

DOES ENTERTAINMENT INDUSTRY ENTERTAIN THE ECONOMY? EMPIRICAL EVIDENCE

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ABSTRACT: *The contribution of entertainment industry to boost up the economy is a new area to investigate. Films and sports (cricket) are the famous modes of entertainment all over the globe. That is why this study considers entertainment only derived from the said modes and focuses on the long run relationship between entertainment industry and economic growth. Annual frequency data for 7 countries is used via panel cointegration technique of Pooled Mean Group (PMG). Empirical inquiries provide the evidence of positive and significant long run relationship between economic growth and entertainment industry. Results also confirm causality running from films and cricket matches to economic growth. Policy makers need to incentivize the entertainment industry in order to enhance the economic growth.*

Key Words: Entertainment Industry, Films, Cricket Matches, Economic Growth, Cointegration.

1. INTRODUCTION

“You walk into a retail store, whatever it is, and if there is a sense of entertainment and excitement and electricity, you want to be there.” Howard Schultz.

For the reader’s convenience we propose a cogent argument that individual’s efficiency derived through entertainment augments the growth of a country by making it possible for the economy to produce more, with similar resources or same, with less resources. In all economies efficiency is now considered a crucial factor to compete internationally. It is perhaps the most important factor to achieve the objectives of long run growth.

In this modern world, the routines of people are getting very hectic. It is getting ever important in the type of life that one is living today. One might be called human beings, but one definitely live like a robot. Without experiencing the relaxation and refreshment via entertainment, one can only work like a machine which obviously declines the efficiency. In addition, one will also fall short of our potential. Nature has drawn a very fine line between human being and machines, and one seem to cross it more often.

The irony is that human beings have really been treated as machines in the modern times. Particularly, in private sector, the workload is quite high and an employee has to meet the requirements if he is to keep his name at the designated spot. Entertainment provides us the necessary vitality and fervor to go about our daily functioning and that too with gusto. The entertainment activities are to us what fuel is to vehicles. Such kind of activities can refresh our mind and can recharge it to work with dedication.

Entertainment brings a lot of stability and solidity in our self and can mend our otherwise tumultuous standard routine. In the present day world, all of us are in dire need of some entertainment so that one can restore balance in our life and can have some ingenuity, innovation, spur the zest to do our tasks in a coherent, well-ordered and methodical way. In this way, one will be able to keep a good momentum towards our work and in a productive way. Without entertainment, the workload of labors can become a daunting task for them and cannot help them function effectively. It is fairly a formidable task to better the economic situations and to accelerate the economic growth with a labor force that is not operating at their potential.

Given the above facts and figures, this study is of much importance as it considers the role of entertainment industry in augmenting the economic growth for seven economies of the world having cricket and films as major source of entertainment.

1.1 Objectives

This paper aims to quantify the long-run relationship of entertainment industry and economic growth, which is stated under the following proposition:

1. There exists a long run causal relationship between the entertainment industry and economic growth of countries under consideration.

To attain this objective, review of empirical literature is summarized in the following section.

2. LITERATURE REVIEW

Meager literature is available regarding entertainment-growth nexus at both theoretical and empirical fronts. To the best of our knowledge not a single study has still been conducted which incorporates the role of both films production and cricket matches played in augmenting the

growth of an economy. The limited existing literature can be divided into three categories as per findings: expected, unexpected and inconclusive. According to expected results entertainment industry should have positive impact on economic growth, while unexpected results indicate that entertainment halts the economic growth due to high costs attached with. However, inconclusive results are those which reveal statistically insignificant impact of entertainment on growth.

Badde [1] conducted a study for 36 metropolitan areas of United States of America (USA) to investigate the significance of economic impact of pro-sport activities by adjusting it for fixed and unique effects he revealed that once fixed effects are factored out, unique behavior can be investigated for evidence of sports contribution to economic growth. The results provided no support for general argument that professional sports and stadiums have significant impact on economic growth. It was concluded that public funding for sports and stadiums is not a profitable investment.

Crompton *et. al.*[6] studied the economic impact of sports facilities and events. He concluded that sports facilities facilitate the economic growth of a country. [13,31,27] concluded that hosting mega events no doubt had been viewed as a source to enhance growth, but since it requires a substantial infrastructural build ups, so spending on such activities might not augment the growth. Authors in [16, 28,18, 4,,16 and 11] found hosting the mega events is though beneficial for the economy, but these benefits are always exaggerated. The benefits however dominate the costs.

Forman, *et. al.*, [9] studied the impact of mega sports events on tourists’ arrival in South Africa and suggested that these mega events promote tourism, but the magnitude depends upon the types of event.

The previous literature is found limited to some cross country studies. This study distinguishes itself from the existing ones by probing the long run causal relationship between films, cricket matches and economic growth.

