Data Analytics Changing the Pace of Entertainment Industry

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Abstract: *The media and entertainment industry is growing at an unprecedented rate, with companies finding it difficult to keep up with the pace. The challenges arise due to pressures to keep the costs down while trying to improve revenues. As a result of all the challenges faced in this industry, it paves the way for the media industry to implement big data. They are driven by the twin needs to reduce operating costs and simultaneously generate more revenue from increasingly competitive and uncertain markets. Media companies are in many respects an early adopter of big data technologies because it enables them to drive digital transformation, exploiting more fully not only data which was already available, but also new sources of data from both inside and outside the organization. This paper presents a wide-ranging overview of the state of the art of big data in the media sector. A survey was conducted among 75 people on the modes of viewing channels and streaming media and habits in TV viewing.*

Keywords: Big data, Entertainment, Netflix, Hotstar, Analytics, Social media, Media

1. Introduction

The entertainment sector in India is poised for a compounded annual growth rate of 20% According to a recent KPMG report. The key factors that are driving the growth of the Media and entertainment industry in India are the favorable demographics, growing Literacy, increasing affluence, development of technology, government support and the Growing interest in the Indian way of life. The never before seen growth in the sector Has been the result of the growing number of television channels, FM radio channels, Rising popularity of social media, growing demand for content from mobile operators Which is expected to further increase with the growth of 3G services and innovations of Technology. This has resulted in the availability of entertainment anywhere and at any time at the touch of a button and has ensured wide spread reach of the industry. This paper is an In-depth analysis of the various components of the Indian entertainment sector, the Current scenario and challenges in the print and electronic space, the growth Opportunities and the future potential.

In these modern times of instant digital communication, film has turn out to be one of the most vital way through various nations and cultures reveal their values and identities. Moving image technologies has turn out to be all-encompassing in our lives. They are huge business. Apart from that, a capability to recognize and apply them has become as important for the people of this present era as literacy was in the times of19th and 20th century .The tempo, scale and consequences of this transformation are significant enough.

The media and entertainment industry had to read the TV ratings, block buster charts etc. to arrive at their investment decisions. But the scenario has changed, and the industry is now awash in data. Backed by competent analytics capabilities, data can be accurately shifted and understood to perk up the media and entertainment industry's telecast and advertising bets. Consumers today are viewing and sharing more content than ever before, highlighting the importance of data analytics in media and entertainment. Hence the incredible amount of data open up massive opportunities for the media industry in content planning, bundling and distribution.

The media and entertainment industries have frequently been at the forefront of adopting new technologies. The key business problems that are driving media companies to look at big data capabilities are the need to reduce the costs of operating in an increasingly competitive landscape and, at the same time, the need to generate revenue from delivering content and data through diverse platforms and products.

It is no longer sufficient merely to publish a daily newspaper or broadcast a television programme. Contemporary operators must drive value from their assets at every stage of the data lifecycle. The most nimble media operators nowadays may not even create original content themselves. Two of the biggest international video streaming services, Netflix and Amazon, are largely aggregators of others' content, though also offering originally commissioned content to entice new and existing subscribers.

Media industry players are more connected with their customers and competitors than ever before. This is because of the impact of disintermediation, content can be generated, shared, curated, and republished by literally anyone with an Internet-enabled device. Global revenues from such devices, including smartphones, tablets, desktop PCs, TVs, games consoles, e-readers, wearable gadgets, and even drones were expected to be around $750 billion in 2014. This means that the ability of big data technology to ingest, store, and process many different data sources, and in real-time, is a valuable asset to the companies who are prepared to invest in it.

Unlike some other sectors, the vast majority of actionable data in the media sector is already in digital form (and analogue products such as newspapers have been created through digital technologies for some years now). However, this does not mean that organizations are deriving the fullest possible financial benefit or cost efficiencies from both their existing data and new sources of data. There is a growing body of evidence that there is much work to do at research and policy levels to support the burgeoning ecosystem of

diverse businesses engaged in analyzing, enhancing, and delivering content and data.

Objectives
- To explore the scope of online streaming media
- To find out the TV viewing habits of people.
- To explore the scope of development in media industry.

2. Literature Review

Debshika Dutta (2009), pointed out that the recent alliance with big west entertainment giants like Walt Disney and Warner Group are surely taking Bollywood leaps and bounds ahead from its current Time and also leading India to a platform where it would become the most favorable destination for many global production units of film sector. Certainly the opening of Indian film industry to Foreign Direct Investment is itself stepping into a larger and worldwide network. Nasreen Teher & Swapna Gopalan (2007), opined that globalization of the film industry was not a completely new phenomenon; by penetrating virtually every society, the international spread of cinema resulted in films becoming the first globalized medium. Globalization intensified greatly after the 1960s, based not on colonialism but on economic and social ties between countries. Thomas L. McPhail (2010), pointed out that more than 50 per cent of Hollywood movies earn their revenues from abroad. Eighty per cent of MTV's audiences are from other countries and this percentage is expected to increase as the global economy continues to grow in size and importance.

