ASSESSING MULTI-DIMENSIONAL PERFORMANCE IN THE MOVIE INDUSTRY: AN ANALYSIS OF CONSTRUCT VALIDITY

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ABSTRACT

This study evaluates the construct validity of measures of the economic and artistic performance of movie industry, using data on Hollywood animation industry. We discuss the content validity of existing measures in the light of current concepts of economic and artistic performance. Empirical results show that box office measures display convergent validity in assessing economic performance, while critics' ratings, number of Oscars, and the number of awards and nominations display convergent validity in assessing artistic performance. Moreover, the results show that Economic Performance discriminates from Artistic Performance, thus supporting discriminant validity.
The implications for research and managerial practice are discussed.

Key words
Performance measurement, Movie industry, Construct validity, Cultural Industries, Animation.

INTRODUCTION

Performance measurement is a key element of organizations, since it allows them to evaluate the results of their choices and strategies and, ultimately, their efficiency and productivity. But how do we measure performance? This apparently simple question in recent years became more and more complex: the increasing number of stakeholders and the multifaceted nature of markets led to a proliferation of different criteria to measure and evaluate corporate performance. This created a situation in which considerations about performance depend more on the selected measure rather than a general, unified view of what a successful output is (Lunnan & Hogland, 2008). This raises considerable challenges for the measurement of corporate performance, as well as linking performance to explanatory factors, and generates the need to find a way to encompass all the different criteria and multiple dimensions of performance.
This issue is even more urgent for cultural industries, which have in the tension between different dimensions of corporate performance one of their distinctive characteristics: cultural projects, in fact, are by definition characterized by the presence of a dichotomy between art and business (Benhamou, 2000; Carù & Salvemini, 2011). The artistic value of a cultural product must in fact be balanced against its entertainment value, since the latter determines how much support, both economic and emotional, the cultural product receives (Lampel,

Lant, & Shamsie, 2000). This combination of art and entertainment is a source of continuing tension in cultural industries, in the attempt to balance artistic integrity and market needs. This problem is common to every symbolic production, but it is particularly urgent to efficient, market-oriented companies in the movie industry. Unlike other cultural forms, movies represent a "profit-oriented cultural genre" (Baumann, 2001: 421), which is defined on the continuum between economics and aesthetics. Movie production houses have thus to confront this conundrum, whether to let art dominate their decision-making process, with mass entertainment as secondary, or to use culture to pursue the goal of entertainment (Lampel, Lant, & Shamsie, 2000).
Because of this dichotomy, performance in the cultural industries in general, and in the movie industry in particular, cannot be measured using a single standard encompassing both dimensions (Delmestri, Montanari, & Usai, 2005). Moreover, academic research on film performance has grown dramatically over the past few years, and has assessed performance in many different ways (Hadida, 2009), implementing different criteria and focusing on different facets of economic and artistic performance. This generated a plethora of different operationalizations for both artistic and economic dimension, spanning from archival measures to subjective perceptions, awards and survey data, thus increasing the confusion and difficulties in measuring them.
Even if the multi-dimensional nature of film performance is widely recognized, the validity of the underlying measures is still questionable, and no attempt has been made to estimate their empirical validity. The objective of the present paper is to evaluate the construct validity of the measures used to assess the economic and artistic performance of a movie. This validity needs to be assessed for at least two reasons. First, there is a need to evaluate the soundness of inferences drawn from these two constructs and the characteristics of their relationship. The second reason is to help researchers and managers in selecting appropriate measures to evaluate them and identify their determinants. Construct validity can be defined as the correspondence between the conceptual definition of a variable (the construct) and the operational procedure adopted to measure it (Schwad, 1980). Assessing construct validity means to verify that the measures used to evaluate economic and artistic performance fully represent the domain of the two concepts, as well as to verify the degree of consistency of the measures, their degree of agreement or divergence in measuring the same construct, and their degree of correspondence against a standard variable (Bollen, 1989).
This paper begins by describing the characteristics of the movie industry, showing the existing contrast between economic and artistic dimension. Then, after presenting the concept of construct validity and its different aspects, we present our definitions of economic and artistic performance and we assess their content validity. Next, we assess the empirical aspects of construct validity using data on 162 Hollywood animated features produced between 1989 and 2012. The level of analysis is the movie, not the production company. Based on the discussion of our findings, we identify the measures that better describe the two constructs. Finally, in the concluding section we provide implications and insights for future research and managerial practices.