3. THEORETICAL FRAMEWORK

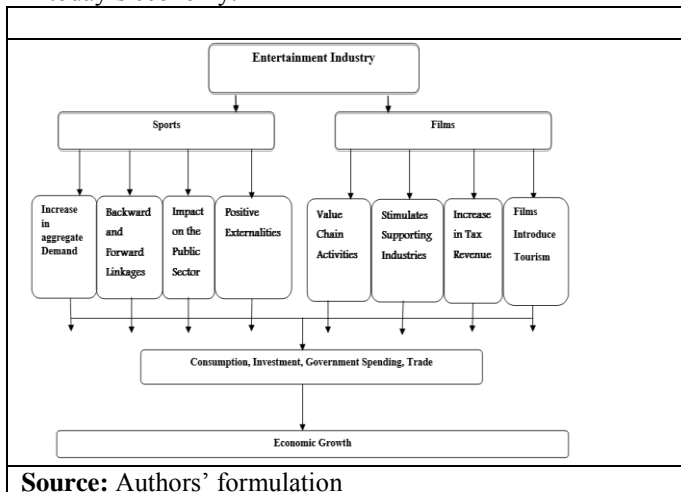
Entertainment industry probably supports the economy by its forward and backward linkages to the growth process. Both films and sports events attract large number of people including producers, actors, players, technical staff and spectators from all over the world which raises the level of aggregate demand for goods, services and labor. It triggers a chain of activities like demand for tourism, accommodation facilities, food items, transportation services, health services and local labor in a particular economy. This increases consumption, which is the first and perhaps the most important component of economic growth. Rise in level of consumption causes an increase in the profits and the producers in order to cater the market demand invest more to raise the level of production. At one side it allows the firms to exploit the economies of scale and on the other side it gives additional employment opportunities.

These events also have backward linkages with supporting industries as: footwear, health care, construction, food supplements and media and advertisement etc. Higher level of consumption due to influx of masses and development of supporting industries enhances the economic growth, which strengthens the public sector of an economy as the government revenue collection increases in the face of rising employment and income. Actually, it is the rationale behind

the public decisions of supporting and flourishing sports in many countries. It implies that the fiscal position of the public exchequer is also improved and more amounts of resources can be employed in development and provision of public goods.

Entertainment activities can be the indication of stability, peace and absence of violence in an economy. These activities produce positive externalities so the tourists, businessmen and traders from all over the world are attracted which stimulates the process of economic growth. Developing countries promote these activities to get investment inflows, which builds up the international trade relations and portray a soft image of the economy. This reduces the possible risk and uncertainty attached to operate for a firm in developing countries.

Films making has a value chain of activities which generate income and employment at every stage of value addition, and also the source of government revenue. Content creation, production, distribution and content consumption are the value chain activities. These activities add the value to content at every stage and provide the technicians, actors, directors, writers and other media personnel with jobs and income opportunities. Industries like: fashion, clothing, cosmetics, designing and media devices manufacturing flourish under the films industry, which creates a permanent source of income and employment. These events are the possible source of international integration. These help to attain a peaceful environment accompanied by proper law and order mechanism, which is the dire need of development in today's economy.



Source: Authors' formulation

Figure 1: Mechanism of Entertainment Industry's Effect on Economy

4. DATA AND METHODOLOGICAL ISSUES

4.1 Estimable Model

The estimated model is given below:

$$Y = f(F, M)$$

Where

Y = Gross Domestic Product

F = Films produced within a year in a country

M = Matches played within a year in a country

$$\ln(Y_{i,t}) = \alpha_i + \beta_i \cdot \{\ln(F_{i,t})\} + \beta_j \cdot \{\ln(M_{i,t})\} + \epsilon_{i,t}$$

$$\epsilon_{i,t} = \rho_i(\epsilon_{i,t-1}) + \omega_{it}$$

Where, $i = 1, 2, 3, \dots, 7$ and $t = 1, 2, 3, \dots, 16$

$\epsilon_{i,t}$ is the disturbance term from the panel regression and ρ_i shows the autoregressive vector of residuals for the i^{th} country. This paper uses variables for GDP per capita borrowed from World Development Indicators (WDI), films produced from Internet Movies Database (IMDB) and number of cricket matches from Entertainment and Sports Programming Network Cricinfo (ESPN Cricinfo). This analysis comprises of annual frequency data for 7 economies which are having considerable cricket matches played and films produced.

4.2 Panel Unit Root Tests

Dataset is composed of about 20 years for matches and 23 years for films and GDP which creates a substantial length of time series to investigate stationarity via unit root test. To confirm the presence of unit root in time series variables, we have employed some different yet popular tests. Stated as: [17] (LLC), [12] (IPS) and [15] (MW) tests. The LLC is based on homogeneity of the autoregressive parameter,

while the IPS is grounded on heterogeneity of the autoregressive parameters. Thus, pooled regression is not associated with IPS tests. MW tests, on the other hand, are based on Fisher type unit root tests that are not restricted to the sample sizes for different samples ([18]). Results from all these tests are given in Table 1. All the series are integrated of order one. The selection of the appropriate lag length was made using the Schwarz Bayesian Information Criterion.

