Very little empirical work has been undertaken to date in any country regarding recoupment from subsidised film and television projects. The only study on this issue known to the authors is an unpublished MBA thesis by Chalifour (1992) who carried out a multiple linear regression study in relation to (mainly television) projects supported by the TFC through its Canadian Broadcast Program Development Fund between 1983-84 and 1990-91. He confined his analysis to recoupment received by TFC itself on its investments, and did not examine overall recoupment on TFC supported projects. Chalifour's findings highlighted the attractiveness of investments in children's programs, and the importance to TFC of the terms of its contracts with producers receiving TFC funding.

The current study is largely of an exploratory nature. Its main purposes are to identify characteristics of successful and unsuccessful film and television program projects, and to estimate their relationship with revenues generated by these projects. More specifically, it seeks to determine which of the product characteristics that were known to TFC at the time it made its production funding decisions had a significant effect on the financial returns generated by supported projects, both in aggregate and to TFC itself.

Notwithstanding differences in their economic characteristics and regulatory arrangements, we have decided to consider together the recoupment on feature film and television program projects. The reasons for grouping the two products together are as follows: both are widely considered to serve the objective of preserving Canadian national culture; for a significant portion of the relevant period, film and TV products were financed from the same TFC fund; TFC allocation policy towards film and television has changed over time according to its perception of the effectiveness of distributing the same pool of resources; there is no clear delineation between movies and TV programs in the sense that feature films are generally screened on television at some time, and a financial commitment by broadcasters is often a prerequisite to feature films being produced; finally, some television programs are released on video, while some feature films are not intended for cinema release (made-for-television, made-for-video) and generate all of their revenues from broadcasters.

This study is divided into two separate but related parts. The first is concerned with the *overall* recoupment on projects supported by TFC, that is, the aggregate recoupment received by all investors (including TFC) in feature film and television program projects which were supported by TFC during the relevant period. The second part takes a somewhat narrower focus and examines that part of total returns on TFC supported projects recouped by TFC itself.

Overall recoupment

In common with most of the studies mentioned earlier on the financial performance of feature films, we were unable in this study to determine the *rate of return* on individual or aggregate investment in TFC supported projects. The main difficulty here is the lack of available data on the cost of the relevant projects. The concept of *recoupment* as used in this study, however, is superior to total box-office receipts data used in most previous studies, as it comprises *revenues generated less distribution costs*, and thus more closely reflects the net returns from films and television projects. One limitation is the fact that in some instances Telefilm Canada may not yet have recouped on a project, leading us to estimate zero overall recoupment, while some money has actually been recouped but not enough to generate a return to Telefilm.

Methodology

The study is based on an analysis of TFC supported feature films and television program projects contained in the TFC database, which was made available to the authors. The accuracy and comprehensiveness of the database was significantly improved for the purposes of this study to rectify a number of existing deficiencies, and thus we were able to work with data of a much-improved quality to that available to Chalifour for his 1992 study. The database contained quantitative and qualitative information on all projects funded, and was supplemented where necessary by reference to actual contract agreements to determine fully the financial structure of projects.

The TFC database contained details on over 600 projects approved by TFC during the 25-year period from 1969 (the year after its establishment) to 1993. Because the task of validating the data was highly resource intensive, a random sample of 251 projects was chosen for our analysis. Detailed data for those 251 projects were then extracted, validated and analysed. For each of the sample projects we have made use of the following sources of information for extraction and validation of data: TFC's investment agreement; the deal letter outlining the financial structure and list of revenues guaranteed at the time of signing; any addenda and other modifications to the contract; and, where available, the audited final cost reports.

Selected characteristics of the data relating to the 251 sample projects are set out in Table 1. A very large proportion of our sample relates to projects for which funding application was made to TFC in the latter years of the study period: over half (50.6 per cent) of applications were made in 1986-90, and over a quarter (26.3 per cent) in 1991-93. In accordance with TFC policy, two-thirds (66.1 per cent) of projects were in English and one-third (32.7 per cent) in French. Drama accounted for the overwhelming proportion of projects (75.3 per cent), with children's (10.8 per cent) being the next largest category. Just on half (50.6 per cent) the projects in our sample were feature films, and just under one-third (30.7 per cent) were television series. Regarding place of production, the largest number of projects (43.4 per cent) was produced from Montreal, the second largest number (36.3 per cent) from Toronto, with the balance (20.3 per cent) dispersed over a number of other Canadian cities.