THE DOUBLE NATURE OF MOVIE PERFORMANCE

Economic and artistic dimension are equally important for the performance of film studios. The first refers to the results obtained by the studio under the managerial and financial point of view. The second is related to the ability of the company of creating products that are perceived as the best in quality by peers and experts. It is very important in the medium-long term, since it helps in building distinctive reputation and brand identity and, therefore, in preempting the consumer's perceptual space (Afuah 2009), i.e. the influence a studio has on consumers' preferences, which represents an important source of competitive advantage (Heugens et al. 2004). This illustration shows that the two dimensions are strictly interrelated and influencing each other, and are thus equally important in order to determine the value of a cultural product. Howecer, as Hirsch (2000) remarks, research on cultural industries still largely neglects to recognize the necessity of considering both dimensions in the evaluation of a project. This matter is further complicated by the fact that there is not agreement on how to measure these two constructs. Economic performance has been assessed through measures as diverse as revenues, profits, market share and theatrical run. On the other side, artistic performance has been assessed using the opinions of peers, experts, and audiences.
In order to gain a full understanding of movie performance, we believe not only that it is necessary to take into consideration both dimensions, but also that there is a need to assess which measures are accurately representing them. In other words, there is a need to assess the construct validity of the different measures, both under the qualitative and quantitative point of view.

Construct Validity

Construct validity represents 'the correspondence between a construct (conceptual definition of a variable) and the operational procedure to measure that construct' (Schwab, 1980, 5-6). It includes content validity, reliability, and convergent, discriminant and criterion-related validity of the measures of the construct. *Content validity* represents the qualitative side of validity, where the domain of a concept is defined and the validity of the measures is assessed by judging whether they fully represent that domain (Bollen, 1989). The domain of a concept is defined through its theoretical definition, which should reflect the meanings associated with the concept in prior research. *Reliability* is defined as the consistency of measurement, evaluated as the magnitude of the direct relations that all variables have on that measure (Bollen, 1989). *Convergent validity* represents the degree of agreement between the total number of attempts to measure the same construct. If two instruments are measuring the same construct, they should display a large common variance (Ariño, 2003). This dimension of construct validity is particularly relevant for those contexts, like the movie industry, where there is a proliferation of measures presumably assessing the same construct (Schwab, 1980). *Discriminant validity* represents the degree of differentiation between measures of distinct concepts (Bagozzi and Phillips, 1982). The underlying argument to this definition is that measures of different constructs should share little variance. Finally, *criterion-related validity* represents the degree to which a measure corresponds to a criterion variable (Bollen, 1989). In order to evaluate it, there is a need to identify a variable as the standard against which to compare the measure in analysis. Since for many measures it is not possible to identify a criterion, often it is not possible to evaluate criterion-related validity.

In the following sections, we will evaluate the content validity of existing measures of artistic and economic performance in the literature, by judging how far these measures reflect the profitability and artistic value of a movie.

Content Validity of Measures of Economic Performance

Movies are collective projects, that usually involve a large number of investors. This means that an appropriate measure of economic performance should be able to capture the degree to which a movie is able to reward the investments made by these different stakeholders. We thus define movie economic performance as the *capability of a movie to generate profits for the different stakeholders who invested in its production*. We will use this definition as the criterion against which to assess content validity.

Hadida (2009) provides a comprehensive review of the existing measures of movie performance. In particular, she classifies the economic measures under three dimensions, namely domestic theatrical performance, domestic ancillary performance, and international theatrical performance. The former comprehends the different measures of success in domestic movie theaters, including box office, budget, theatrical run, return on investment, market share, and other measures related to audiences. The second refers to the commercial returns of a movie in its other domestic distribution channels, including home video and television. Finally, international theatrical performance refers to the same measures of the first dimension, but comprehending also data from foreign countries.