K. Krasnow Waterman and Paula J. Bruening (2014), in their paper tells the ability to ingest massive volume, variety, and velocity of data for analytics does not eliminate risk if not properly addressed such ability can often compound it, creating the risk of data use outside the bounds of law, regulation, and ethical practice. To derive the greatest benefit from Big Data and analytics, institutions will need to understand and address the implications of choices about data and analytic tools. They will need to carefully assess the integrity of their analytic processes and the accuracy of their findings, and to consider the legal consequences for privacy and data protection of applying the outcomes of analytic models to information about individuals.

Mint (2017), Leading broadcaster Star India Ltd.'s digital streaming platform Hotstar and Zapr Media Labs, a Bengaluru-based media tech company, have announced a strategic partnership to drive the next wave of mobile audience analytics in India. Hotstar had the opportunity to build the world's first platform on digital where consumers are engaged and immersed while at the same time delivering deep audience understanding that allows brands to talk to individuals rather than segments. They believe that they have a shot at creating the world's premier truly personalized advertising service, which benefits both brands and consumers.

Vignesh, J (2017), in the article tells about Infinite Analytics' artificial intelligence (AI) platform called 'ian' (Infinite Analytics Nucleus), is an 'intelligent' layer between consumers and brands. Digital platforms such as Netflix and Amazon Prime use data analytics to understand audience

preferences. Digital platforms throw up a lot of data. They look at a number of data points across social media to understand patterns. It allows them to identify and reach niche audiences for a particular subject.

Shilpa Balan, Janhavi Rege (2017) in their paper tells about the fact that information can now be rapidly exchanged due to social media. Due to its openness, Twitter has generated massive amounts of data. In their paper they apply data mining and analytics to extract the usage patterns of social media by small businesses. Social media is going to change the business setting for many organizations within the next few years. This is because the volume of comments and posts on social media sites is expected to grow rapidly. Further, it is also mentioned that those organizations that will invest in incorporating social media will have a major advantage over their competitors.

Wu He, Jiancheng Shen, Xin Tian, Yaohang Li, Vasudeva Akula, Gongjun Yan, Ran Tao (2015) conducted a case study to collect and analyze a data set with nearly half million tweets related to two largest retail chains in the world: Walmart and Costco in the past three months during December 1, 2014-February 28, 2015.The case study revealed the value of analyzing social media mentions and conducting sentiment analysis and comparison on individual product level. In addition to analyzing the social media data-at-rest, the proposed framework and the case study results also indicated that there is a strong need for creating a social media data application that can conduct real-time social media competitive intelligence for social media data-in-motion.

David Kebo (2012) in his article tells that Netflix is all in for Big Data–using it to optimize the quality and stability of its video streams, and to assess customer entertainment preferences, so it can do a better job of targeting its users with offers for shows they might like to see. This processing power allows the company to run massive data analyses, such as graphing traffic patterns for every type of device across multiple markets. Laika Satish ,Norazah Yusof (2017) analyze and study the ways of considering customer experience big data analytics and incorporate crowd sourcing in the process to increase customer satisfaction and loyalty, revenue and greater employee satisfaction where commerce is immediate and secure. The idea in this paper can act as a guide for incorporating crowdsourcing with Big data in customer analytics which can have the potential to bring together a large group of crowd workers who are customers themselves on the same platform when there is an issue that affects them all. Crowdsourcing issues for customer retentions are mostly focused around problems with the worth, correctness, and aggregation of data especially when the data is massive.

3. Methodology

The methodology used in this paper is my analyzing the primary and secondary data collected on the viewing habits of people of various age groups. This will give an idea on the medium which people now-a-days like to watch their favorite shows, or other means of entertainment.

The primary data was collected from a random sample of 75 individuals through a questionnaire. The items of the questionnaire include questions based on the various medium they use for watching whether its an online or Television medium. The questions also reflect the various timings in which people like to visit these mediums. Here the word television is used to refer watching through cable/satellite medium. The secondary data was collected from various website and articles which give a result on the analytics conducted on Big data. The results of the surveys are as follows.

