Chapter 5

1.1. SUMMARY AND CONCLUSION

Based on the literature review hypotheses were formulated and tested using Chi-square test of independence. Further to overcome the inherent shortcomings of chi-square statistic in testing degree of association between independent and independent variables Yule’s coefficient of association was also conducted.

While testing null hypotheses it was found in the study that online piracy demographic factors like age and occupation of respondents (movie goers) influenced piracy to a significant level as compared to hard copy format of piracy through counterfeit CDs/DVDs barring a few exceptions. It was found in the analysis that cine goers up to the age of 30 years were more prone to downloading movies from illegal sites as compared to the cine goers falling between the ages of 31 years to 60 years. Interestingly it was also observed in the analysis that students were more inclined towards online piracy as compared to the cine goers who were working professionals. The probable reason was that the younger generation especially students today are gizmo geek and tech savvy with access to latest technology supported by personal computer and internet. Frequency of watching movies was found to be significantly high among youth and students as compared to older respondents and working class. This high frequency of watching movies was another reason that the youth and students were found to be prone to online piracy as compared to others. Empirical studies conducted at different parts of the world however suggested that gender was also a contributing factor to online movie piracy with males found as more prone to piracy than their female counterparts.

The trend of hard format movie piracy (through counterfeit CDs/DVDs) however was different as found in the study. The null hypotheses ‘subscribing pirated CDs/DVDs depends upon respondents’ age and gender failed to reject. Students were found to indulge more in hard copy format of piracy as compared to others (working professionals) as the null hypothesis ‘subscribing pirated CDs/DVDs depends upon respondents’ occupation was rejected. The reason behind this trend suggested that once a pirated CD/DVD was subscribed other members in a family also share the movie watching on their TV and CD/DVD players (home electronic appliances). The null hypothesis ‘There is significant relationship between awareness about legal consequences and movie piracy’ was rejected. This means the respondents indulged in piracy
knowingly however Yule’s coefficient of association was less than 50 percent. This percentage suggested a poor association between independent as well as dependent variables. Cost factor was the most dominant factor contributing to piracy among others like time spent on watching movie at theatres, delayed availability of licensed CDs/DVDs etc.

Here again Yule’s coefficient of association was found (as 36.26%) to be less than 50 percent. Despite cost as the most dominant factor the poor degree of association suggested that other factors were also contributing to movie piracy though not at equal measure.

The study carried out for doctoral degree was based on both primary and secondary data. The predefined objectives were met with the help of both quantitative as well as qualitative analyses:

**Objectives/Need of the study:**
The proposed study was an attempt to identify the factors contributing to movie piracy and to quantify the loss of revenue to Mumbai based Hindi film industry and the government exchequer in the form of entertainment tax.

1. To identify the factors contributing to movie piracy
2. To propose a conceptual framework to understand how various factors contribute to movie piracy.
3. To quantify the loss of revenue to the film industry at the box office.
4. To quantify the loss of revenue to the Government of Maharashtra at the box office in the form of entertainment tax.

Quantitative analysis was done to measure the impact of various factors identified from the review of literature viz., age, occupation, gender of movie goers, illiteracy, cost of watching movies at theatres, unemployment, poor enforcement of law, lack of infrastructure, moral obligation, past piracy behaviour, and technology. The impact of age, occupation, gender, awareness level of movie goers about legal consequences of movie piracy and economic/financial implications for the film producers, film distributors, and theater owners, and the government exchequer were analysed with the help of chi-square test and Yule’s coefficient of association. The financial impact was measured on the basis of box office collection throughout the state by extrapolating primary data collected from cine goers. Loss of revenue to
various stakeholders was calculated in monetary terms and its total impact on the state of Maharashtra’s GSDP and national GDP was also calculated.

For qualitative analysis the demographic factors like literacy level and unemployment rate among cine goers were also identified with the help of review of literature. Some behavioural factors like moral obligation, past piracy behaviour, and attitude of cine goers towards movie piracy and a few other factors like cost of watching movie at theatres, poor enforcement of law, lack of infrastructure, and latest technology adding fuel to movie piracy were also helpful in developing interpretive structural model (ISM) and MICMAC analysis to identify driving power, dependence power, and linkage variables among all factors influencing piracy. This was otherwise not possible through quantitative analysis alone. This way the study was completed with both identification of various factors contributing to movie piracy and linkages among them. Both quantitative as well qualitative analyses helped the researcher to arrive at a meaningful conclusion and complemented each other. The limitations of ISM model was that it needed to be empirically tested. This serious limitation of ISM model to validate it with the problem it tried to analyse was empirically tested and found correct on the basis of primary data collected from cine producers and their association.