Given our guiding definition of economic performance, the most appropriate measure among those implemented in the literature is the *Return on Investment (ROI)*, usually calculated as the ratio between box office revenues and production cost. This measure has an high content validity because it directly accounts for the capability of a movie to generate profits, and it is thus an appropriate measure of economic performance. *Box office* and *ancillary markets performance* measures are conceptually related to profitability, since they are one of its determinants and they are financial measures. Even if worldwide aggregate measures should be preferred, because they provide a more precise assessment of the income generated by the movie, domestic box office and ancillary revenues constitute a representative measure of commercial performance (Hadida 2009).

The *production budget* can be considered a valid measure of economic performance because it represents the denominator of the Return on Investment ratio, and it can thus influence the profitability of a movie. Even if it does not intuitively represent a movie's ability to make money, research (Simonton, 2004a) has shown that the production budget is positively correlated to box office success, showing their significance as predictors not only of profitability, but also of revenues.

While it is true that *length of the theatrical run* is usually dependent on box office performance, and it can thus be used as a proxy when data about revenues are not readily available, this measure has low content validity in measuring economic performance. Theatrical run is not in fact a reflection of the profitability of the movie, both because of its non-financial nature and because of the fact that it can be influenced by factors not related to profitability: for example, theatrical run can be influenced by distribution agreements, which bind exhibitors to keep showing the movie for a certain number of weeks, regardless of performance.

Finally, *Market share* – calculated as the percentage of the total revenues generated by the industry that is

directly imputable to each movie – is by definition dependent on the competition that the movie is facing, rather than on the profitability of the movie. A movie can generate very little or even no profits, and still have a large market share, if the competing movies obtain worse results. On the other side, an highly-profitable movie can have a medium or low market share because also its competitors registered high revenues. This measure does not display content validity, because it does not account for the profitability of the movie.
In summary, not all the existing measures of economic performance display content validity. Return on Investment display the highest content validity, followed by measures related to revenues in the primary and ancillary channels. Production budget displays content validity, even if does not intuitively measure the movie's ability to make money. Finally, theatrical run and market share do not display content validity, since they can be influenced by external factors such as distribution agreements and competition that are not directly related to movie profitability.

Content Validity of Measures of Artistic Performance

The artistic performance of a cultural product is by its nature difficult to define. The artistic quality of cultural products, in fact, is not an intrinsic property, but the consequence of a social judgment expressed by people operating in the same field (Csikszentmihalyi, 1999). Thus, artistic performance does not refer to the movie *absolute* quality, but to its *perceived* quality, expressed in terms of appreciation by peers, experts and other members of the field. We can thus define artistic performance as *the degree to which the movie is recognized to be artistically valuable by social actors operating in the movie industry*.
Critics' ratings and votes have been traditionally used as markers of movie quality (eg: Delmestri et al., 2005). Critics are among those social actors who are legitimized by the field to assess the quality of cultural content of a movie: research has shown that they often play an especially crucial role as gatekeepers (Hirsch, 1972) and mediators of the relationship between cultural products and audiences (Shrum, 1991). Thus, critics' ratings can be considered an appropriate measure of artistic performance. Research (Ginsburgh & Weyers, 1999; Ginsburgh, 2003) has considered also the *inclusion in recognized quality movie lists* (e.g: the US National Film Registry) as a market of artistic quality. Since the inclusion of a movie in such lists reflects its appreciation by the members of the field, it can be considered a conceptually valid measure of artistic performance. However, the validity is not very high because this measure limits the possibility of comparison across movies, since it is not able to rank the quality of the movies, but just to provide a binary categorization
Finally, artistic performance has also been assessed through the number of nominations and awards received by the movie at the most important festivals and awards ceremonies (eg: Ginsburgh 2003; Hadida 2004). In particular, large part of the existing research focused on *number of nominations and awards at the Oscars,* the most important awards for the Hollywood movie industry. This seems justified by the fact that the Oscars have been shown to be the best indicator of the movie's capability of receiving other awards, and of receiving high ratings in later movie guides (Simonton, 2004b). However, we believe that a composite measure considering a multiplicity of *awards and nominations received by different professional societies* would provide a more conceptually valid measure of artistic performance, since the assignment of the Oscars is driven more by commercial than quality considerations (Holbrook, 1999), and thus, taken alone, it is not a valid measure of artistic performance.
To summarize, the various measures of artistic performance exhibit different degrees of content validity. Evaluations from critics and peers, expressed in the form of ratings and different awards, display the highest content validity.