	Intercept &		Intercept &		Intercept &	
	No Trend	Trend	No Trend	Trend	No Trend	Trend
	LY		LM		LF	
LLC	I(1)	I(1)	I(1)	I(1)	I(1)	I(1)
IPS	I(1)	I(1)	I(1)	I(1)	I(1)	I(1)
Fisher-ADF	I(1)	I(1)	I(1)	I(1)	I(1)	I(1)
Fisher-PP	I(1)	I(1)	I(1)	I(1)	I(0), I(1)	I(1)

Source: Authors' estimates

4.3 Panel Cointegration Analysis

Others [7] recommend the use of macro-panel data techniques when time span is more than 20 years. Here $t = 20$ in case of cricket matches and 23 for both films and GDP, therefore, macro-panel data techniques are suitable. Out of the panel cointegration techniques Pooled Mean Group (PMG) is repeatedly found to be the most suitable [20,21, 22,23 and 24]. Therefore, we employ it for cointegration analysis to check the long run relation is given below:

Y = f(M,F)	
Variable	Long Run Parameters
$M_{i,t}$	0.1602(0.001)
$F_{i,t}$	0.7992(0.000)
Error Correction Term	
ϕ_i	-0.2188 (0.091)
Short Run Parameters	
ΔY	-0.2224(0.101)
ΔM	-0.0442(0.072)
ΔF	0.1785(0.019)
C	0.1239(0.001)

Note: p-values of parameters are given in the parenthesis
Source: Authors' estimates

Table 2 shows the results of the cointegration. Long-run parameters, short-run parameters and the Error Correction Term are reported in the above table. The model we used for the analysis is a log-log model. Long run parameters are indicating a significant positive long run impact of entertainment industry on the economic growth of the sample countries. However, the contribution of films production towards economy is found greater than that of cricket matches. This is perhaps due to the longer value chain process involved films production than a cricket match. Error Correction Term ϕ displays a value of -0.2188 which is negative and less than 1. It solidifies the presence of cointegration between the films produced, the number of cricket matches played in the country and the GDP. Statistical results reveal an annual adjustment of 0.22 percent in the short run.

4.4 Panel Granger Causality Analysis

To answer the question set in title of this paper, we finally use the panel granger causality test, results of which are shown below in Table 3.

Causality	F-Statistics	p-value	Remarks
LY \nRightarrow LM	1.2151	0.300	Uni-Causal
LM \Rightarrow LY	3.5711	0.031	
LY \nRightarrow LF	2.0012	0.139	Uni-Causal
LF \Rightarrow LY	14.226	0.000	

Source: Authors' estimates

Cause and effect mechanism is at the core of macroeconomic theory, which is vital to understand the possible nature of relationship between the variables. Our causality analysis confirms the validity of growth hypothesis

for both number of films produced and number of matches played, as there is no feedback from the other way round. These revelations robustly defend the existence of long run causal relationship between entertainment industry and economic growth of the sample countries.

5. CLOSING REMARKS

The empirical findings of the study provide the evidence that the entertainment industry (films and matches) is having a long run causal relationship with economic growth of the countries under consideration. Further it confirms the growth hypothesis for both films and matches. Since, both films and matches are causing economic growth. Entertainment industry has enough potential to generate income, employment and positive externalities to foster the growth. We can say that, with the increase in the number of cricket matches played in the country and the number of films produced in the country, GDP will also increase. This is why economies have always pounced upon the opportunities to grasp the hosting of sports events to reap the associated economic benefits.

Entertainment industry has come through as an emerging industry, and have enough potential to lift up the growth. It not only generates income and employment, but it also causes different people across the globe with different skills and capabilities to interact which facilitates the trade and cooperation and thus helps the economy to increase in size and potential level as well.

Policy makers have usually been in the search of such growth oriented policies which are efficient and have maximum positive externalities. Governments need to capitalize on the opportunity by supporting the entertainment industry which can be very helpful for the prosperity of the economy. Entertainment industry has been found to have a direct relation to foster the economic growth of the country. There are affiliated benefits which can also be counted as efficient channels to avail further opportunities and advantages. Arch rivals like India and Pakistan can utilize the tool of sports diplomacy, and can strengthen the ties with each other. Stars of entertainment industry can work with the celebrities of other countries to formulate relations in a cooperative way. This can better the image of the countries by inducing them to cooperate mutually for the welfare of masses. It can also help them to maintain good trade relations. Mega events should be financed and facilitated in order to generate income and employment opportunities. This, if done can solidify the social relationship by alleviating poverty and reducing disparities.

Mega projects regarding both cricket matches and films can help the governments through enhancing tax revenue which can be utilized to improve the economic conditions of the country. These events can also act like a hub for the investment in entertainment industry. Government is required to facilitate and strengthen the production of such films which export and promote the culture and create a positive image of the country so the tourists and the investors can be attracted. Last but not least, people attached to entertainment industry should be encouraged in order to develop human capital.

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