Film and television products often generate income from several 'windows' for a number of years after their release. A feature film may earn revenues from cinemas upon theatrical release and then, in succession, from video, pay-per-view television, cable, and conventional television. Similarly, a television program may earn income from its repeat broadcast some years following its initial showing and, in some cases, from video release. This posed a problem for this study where projects had been recently completed and released, but had not earned all of their potential revenue within the period of the study (that is, by 1993). To obtain a single, comparable value to represent the amount of recoupment for each project, if projects had seven years or more of recoupment, we used the sum of the first seven years data (only). For projects which had been released for less than seven years, we predicted their seven year recoupment total by means of a regression constructed on the basis of the pattern of recoupment for all projects with less than seven years data. For example, if the observed recoupment data related only to the first, second and third years, we used those values to estimate the likely recoupment for the fourth, fifth, sixth and seventh years. This technique allowed us to maximise the use of the data available to us and avoid underestimation of recoupment for projects with probable future earnings.

Table 1: Selected Characteristics of Sample

	Number	**Percentage**
Year funding application made to Telefilm		
1969-75	16	6.4
1976-80	19	7.6
1981-85	23	9.2
1986-90	127	50.6
1991-93	66	26.3
Total	**251**	
Language of projects		
English	166	66.1
French	82	32.7
English/French	3	1.2
	251	
Project category		
Children's	27	10.8
Documentary	16	6.4
Drama	189	75.3
Variety	19	7.6
	251	
Project format		
Feature films	127	50.6
Medium films	10	4.0
Mini-series	15	6.0
One-off projects	10	4.0
Television series	77	30.7
Anthologies	2	0.8
Short films	10	4.0
	251	
City of production		
Montreal	109	43.4
Toronto	91	36.3
Other	51	20.3
	251	

Note: Percentages may not add to 100.0 because of rounding.

In this analysis we are determining which project characteristics have a statistically significant effect on the proportion of 'revenue to budget' for the relevant projects. We thus attempt to derive the best available estimates of the financial success of the projects as a whole. We have constructed measures of the total financial success of a project, which reflect the total amount of funds received through all types of sales of the finished product. This involved adding to each project's estimated final TFC recoupment, the licence revenue and advances (whether included in the original project budget or excluded) to capture the aggregate amount of project revenue from all sources.

We used a multiple regression model where we considered both linear and non-linear relationships with the dependent variable, namely, overall project recoupment. We also applied a natural log transformation to the dependent variable to satisfy the normality and constant variance requirement of regression models. A stepwise analysis was conducted to show the *major* steps in the model building.

Results

What we are examining here is the proportion of total budget that is recovered by all investors (including TFC) in TFC supported feature film and television projects. In this exploratory study we gathered and tested a wide a range of variables in an attempt to explain overall project recoupment. Appendix 1 sets out the whole range of project variables tested for relationship with overall recoupment. These included genre and language of productions, number of creative personnel involved, time taken to complete, as well as all 2-way interactions between category, language and project type (film or television).

Our analysis revealed ten variable s to be statistically significant in terms of linear, log or proportional relationships. The model comprising these ten variables accounts for approximately 48 per cent of the variability in the overall recoupment measure. The 10 statistically significant variables are set out in Table 2 together with their estimated coefficients.

We now set out and briefly comment on each the 10 variables found to be statistically significant.

1. Canadian pre-sales (SALCNPRP)

- Effect: $e^{2.157310*x} = 8.6478^x$ where x = total Canadian pre-sales as a proportion of total budget. In general, an increase in the Canadian pre-sales will substantially increase the return on a project's total production budget. For example, a project with pre-sales covering the total budget would recoup 8.6 times as much as a comparable project with no pre-sales.
- Comment: The amount of pre-sales is a good indication of the likely demand and financial success of products.