Empirical Validity of Economic and Artistic Performance

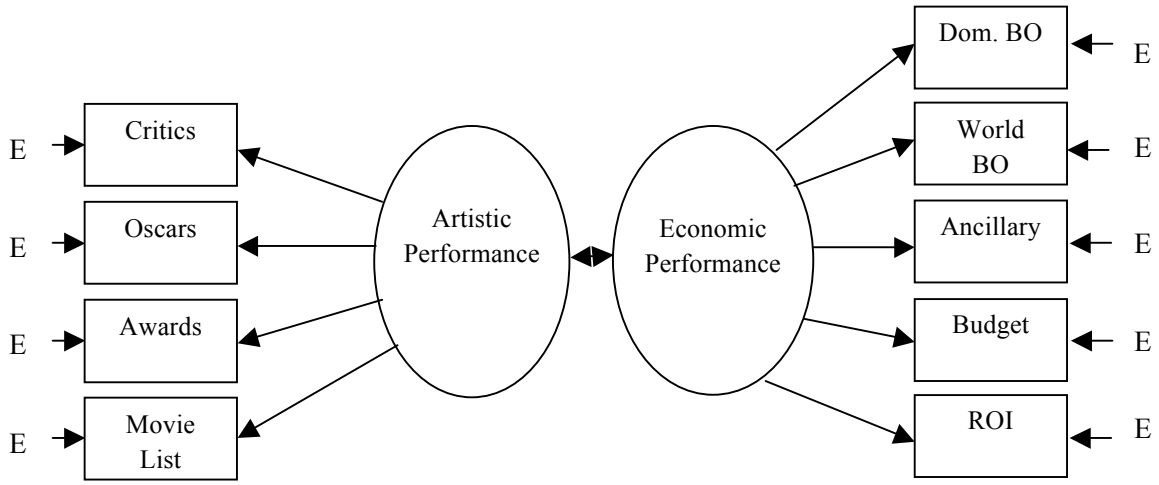
Whereas assessment of content validity relies on conceptual arguments, evaluation of the other aspects of construct validity has an empirical component (Ariño, 2003). For this purpose, and coherently with previous attempts to establish construct validity, we followed a structural approach. We thus specified a measurement model with two latent constructs (Artistic and Economic performance) and the different performance measures as observed parameters. We included in the model only those measures that we have shown to have content validity. We decided to allow artistic and economic performance to correlate freely: that is, the value of this correlation is a parameter to be estimated. The two dimensions are in fact interdependent (Caves, 2000): for example, some awards may capture as well economic performance (Rosman et al., 2010; Lincoln & Allen, 2011), while some awards, like Oscars, can influence the subsequent performance of a movie. It would thus not be appropriate to consider them separately.
The diagram in figure 1 represents the expected relationships. The convergent validity and discriminant validity of economic and artistic performance measures will be assessed on the ground of
this model. The assessment of criterion-related validity is not relevant for the present case, since there is no readily available model of movie economic and artistic performance from which to draw ex ante predictions

with which to compare existing measures. When a criterion is not available, criterion-related validity cannot be assessed (Bollen, 1989).

METHODS

Sample
Instead of adopting a cross-sector approach, this article follows recommendations by Voss and Voss (2000) and Rouse and Daellenbach (2002) to focus on a single industry. Hollywood movie industry was selected because of its profitability and its diffusion throughout the world. The decision to focus in particular on animated features was made because animation is a homogeneous industry, with standardized processes and comparable data and audiences. Performance can thus be confronted without any problem related to the genre of the movie, the target audience, or other potentially confounding factors.
For the purpose of the present analysis, we focused on the animated movies produced and released in the US in the 1989-2012 period. We identified the movies using the Internet Movie Database (IMDB), an online source already used in previous studies on the movie industry. To insure data quality, we cross-checked the information with the American Film Institute Website, as well with the information available on the websites of the production companies. Our search resulted in a dataset of 196 movies. Since our focus was on the validity of different measures, we decided to exclude from the analysis all those movies for which information on more than one measure was not available. After this selection, our final dataset included 161 movies. For each movie, we collected data concerning its economic performance and artistic merit, release date and production company.