The researcher to the best in his efforts had substantiated the information collected so far while preparing the synopsis of the proposed study with the help of both primary and secondary data at the end of his research. This would be of a great help to the legitimate stakeholders of movie industry including the state govt. of Maharashtra which collect revenue from the industry in the form of entertainment tax. Apart from this through identifying factors encouraging video piracy would also help curb the problem. In researcher’s view the proposed research work would impact the industry and the society at large in the following manner:

1. A significant improvement could be expected in the revenue earned by Mumbai Film Industry;
2. Several reports and news articles suggested that there was erosion in the employment in the film industry because of the movie piracy. If piracy could be checked, this would positively impact the rate of employment in the industry.
1.2. LIMITATIONS

Like other research works this study does also have a few limitations.

Methodological limitations:

- The null hypothesis was rejected, which signified that there was significant association between downloading behaviour and age. To further support the statement, Yule’s coefficient of association was also found to be significantly high (86.94%). Hence it was concluded that downloading behaviour was clearly determined by the age of individuals (movie watchers). However from above analyses a clear demarcation could not be made related to what section of the individuals showed the highest online piracy behaviour leaving space for future research.

- Sample size: Though the sampling is concerned with the selection of individuals from within a statistical population to estimate characteristics of the whole population. Random sampling could not be possible. Therefore, convenience method was adopted. Total number of responses collected from cine goers was earlier 700 but later 185 responses were shelved because of errors. Out of 700 such responses finally 515 responses were considered for analysis. Apart from a questionnaire for cine goers another set of questions was also prepared to target cinema producers, and the office bearers of film producers’ association. Total number of such data was 12. With such a small size of sample under the film producer’s category it was not possible to do quantitative analysis. Therefore, data was used in qualitative analysis to draw inference out of it.

- Six places within the state of Maharashtra were selected for field survey and primary data collection in cine goers’ category. It was a well-established fact that the number of cine goers was too large to cover up sufficiently. A small sample size that too within one state was another limitation to this research. This limitation however left an opportunity
behind for the future researchers to conduct similar research in different states across India.

- It was not possible to conduct research at a large canvass because of the paucity of time and resources unlike professional agencies who conduct field surveys and research in a chosen field with greater accuracy, better accessibility to data, sufficiently allocated funds and man power resources.

- Non-availability or non-accessibility of reliable data was another area of concern during the course of data collection. It was felt on several occasions that the film fraternity people like producers, distributors, and theatre owners also had insufficient information regarding the loss of revenue at box office collection due to movie piracy. When asked they vouched that there was no data base to identify the size of population which watched movies. Using different methods for estimation could give only wild guess and rough estimation far from the reality. For example in this study the size of population identified as movie goer was based on the per capita income of people living in Maharashtra excluding those living below poverty line. Other researcher would use if some other method to estimate the population of movie goers, there are chances that the outcome would also differ.

- Prior research studies give direction for further research in the chosen field. When review of literature was conducted it was felt that very few studies were carried in past that too in scattered manner. So far researcher’s information went no Indian university so far had awarded a Ph. D degree to a research scholar in movie piracy. A lot of work was yet to be done.

- Research conducted by professional bodies and consultancy firms like FICCI, Motion Pictures Association of America, Canada, Australia, and many other countries also quantified financial loss due to movie piracy to respective film industries located in their host countries using different methodologies. It was obvious because of the varied methodologies used in research that the estimation of loss was also different. Few of them calculated loss of revenue to the industry whereas others developed models to quantify the loss and its ripple effect across all other industries in the economy. Some of
the reports were based on the quantification of loss of revenue at box office, online watching, and loss on sale of licensed CDs due to rampant piracy of feature films. Some of the research were based on the identification of representative goods and services and their demand affected in the market due to piracy, whereas a few others were based on the record seized counterfeit products (movie CDs/DVDs) at custom checking. But all had one or the other limitations with significantly varied results. Needless to say none of the research the researcher came across so far could be considered as a holistic research. After realizing these serious limitations the researcher finally decided to concentrate on the estimation of loss of revenue to Mumbai based Hindi film industry specifically at box office collection. For this purpose data collected from cine goers was the most authentic source of information. In the survey it was notices that no one else other than a movie goer could understand audience psychology better, the crux of this research.