2. Time (TIME)

- Effect: $e^{-0.066279*x} = 0.9359^x$ such that x = [date of last disbursement] - [1988]. For example, if 1991 was the year of last disbursement, x = 3. The finding reveals that later year projects (with funding applications to TFC nearer to 1993) tended to have lower total receipts as a proportion of budget.
- Comment: A higher proportion of projects were supported in the late 1980s and early 1990s - with the greater number of projects funded, TFC may have been less concerned with financial criteria for funding.

3. Foreign pre-sales (SALFNPRP)

- Effect: $e^{1.993471*x} = 7.3410^x$ where x = total foreign pre-sales as a proportion of total budget. This means that an increase in foreign pre-sales will tend to increase a project's overall recoupment as proportion of budget.
- Comment: This is similar to and consistent with (1).

4. Dollar per hour (DOLHRLN)

- Effect: $e^{-0.200760*\ln(x)} = x^{-0.2008}$ such that x = total budget divided by the number of hours of the completed product. In general, therefore, a higher cost per hour for a project will result in a lower proportional return on a project's total production budget.
- Comment: This result is consistent with the findings of Wyatt (1994) in his study of Hollywood movies where his high cost variable had a large negative effect on box-office revenues. In their study of Canadian feature films, Finn et al (1996, pp.157-58) concluded that an additional dollar of production spending generated, on average, 72 cents of North American box-office rentals.

5. Toronto (TNTO)

- Effect: $e^{0.275062*x} = 1.3166$ such that x = 1 if the production company is based in Toronto. This result indicates that, for any project, the proportion of recoupment will be, on average, 32 per cent higher if the production company is based in Toronto.

- Comment: This suggests that Canadian produced films and television programs tend to result in considerably higher returns if produced from Toronto rather than elsewhere in Canada.

6. Children's films (FLMCHILD)

- Effect: $e^{0.750644*x} = 2.1184$ such that x = 1 if the project is a children's film. Holding all other variables constant, therefore, children's films have, on average, a 212 per cent higher return than other projects.
- Comment: Canadian children's films tend to be significantly more commercially successful than other categories of product. This suggests that Canada has a comparative advantage in the production of children's films.

7. TFC (TFC)

- Effect: $e^{0.008613*x} = 1.0087^x$ such that x = amount of TFC funding (in $100,000s). That is, a larger contribution by TFC will result in a higher overall recoupment on the project as proportion of budget.
- Comment: This finding seems to reflect a Telefilm Canada policy of making large proportional investments only in the case of projects with strong commercial potential.

8. NFB (NFB)

- Effect: $e^{0.052465*x} = 1.0539^x$ such that x = amount of NFB funding (in $100,000s). This indicates that a larger contribution by the NFB will result in a higher overall return.
- Comment: This result is consistent with (9) for TFC recoupment. This indicates superior financial performance of NFB funded projects, perhaps resulting from production expertise, access to facilities etc., which the NFB brings to projects it supports.

9. Loan (LOANPRP)

- Effect: $e^{-2.474805*x} = 0.0842^x$ such that x = the proportion of the total budget which is comprised of loans. For example, a fully loan-financed project (were it possible) would recoup only 8.4 per cent as much as a comparable project with no loan financing. In general, therefore, the higher the proportion of the budget that is made up of loans, the lower the proportion of the project's total budget that will be recovered.
- Comment: This suggests that less commercially promising products require a higher proportion of loan money. Conversely, good project proposals may attract pre-sales and not require significant loan funds.

10. Deferrals (DEFRELN)

- Effect: $e^{-0.137690*\ln(x)} = x^{-0.1377}$ such that x = amount of deferrals (in $100,000s). This means that, holding all other variables constant, a larger amount of deferrals will produce a lower recovery of a project's production budget.
- Comment: This result is similar to (9). Deferrals have prior claim to recoupment and may indicate an inflation of budget.