FIGURE 1
Initial Measurement Model



Measures

Economic Performance Measures. We included in the analysis two measures related to box office revenues. The first, *domestic box office,* considers just the revenues generated within the US market; the second, *Worldwide box office,* is the sum of the domestic revenues and the international revenues. The variable *return on investment* was calculated dividing the worldwide box office of each movie for the relative production cost, as indicated by Tomasi (2004). The variable *Production budget* was computed considering just the production costs, without taking into account distribution and marketing costs. All the data for the aforementioned variables were obtained from IMDB, and cross-checked using the Box Office Mojo, one of the most referenced websites for box office data. *Ancillary channels revenues* were calculated using the home video rental rankings of the movie. The data were obtained from IMDB, and measure the movie position in the home video rental rankings in the US during the first ten weeks of release. In order to facilitate interpretation, we reversed the index, so that lower values correspond to worse rankings. We did not use information about DVD revenues and television revenues because either this information was not available or was largely incomplete.

Artistic Performance Measures. *Critics' Ratings* were computed using data taken from Rotten Tomatoes (www.rottentomatoes.com), a well-established online public source which assigns each movie a score of critical reception ranging from 0 to 10. The score is generated using a wide number of movie reviews from accredited media outlets and critics societies. The same list of critics is used to evaluate every movie, thus increasing the consistency of the scores and reducing the risk of bias. To create the variable *Nominations and Awards* we collected data on the awards and nominations assigned to each movie by the following professional societies: (1) the Academy of Motion Picture Arts and Sciences; (2) the Directors Guild of America; (3) the Writers Guild of America; (4) the American Society of Cinematographers; (5) the American Cinema Editors; (6) the Producers Guild of America; (7) the Hollywood Foreign Press Association. Moreover, given our focus on the animation industry, we included also the nominations and awards assigned by two associations who have devoted particular attention to animation: (8) the Hollywood branch of the International Animated Film Association; (9) Academy of Science Fiction, Fantasy & Horror Films. To create the variable *Oscars* we considered just the nominations and awards assigned by the Academy of Motion Picture Arts and Sciences.
Finally, the information to create the binary variable *Movie list* (1 included, 0 otherwise) was obtained from filmsite.org, a source already validated by previous research (Ginsburgh, 2003). The website selects every year a certain number of movies to be included in the list of best movies released that year. We used a well-referenced movie website instead of the US National Film Registry because a movie has to wait 10 years after its release to be considered for inclusion in the registry and, given the period covered by our analysis, this would have generated a large number of missing value.

RESULTS

Preliminary Analysis: Refitting the Model

The means, standard deviations, and correlations among the observed variables are presented in Table 1. The first step before testing the fit of our data with the hypothesized model was assessing individual reliability of the measures. The model could be modified in case some measures are found not to be reliable, since this would mean that they are not good measures of the latent construct.
First, we looked at the Cronbach's alphas of the two constructs, which were both above the recommended limit of 0.6: the alphas for Artistic Performance and Economic Performance were equal to .85 and .76, respectively. We then calculated the individual item reliability coefficient, which is expressed as the squared factor loading of the variable (Bollen, 1989). The coefficient measures the share of variance in each measurement item explained by the latent variable. We calculated the reliability coefficients using the measurement model in figure 1. The reliability for all the measures of artistic performance was good, with critics (.62), Oscars (.63), and awards (.82) higher than the recommended threshold of .50 (Götz, Liehr-Gobbers, & Krafft, 2010). Inclusion in the movie list, however, scored slightly lower than .50 (.46). The analysis of the reliability of the measures of Economic Performance revealed that domestic (.89) and worldwide box office (.96) had high reliability, while production budget (.39), ROI (.10) and ancillary revenues (.23) registered very low reliabilities.