5.3 Practical Implications and Contribution to Available Literature

Practical Implications
Based on the findings, the government and movie industry should make greater efforts to sensitize people against the evils of movie piracy. People should be made aware of the reality that movie piracy is not a victimless crime contrary to the popular belief. It causes huge economic loss to the film industry in particular and to the economy of the country as a whole, as the government also loses its revenue in the form of entertainment tax at box office collection. The movie industry should also provide the viewers with cheaper alternatives to watch movie at theatres, especially multiplexes, which are beyond the reach of common man. This step would help to capture low-income consumers who are likely to resort to piracy because of the cost factor. Single screen theatres are cheaper but the overall experience of watching movie is poor. The government should also encourage single screen theatres by reducing entertainment tax rate so that they could come up with better facilities. However the state govt. has taken a few steps in this direction by imposing cap on ticket rates at multiplexes and single screen theatres. In the remote areas the state govt. has decided to give single screen theatres a 7-year holiday on entertainment tax (PTI, Jan. 16, 2013). Despite this effort of the govt. no such project of new single screen theatres has come to fruition. At this juncture it is difficult to predict how far these
steps would help the movie industry. May be sensitizing people against the practice of piracy would perhaps be the best solution to the problem.

Contribution to Available Literature
The review of literature helped the researcher to understand the research gap. No systematic research was conducted to quantify the loss of revenue to Mumbai film industry in a systematic manner. However agencies like MPAA, CMPDA, and IPSOS were found to have systematically studied and quantified the loss of revenue to film industries located in the USA and other foreign lands. Many news articles published in newspapers suggested a lump-sum loss of revenue to the film industry in India but the basis of that loss was not discussed. The present study was a sincere effort to quantify the loss of revenue at box office with the help of available secondary data about number of cinema theatres across the state of Maharashtra (both multiplex and single screen theatre), their average seating capacity, average occupancy of seats in a show, average number of shows, average ticket rate, the population of the state excluding those who don’t watch movies based on their purchasing power parity (people living below poverty line were excluded from the study assuming that they can’t afford to watch movies). It was also observed during data collection at cinema theatres that the respondents falling between the ages of 16 years to 60 years watched movies. The demography of Maharashtra was another basis to segregate people below the age of 16 years and above the age of 60 years. Thus the researcher arrived at the estimated population of the state with the help of the latest census. To quantify the loss of entertainment tax to the Government of Maharashtra prevalent entertainment tax was also taken for the study. The GSDP of the state of Maharashtra and the national GDP searched from governments’ websites helped the researcher to estimate loss to the state/national economy. Finally the primary data collected from movie goers was extrapolated and thus the loss of revenue at box office was calculated with the help of both primary as well as secondary data.

The role of technology was also reviewed through available literature in movie industry as a whole. The research papers and articles suggested that technological advancement had not only changed the face of entertainment industry but also redefined the word ‘entertainment’. From celluloid movie prints to high definition digitized movie prints not only enhanced the quality of film projection and sound at theatres but also prompted piracy. Movie piracy in hard copy format
(CDs/DVDs), and online piracy are the product of latest technology. Interestingly at the same time it was also observed that technology if prompted piracy it was also used as a counter measure to curb the menace of piracy. Texas Instruments and Dolby, USA devised technology to detect the source of piracy. In India UFO Digital Cinema invented a dynamic secret water mark to detect the source of piracy from pirated CDs/DVDs. With the help of case studies of two Hindi feature films ‘TASHN’ and ‘WHAT”S YOUR RASHI?’ the role of technology in curbing piracy was a significant addition to the existing literature on the subject.

The important factors contributing to movie piracy were identified with the help of available literature. It was also observed that how did those factors contribute to the piracy was not discussed in details. The researcher did an effort to bridge that gap by suggesting a conceptual framework on movie piracy to understand how various factors contributed to it. This was done with the help of ISM and MICMAC analyses.

### 5.4 Further Research Direction

Due to constraint of resources only theatrical exhibition loss to Mumbai based Hindi film industry had been studied. The home video distribution loss and its ripple effect on other industries could not be studied as opposed to several studies conducted in foreign countries. The impact of motion pictures piracy on overall economy of India could be an interesting area for future research. Several empirical studies suggested that there is ripple effect of movie piracy on other industries due to movie piracy across the economy of a country. Loss of employment might also be an interesting area for future research.