Table 2: Estimates of Overall Recoupment Regression

Variable	Definition	Coefficient estimate	Standard error	Beta
SALCNPRP	Canadian pre-sales as proportion of budget	2.157	0.256	0.509
TIME	year-1988	-0.066	0.008	-0.463
SALFNPRP	foreign pre-sales	1.993	0.277	0.381
DOLHRLN	ln($100,000s per hour)	-0.201	0.046	-0.258
TNTO	Toronto production co. (dummy)	0.275	0.087	0.166
FLMCHILD	children's films	0.751	0.246	0.144
TFC	TFC (in $100,000s commitment)	0.009	0.004	0.132
NFB	NFB (in $100,000s commitment)	0.052	0.023	0.113

LOANPRP	loans as a proportion of budget	-2.475	1.135	-0.104
DEFERLN	ln(deferrals)	-0.138	0.080	-0.084

Statistics:

R squared	0.477
Adj. R sq.	0.455
Std. error	0.589

Summary: Factors contributing to higher *overall returns (in descending order):*
- *Canadian pre-sales (1)*
- *foreign pre-sales (3)*
- *produced in Toronto (5)*
- *children's films (6)*
- *larger contribution by TFC(7)*
- *investment by NFB (8)*

Contributors to lower *returns:*
- *projects just prior to 1988 (2)*
- *higher cost per hour (4)*
- *proportion of loans in budget (9)*
- *proportion of deferrals in budget (10).*

We move now from the examination of overall recoupment on TFC financed projects to consideration of recoupment by TFC itself on those same projects.

Recoupment by Telefim Canada

Government film and television financing agencies often have multiple objectives, some of which are potentially conflicting. In particular, they are typically charged with both cultural and commercial goals. They aim to foster the production of nationally distinctive films and television programs that are of high quality and artistic merit. Concurrently, they seek to be commercially successfully in terms of recouping production costs and making a profit on their investments. Recouped revenues enable agencies to 'recycle' scarce investment funds. The amount of recoupment is also an indirect measure of audience appeal for funded projects and thus provides helpful marketing information to agencies.

The 'conflicting functions' role of TFC is epitomised by the 1996 report of the Mandate Review Committee (p.261) which advised TFC to optimise recoupment wherever possible - but only to the extent consistent with its cultural goals. The report points out that even though TFC had responded to the substantial reduction in the level of its parliamentary appropriation by seeking a higher rate of recoupment on its investments, it should be able to raise its level of recoupment to 10-15 per cent of its total investment in film and television projects. In the past, the rate of return seems to have been less than 10 per cent (Chalifour, p.29; Finn et al, 1996, p.152). Of the 251 projects we examined, 77 (30.7 per cent) failed to recoup any money at all for TFC.

One reason for the relatively low recoupment by TFC on television projects is that the Canadian licence fee payment is normally used to complete production financing, and the proceeds from this first, and perhaps only, major sale (to a television service) are often not sufficient to provide recoupment to TFC or any other investor. TFC's ability to recover its investments in television projects has been further reduced by the conditions of the capital cost allowance (CCA) taxation incentive under which independent producers can attract private investment only if TFC agrees to those private investors being repaid on a preferred basis to itself. Even if a Canadian television program is sold to as many as 40 countries it will typically earn a relatively modest amount compared to its costs of production. Export potential is particularly limited for French language programs (Mandate Review Committee, p.201).

Methodology

In this analysis we are determining which of the product characteristics that are known to Telefilm at the time it makes its production funding decision have a significant effect on the amount of return on TFC's investment.

For this exercise we used the censored data model. The data set includes observations where Telefilm recoupment is zero. The censored data analysis recognizes these observations exist but with unknown values lower than the minimum.

Results

Our analysis revealed that 12 variables were statistically significant and accounted for 55 per cent of the variability in the dependent variable, namely, the proportion of investment recouped by TFC. These 12 variables are set out in Table 3 together with the respective estimated coefficients. All variables considered for TFC recoupment are listed in Appendix 2.