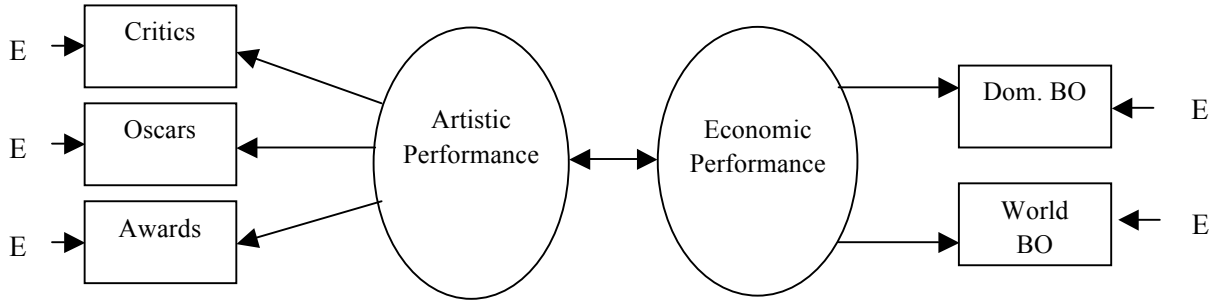
TABLE 1
MEANS, STANDARD DEVIATIONS, AND CORRELATIONS [A]

Variable	Mean	s.d.	1	2	3	4	5	6	7	8
1. Domestic BO (million)	106.01	91.17								
2. Worldwide BO (million)	253.81	236.03	.92							
3. Production Budget (million)	76.51	52.64	.56	.62						
4. ROI	3.80	4.54	.31	.32	–.16					
5. Ancillary (DVD)	24.19	9.44	.44	.47	.59	–.13				
6. Critics	6.21	1.36	.43	.39	– .26	.16	.17			
7. Oscars	0.73	1.28	.51	.48	.24	.24	.11	.61		
8. Awards	5.95	5.73	.56	.55	– .41	.15	.34	.73	.72	
9. Movie List	0.20	0.40	.49	.48	.28	.17	.27	.55	.57	.58

[a] Correlation Coefficients with a magnitude greater than .15 are significant at the .05 level

The results from this tests suggest that the proposed model should be modified. The reliability tests show that production budget, ROI and ancillary revenues do not measure the same as domestic and worldwide box office, and that these two are reliable measures of the latent construct Economic Performance. In the same way, inclusion in the movie list is not a reliable measure of the latent construct Artistic Performance. These conclusions are also supported by the low fit of the research model, with the chi-square/df ratio (4.59) higher than the recommended level of .30 (Joreskog & Sorbom, 1993; Kline, 1998).

FIGURE 2
Modified Measurement Model



Moreover, we can see that removing the measures suspected of low reliability improves the alpha coefficients of Artistic and Economic Performance to .87 and .96, respectively. Thus, the measurement model was changed, excluding those variables that have been shown to have low reliability. The new measurement model is presented in figure 2.

Convergent Validity

Convergent validity is examined through four tests involving the new measurement model. The results are summarized in Table 2. The first test examines the overall goodness of fit of the model. We used several goodness-of-fit indices in assessing the fit of the research model. These fit indices included the chi-square

statistic, the comparative fit index (CFI), the Tucker-Lewis coefficient (TLI), and the root mean square error of approximation (RMSEA). As suggested in the literature (Joreskog & Sorbom, 1993; Kline, 1998), the following criteria of goodness-of-fit indices were used to assess the model fit: the chi-square/df ratio has to be less than 3; the values of CFI and TLI are recommended to be greater than .90; and RMSEA is acceptable up to .08. Table 2 shows that the model meets all these requirements, supporting the convergent validity of the measures.
The second test of convergent validity examines the composite reliability of the constructs. This index assesses the extent to which individual measures of a construct are internally consistent (Götz et al., 2010). In order to be considered good, composite reliability should exceed .70 (Fornell & Larcker, 1981). Table 2 shows that the composite reliability of both constructs is above the threshold level (Artistic= .87, Economic= .96), supporting the convergent validity of the measures.

TABLE 2
MEASUREMENT PROPERTIES

Construct and Indicators	Standardized loading	Reliability	Variance Extracted Estimate (AVE)
Economic Performance		***.96***	.92
Domestic Box Office	.94	.88	
Worldwide Box Office	.98	.96	
Artistic Performance		***.87***	.69
Critics	.78	.61	
Oscars	.78	.61	
Awards	.93	.86	
Goodness of Fit Indices	Estimate	Threshold	
Chi-square/df ratio	1.46	< 3	
CFI	.99	> .90	
TLI	.99	> .90	
RMSEA	.05	< .08	

Note: all standardized loadings significant at $p < 0.001$. Numbers in bold italics denotes composite reliabilities.