Primary Data Analysis
Analysis on the medium of entertainment which mostly prefer now-a-days showed the following result.
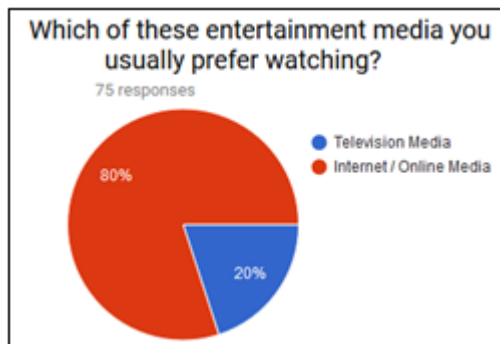
Figure 1

Inference: It is seen that 80% of the people prefer watching the shows or other means of entertainment through online media. The people that prefer watching Television is only 20%. The ease of using and watching through portable handsets may be the reason for this.

Analyses on the time spend on Television and online media showed the following result:
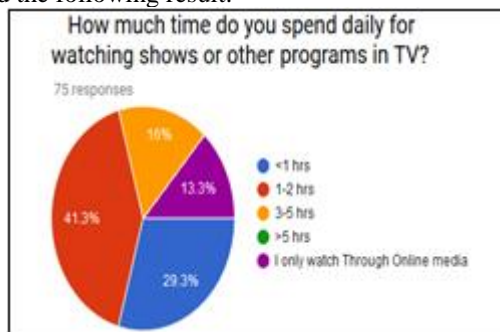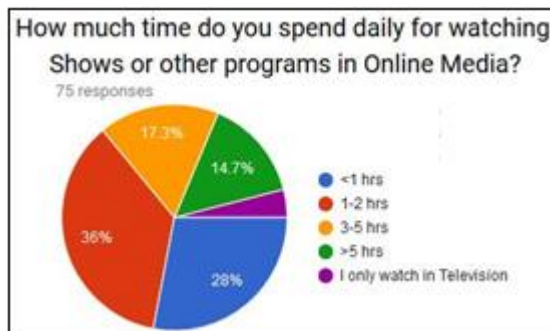

Figure 2

Figure 3

Inference: According to figure 2 the result shows that most of the people spend an average time of 1-2 hours watching their favorite shows on television. 29% watch television for only less than an hour. 16% watch 3-5 hours per day and the rest 13% watch only through online media.

In Figure 3 36% people spend 1-2 hours on online media. 28% use it for less than an hour.17% people use it for 3-5 hours daily. Here 14% use online media for more than 5 hours a day which is not at all found in the case of television media.

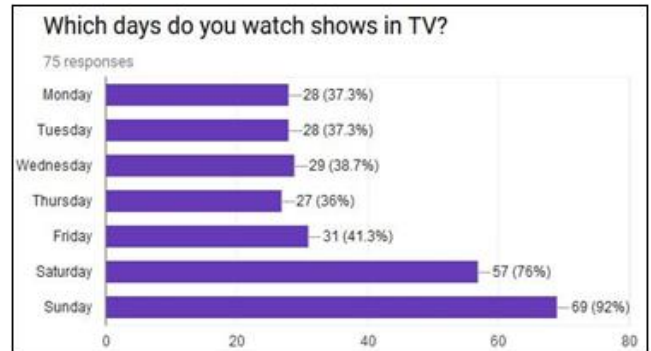Analysis on the days on which people usually watch television showed the following result:

Figure 4

Inference: The graph shows that people prefer watching television mostly on weekends, Sunday being the favorite one (69%). People usually watch less hours on the weekdays.

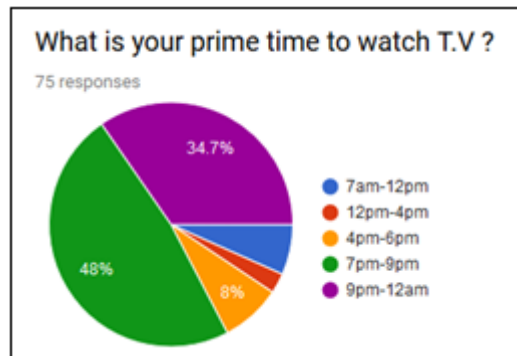Analysis on the prime time of watching television showed the following result:

Figure 5

Inference: The result shows that the peak time of watching television is between 7pm-12am. In this 48% watch during 7pm-9pm. 34% people from 9pm-12am. Least watch is during 12pm-4pm.