The following variables were those found to be statistically significant in explaining TFC recoupment.

1. Time (TIME)

- Effect: $e^{-0.0596*x} = 0.9418^x$ such that x = [date of last disbursement] - [1988]. More recent projects, therefore, tend to have lower returns on TFC investment.
- Comment: This result is similar to and consistent with result (2) for overall recoupment.

Table 3: Estimates of Telefilm Canada Recoupment Regression

Variable	Definition	Coefficient estimate	Standard error	Beta
TIME	year-1988	-0.060	0.005	-1.081
MTRL	Montreal production co. (dummy)	0.457	0.070	0.742
ENGLISH	English language production	0.341	0.071	0.521
DOLHRLN	ln($100,000s per hour)	-0.154	0.025	-0.515
TNTO	Toronto production co. (dummy)	0.302	0.069	0.471
DEFERLN	ln(deferrals)	-0.167	0.047	-0.267
CPRIVPRP	Canadian private investors	-0.339	0.127	-0.243
EXLICTOT	total excluded licence	0.010	0.003	0.239
NFB	NFB ($100,000s)	0.034	0.015	0.194
PROVPRP	Provincial government funding	-0.556	0.272	-0.181
FLMCHILD	children's film	0.351	0.150	0.171
CPVBDPRP	Canadian private broadcaster	-0.444	0.253	-0.159

2. Montreal (MTRL)

- Effect: $e^{0.45659834*x} = 1.5787$ such that x = 1 if the production is based in Montreal. For production companies based in Montreal, TFC's proportion of recoupment is 58 per cent higher than from production companies based elsewhere in Canada (other than Toronto).
- Comment: Projects undertaken outside Montreal and Toronto are, on average, less financially successful than those produced by production companies based in Montreal.

3. English Language (ENGLISH)

- Effect: $e^{0.34095195*x} = 1.4063$ such that x = 1 if the project is English language. In other words, English language projects have a 41 per cent higher return on the proportion of investment by TFC.

- Comment: Telefilm recoups a higher proportion of its funds invested in English language projects. Note that not all of the projects produced by companies based in Montreal are shot in French; many are shot in English.

4. Dollar per hour (DOLHRLN)

- Effect: $e^{-0.1537*\ln(x)} = x^{-0.1537}$ such that x = total budget divided by number of hours in the project. In general, therefore, a higher cost per hour will result in lower TFC returns.
- Comment: This is similar to and consistent with result (4) in overall recoupment.

5. Toronto (TNTO)

- Effect: $e^{0.30207879*x} = 1.3527$ such that x = 1 if the production company is based in Toronto. This means that for production companies based in Toronto, TFC's proportion of recoupment is 35 per cent higher than from production companies based elsewhere in Canada (other than Montreal).
- Comment: Together with (2) above, this suggests Telefilm recoups much more of its investment in projects when they are based in the major production centres of Montreal and Toronto. Projects based elsewhere in Canada return very little of Telefilm's money.

6. Deferrals (DEFERLN)

- Effect: $e^{-0.1674*\ln(x)} = x^{-0.1674}$ such that x = amounts of deferrals (in $100,000s). That is, holding all other variables constant, a larger amount of deferrals will produce a lower yield of TFC investment.
- Comment: This is consistent with result (10) in first part. Deferrals have prior claim to revenue generated.

7. Canadian Private Investors (CPRIVPRP)

- Effect: $e^{-0.3391533*x} = 0.7124^x$ such that x = proportion of total budget contributed by Canadian private investors. This means that as the percentage of the budget from Canadian private investors increases, TFC receives a lower return on its investment.
- Comment: Presumably, the private investors have prior claim to recoupment, which therefore reduces TFC's return.

8. Excluded Licences (EXLICTOT)

- Effect: $e^{0.00981696*x} = 1.0099^x$ such that x = amount of excluded licences (in $100,000s). 'Excluded licences' refer to licence fee revenue contracted prior to project commitment by TFC that is not included in the financial structure required to meet the budgeted cost of production. This finding means that, on average, as the amount of excluded licence fees increases, so does the rate of return on TFC's investment.
- Comment: Note the relatively small coefficient. The finding indicates that the higher the level of excluded licence fee revenue the greater the amount of money available to flow back to all investors, including TFC.