The third test we performed looked at the average variance extracted of each construct. This index assesses the proportion of variance shared by the individual measures of a construct. In order to be considered good, AVE values should be greater than the commonly-agreed threshold level of .50. As we can see from table 2, the estimates for both Artistic (.69) and Economic Performance (.92) are above this level, thus supporting the convergent validity of the measures.
Finally, we looked at the significance of the factor loadings for both dimensions of movie performance to assess the convergent validity of the underlying measures. There is evidence of convergent validity if a z-test shows all of the observed variables measuring a construct to be significant at least at the 0.05 level (Bentler, 1992). As table 2 shows, all the estimated factor loadings for the indicators of Economic and Artistic Performance are significant at the .001 level.
All the tests point in the same direction, confirming the convergent validity of both box office measures in measuring Economic Performance, and the convergent validity of critics' ratings, Oscars and awards in measuring Artistic Performance.

Discriminant Validity

We assessed discriminant validity through with the χ^2 difference test, as in Ariño (2003), comparing the baseline model with a more restricted model in which the correlation between the two constructs under examination is constrained to equal 1.0 (Joreskog, 1971). A significantly higher χ^2 for the model in which the correlation is restricted would indicate a nonperfect correlation between the constructs, which is evidence of discriminant validity (Bagozzi and Phillips, 1982). The restricted model (χ^2 = 15.96, df= 5) shows a significant ($p<0.005$) increase from the baseline model (χ^2 = 5.84, df= 4), thus suggesting that the measures of Artistic Performance have discriminant validity with respect to the measures of Economic Performance.

DISCUSSION AND CONCLUSION

The objective of our research was to assess the construct validity of existing measures of economic and artistic performance of movies. Our analysis of reliability revealed that production costs, return on investment and ancillary markets revenues are not reliable indicators of economic performance. The lack of reliability for production cost can be explained by the fact that it is not a direct measure of a movie's capability of making money. In the same fashion, the low reliability of the DVD rank measure suggests that rankings are not a reliable way to assess revenues and profitability deriving from ancillary channels.

On the other side, the lack of reliability for Return on Investment raises some questions. Return on Investment measures the profitability of a movie, and should therefore be a reliable measure of the economic performance of a movie. One possible explanation is that the economic performance dimension is composed by two sub-constructs: one, more prominent, is related to the capability of generating revenues, and was measured in the present model; the other is related to the movie's ability to generate profits. Further research should investigate this issue, trying to understand if Economic Performance is a multidimensional construct. Another explanation is that the Return on Investment does not depend just on how the movie performs, but also on a "fixed", given element like the production budget. This suggests that Return on Investment, like market share, may be a good measure to assess the performance of a production studio, but a bad indicator of the performance of a single movie, since it includes an element, the production cost, that does not predict sales and has proven as well to be an unreliable indicator of economic performance. Moreover, the reliability of Return on Investment and production budget may have been impaired by the fact that studio accounting practices are not always neat and clear, and by the widespread secrecy around actual costs.

The results suggest that, in order to assess economic performance, researchers should gather data on both domestic and worldwide box office revenues. The increasing importance of international box office in determining the economic performance of a movie requires researchers to focus more on this measure, rather than on the mere domestic results, in order to make predictions and analyses.

The results also indicate that, when assessing the artistic performance of a movie, researchers should try to collect information not just about the Oscars received by the movie, but also about other awards that are relevant for the particular genre, production and setting of the movie.

These findings have important implications also for practitioners, who should evaluate performance using full, and not partial information, about economic and artistic results: focusing just on domestic box office and on Oscars may lead to take wrong decisions regarding future investments in similar movies, as well as on the best ways to vehiculate the image of the movie.

This paper, although limited by its focus on a single industry and the use of a single methodology, provides important suggestions on which measures to use to evaluate economic artistic performance, and intend to help both researchers and practitioners in undertaking more rigorous and stringent analyses.

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