Secondary Data Analysis
The graph showed below is taken from a survey conducted by PEW Research center to find out the primary way of US Young Adults for watching television.
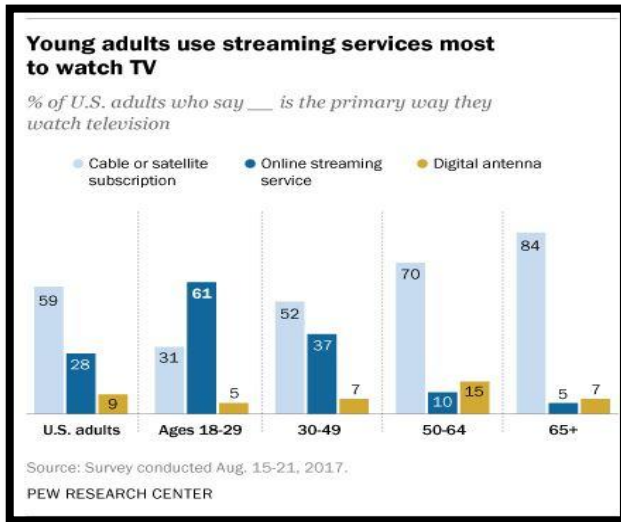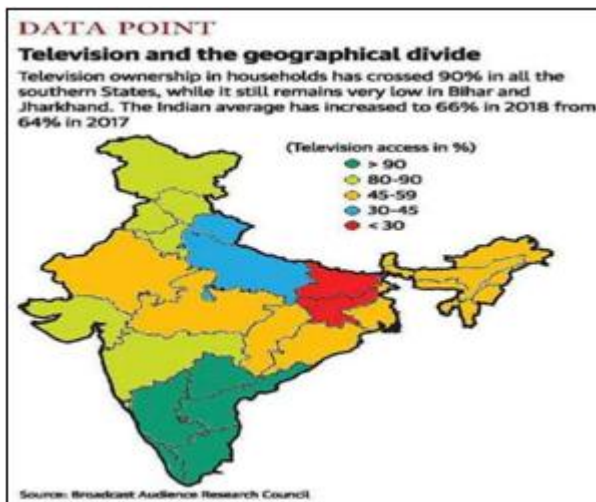
Figure 6

Inference: This graph shows in an average 59% of the U.S adults use cable or satellite subscription for watching TV. In this young adults use streaming services most to watch TV (61%).

Figure below shows the Television and geographic divide in India.

Inference: The television ownerships in households have crossed 90% in all the southern states, while it still remains very low in Bihar and Jharkand

4. Findings & Suggestions

4.1 Findings

The findings from the analysis and interpretation are as follows:-
- Most of the people prefer watching or streaming through online media. The ease to use these and the growing data operators providind low cost and faster data network can be a reason for this.And also the rise of many applications like Netflix, Hotstar, Voot and other channel oriented online streaming applications.
- The no. people who watched on television is more than online media but the quantity of time used is much greater in online media compared to television. People watch more than 5 hours in an online media whereas an average rate of watching in television is 1-2 hrs a day.
- People prefer to watch or stream mostly in weekends rather than on weekdays.
- The prime time for watching through television is usually 7pm-12pm. That is the night time is the peak time to show any important shows which could grab higher ratings.
- The television and geographic divide in india shows more amount of television ownership is in south india compared to other parts of India.
- Online or packet streaming media has a growing potential in the entertainment industry. More amount of web series are coming up, a lot of creative contents are made online. Digital media influencers are up in the rising.

4.2 Suggestions

- Analytics may be conducted to find out the content what people prefer to watch as there are a lot of options out in public. People skip contents which doesn't catch and hold them in the first few minutes or even seconds while a video is streamed.
- The advertisements provided in the starting or in between the online streaming which can be skipped after 5 seconds can be made interesting in the starting 5 seconds which grabs the viewer to watch it and not skip it. This allows a better collaboration of the content creators and the business partners.
- The weekday shows can be crisp but rich enough so that the viewer is able to watch it. This may improve the footprints for weekdays.
- The Television ownership should be increased in the northen parts of india which may bring in more views.

5. Conclusion

The approach of the people in watching their shows on Television has changed drastically. Less number of people prefer watching through cable/satellite media rather people prefer watching in their laptops, mobile phones ,tablets or portable handsets. The working class have very much less time to spend to watch on television. Online streaming is preffered by most of the people.The fast and cost friendly data plans may be the reason for this change. More and more applications are coming up which show exactly the same content of television like hotstar,voot, sonyliv, netflix etc. These applications make it very convenient to the views as one can watch on it any time. The data in the entertainment industry is usually Big data with lakhs of people. The scope in online streaming media is increasing day -by -day. More and more new and innovative contents are coming up. Brands are collaborating with media partners.Web series are on the Trend. These all make Entertainment industry with a great scope ahead.

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