9. NFB (NFB)

- Effect: $e^{0.03447195*x} = 1.0351^x$ such that x = amount from NFB (in $100,000s). This means that a larger investment by the NFB will result in a higher return on investment for TFC.
- Comment: Result consistent with (8) for overall recoupment.

10. Provincial Funding (PROVPRP)

- Effect: $e^{-0.555719*x} = 0.5737^x$ such that x = proportion of the total budget coming from provincial funding. That is, the larger the provincial government contribution, the lower the returns to TFC on its investment.
- Comment: This may reflect the predominance of industrial motives by provincial funding bodies, and/or that provincial governments may be a 'last resort' funding source for some projects with poor commercial potential.

11. Children's Films (FLMCHILD)

- Effect: $e^{0.35063472*x} = 1.4200$ such that x = 1 if the project is a children's film. Holding all other variables constant, therefore, children's films have a 42 per cent higher return on TFC's investment than other project categories.
- Comment: Result (6) for overall recoupment showed a consistent result.

12. Canadian Private Broadcasters (CPVBDPRP)

- Effect: $e^{-0.4444914*x} = 0.6412^x$ such that x = proportion of the total budget coming from Canadian private broadcasters. That is, on average, as funding by Canadian private broadcasters increases, the proportion of investment recovered by TFC tends to decrease.
- Comment: Similar result to (7) above for Canadian private investors (non-broadcasters). The advances by private broadcasters for licence fees are considered to be part of their 'investment' in projects. This result may reflect TFC's taking a subservient position in terms of the various tiers of

recoupment, and the relatively low level of revenues, apart from licence fees, earned by Canadian TV programs.

Summary: Factors contributing to higher TFC recoupment (in descending order):

- *produced in Montreal (2)*
- *English language (3)*
- *produced in Toronto (5)*
- *amount of excluded licences (8)*
- *investment by NFB (9)*
- *children's films (11)*

Contributors to lower TFC recoupment:

- *projects just prior to 1988 (1)*
- *higher cost per hour (4)*
- *deferrals (6)*
- *proportion of budget from private investors(7)*
- *funding from provincial governments (10)*
- *funding from private broadcasters (12)*

Summary and conclusions

Comparing the determinants of overall recoupment to those of TFC recoupment shows that the two most important drivers of overall recoupment (Canadian and foreign pre-sales) do not enhance TFC recoupment. Such presales are usually built into the financial structure and are not available to TFC. "Excluded licences" do enhance TFC recoupment. On the other hand, project characteristics leading to stronger market performance (produced in Toronto, involving the NFB or a children's film) enhance recoupment at both levels. Telefilm Canada recoups more on projects in which it has made larger investments but such projects do not show higher overall recoupment. Although Telefilm Canada exacts a higher level of recoupment on English language, Toronto and Montreal-based productions, only Toronto based productions enhance overall recoupment.

On the negative side projects produced just prior to 1988, those with higher deferrals and those with a higher cost per hour had lower recoupment both overall and by Telefilm Canada. A higher proportion of loans in the budget caused lower recoupment overall but not for Telefilm Canada because repayment of Telefilm financing has an early claim on project revenues. Larger financial commitment by private broadcasters and private investors does not affect overall recoupment but does reduce Telefilm Canada recoupment because of the tiered recoupment arrangements.

In future work we will be analysing the determinants of project success when success is measured in terms of US box office returns and non-financial measures – audience appeal, award performance in the festival circuit

Appendix 1

Variables considered for overall recoupment

Project characteristics

- category: drama; children's; documentary; variety
- language: English; French; English-French
- type: film; television
- all two-way interactions between category, language and film/TV
- format: feature films; medium films; short films; mini-series; series; one-offs; anthologies
- production company based in Montreal

- number of disbursements in the production process
- number of splits in the production process
- number of TFC funds (other than film and TV funds) in the production process
- number of producers, screenwriters, directors, actors; producer, screenwriter, director, actor etc.
- length of time to produce project
- length of the project (includes all episodes of a multiple episode production)
- pre-TFC/post-TFC era production (TFC officially established in 1983)
- quadratic effect of the TIME variable

Financial structure variables

- total project budget
- participation from each of Canada, US, UK, France, other countries, North America and foreign countries (non-Canadian)
- total funds excluded; licence fees excluded; licence fees included; advances included; advances excluded; total advances; total licences
- total pre-sales of project (sum of above for film and TV)
- equity; grants; tax credits (CCA)
- TFC funding; provincial government funding; other government funding
- participation from: private broadcasters; public broadcasters; distributors; private investors
- US pay TV revenues; Canadian pay TV revenues; total pay TV revenues;

Appendix 2

Variables considered for Telefilm Canada recoupment

Project characteristics

- category: drama; children's; documentary; variety
- type: film; television
- all two-way interactions between category, language and film/TV
- format: feature films; medium films; short films; mini-series; series; one-offs; anthologies (also medium and short films combined to make a separate classification)
- number of disbursements in the production process
- number of splits in the production process
- number of TFC funds (other than film and TV funds) in the production process
- number of producers, screenwriters, directors, actors; producer, screenwriter, director, actor etc.
- time needed to produce entire project
- length of the entire project (includes all episodes of a multiple episode production)
- pre-TFC/post-TFC era production (TFC officially established in 1983)
- quadratic effect of the TIME variable

Financial structure variables

- total project budget
- participation from each of Canada, US, UK, France, other countries, North America and foreign countries (non-Canadian)
- total funds excluded; licence fees included; advances included; advances excluded; total advances; total licence fees
- total pre-sales; Canadian pre-sales; foreign pre-sales
- equity; loans; grants

- TFC funding; other government funding; tax credits (CCA)
- participation from: private broadcasters; public broadcasters; production companies; distributors; private investors
- US pay TV revenues; Canadian pay TV revenues; total pay TV revenues

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References

Chalifour, M., (1992, April). *Telefilm Canada: Canadian broadcast program development fund: A linear regression model for predicting rates of recoupment*, Business Research Project submitted in partial fulfilment for the degree of Master of Business Administration, Concordia University, Montreal.

Department of Canadian Heritage, (1998, February). *A review of Canadian feature film policy: Discussion paper.* Ottawa.

Finn, A., Hoskins, C. & McFadyen, S. (1996). Telefilm Canada investment in feature films: Empirical foundations for public policy. *Canadian Public Policy*, 22(2), 151-61.

Garrison, L.C. (1971). *Decision processes in motion picture production: A study of uncertainty*, unpublished PhD dissertation, Stanford University.

Hoskins, C., McFadyen, S. & Finn, A. (1997). *Global television and film: An introduction to the economics of the business*, Clarendon Press, Oxford.

Litman, B.R., (1983), 'Predicting success of theatrical movies: An empirical study', *Journal of Popular Culture*, 16, 159-75.

Litman, B.R. & Kohl, L.S., (1989, Fall). Predicting financial success of motion pictures: The '80s experience. *Journal of Media Economics*, 2, 35-50.

Mandate Review Committee, (1996). *Making our voices heard: Canadian broadcasting and film for the 21st century*. Department of Canadian Heritage.

Prag, J. & Casavant, J. (1994). An empirical study of the determinants of revenue and marketing expenditures in the motion picture industry. *Journal of Cultural Economics*, 18, 217-35.

Simonet, T. (1977). *Regression analysis of prior experiences of key production personnel as predictors of revenues from high-gross motion pictures in American release*. Doctoral Dissertation, Temple University, reprinted by Arno Press, 1980.

Smith, S.P. & Smith, V.K. (1986). Successful movies: A preliminary empirical analysis. *Applied Economics*, 18(5), 501-07.

Wyatt, J. (1994). *High concept: Movies and marketing in Hollywood*. Austin, TX: University of Texas Press.