
by

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Graduate School of Management
Faculty of Commerce

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DECLARATION

I, Enias Biza, do hereby declare that this dissertation is the result of my own investigation and research, except to the extent indicated in the Acknowledgements, References and comments included in the body of the report, and that it has not been submitted in part or in full for any other degree to any other university.

.................................................  .................
Student’s signature                  Date

Approved for submission

.................................................  .................
Eng M. Manuhwa                      Date
Supervisor
DEDICATION

I dedicate this dissertation first to my wife, Elizabeth and my children Blessing Takudzwa and Grace Tinotenda Biza. For two years you did not spend any weekends and public holidays with me. You endured and you were patient and I am very grateful to you guys. A special dedication goes to my brother Pfumai for all the financial support you gave me, you are a real brother and my Pastor, Joshua Chiweda for praying for me and my family may God richly bless you.

ACKNOWLEDGEMENTS

I am forever indebted to my supervisor, Engineer Martin Manuhwa who guided me throughout the entire project process. His criticisms and contributions chiselled out chaff and left behind this work as it is today.

I also want to express my gratitude to my wife Elizabeth for providing the necessary support that complimented my effort and my son, Blessing and daughter, Grace for understanding by allowing me time meant for them so that I could concentrate on the project.

I will not leave out the Rainbow management and staff who went out of their way to assist me in this research. My gratitude also extends to the Graduate School of Management lecturers and staff for the profound knowledge I have gained over the past two years of study.

It is not possible to individually thank all who went out of their way to assist in this work. I would like to express and extend my profound gratitude to all who made this project a success may God richly bless you.
ABSTRACT

The general view from literature on the Impact of Digital Technology on the viability of the Cinema Industry is that most countries have embraced digital technology and this has turned the fortunes of the industry for the better. The technology brings with it huge savings in terms of transportation and storage of the 35mm reels and it enables the cinema industry to screen movies on day and date with countries like America. Digital technology is also a tool that is being used to fight piracy which has become a major threat not only to the cinema industry but to the whole arts and entertainment industry especially the music industry.

In an endeavour to place the problem into perspective, the research objectives were to investigate the impact of digital technology on the viability of the Cinema industry in Zimbabwe. Empirical data was obtained through face-to-face interviews and questionnaires. The respondents were management and staff of Rainbow Cinemas and the movie goers or patrons. Qualitative and quantitative methods were both used and data gathered was analysed through Data Displays in the form of content analytic summary tables and graphs.

The study found that the cinema industry in Zimbabwe is still to embrace new technology as most players in the industry are still to be digitalised and they are still using 35mm projectors which are being phased out in most parts of the world. Only one movie house Ster-Kinekor which is part of the Ster-Kinekor South Africa has fully digitalised its Eastgate branch with two auditoriums equipped with 3D projection system. Piracy have hit hard on the cinema industry in Zimbabwe with the industry struggling to survive in face of huge operating cost like salaries and wages, utility bills and film hire costs and rentals against low cinema attendances. Most movies are released in the cinema 6 months after their release date from Hollywood production studios and they will have flooded the pirated DVD market.

In view of these findings this study recommends that the Digital technology is the way to go if the cinema industry in Zimbabwe is to survive. Partnership with suppliers and other strategic partners is recommended in order to mitigate the financial challenges facing the industry for it to fully digitalize. There is also need for government and the financial sector to help in reviving this industry through putting in place strict anti-piracy policies and offering loans respectively.
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<tr>
<td>DVD</td>
<td>Digital Versatile/Video Disc</td>
</tr>
<tr>
<td>3D movie</td>
<td>3 Dimensional movie</td>
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<tr>
<td>VHS</td>
<td>Video Home System</td>
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<tr>
<td>VOD</td>
<td>Video-on-demand</td>
</tr>
<tr>
<td>MPEG</td>
<td>Motion Picture Experts Group (multimedia file)</td>
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<tr>
<td>RF</td>
<td>Radio Frequency</td>
</tr>
<tr>
<td>DRM</td>
<td>Digital Rights Management</td>
</tr>
<tr>
<td>HIFA</td>
<td>Harare International Festival of the Arts</td>
</tr>
<tr>
<td>NAMA</td>
<td>National Arts and Music Awards</td>
</tr>
<tr>
<td>ZESA</td>
<td>Zimbabwe Electricity Supply Authority</td>
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<tr>
<td>ZRP</td>
<td>Zimbabwe Republic Police</td>
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<tr>
<td>MPAA</td>
<td>Motion Picture Association of America</td>
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<tr>
<td>SMPTE</td>
<td>Society of Motion Picture and Television Engineers</td>
</tr>
<tr>
<td>DCI</td>
<td>Digital Cinema Initiatives</td>
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<tr>
<td>AAM</td>
<td>Arts Alliance Media</td>
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<tr>
<td>IMAX</td>
<td>Image Maximum</td>
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<tr>
<td>ISP</td>
<td>Internet Service Provider</td>
</tr>
<tr>
<td>AOL</td>
<td>American Online</td>
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<td>RIAM</td>
<td>Royal Irish Academy of Music</td>
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CHAPTER 1
1.0 Introduction
Necessity is the mother of all inventions and when things change they change for a reason. According to Schumpeter (1975), continued business survival is premised on innovation. Most developments that have taken place in the history of cinema came about for a reason and mostly attributable to innovation. Digital technologies are changing the possibilities of cinema and its viability as an industry. The fast moving changes in technology in particular digital technology has changed the study of any medium in that the study now has to look at how the data is stored and how it’s transmitted as part of the story. Therefore we look at how digital technology has impacted the operations of cinema and the viability of the industry. Today cinema is digitally created, stored, distributed, and is viewed primarily with computers and the attributes of digital creations have increasingly taken on by digital technologies. In digital form, cinema can be radically reproduced, manipulated, networked, interactive, hybrid, variable, and dispersive, making it very much different from traditional cinema.

Cinemas need to take advantage of new technology and create competences that will position and sustain them against competition. Digitalization will put a cinema in a position where it is easy to defend itself and that is achieved when its competitive advantages brought about provides value that cannot be copied, substituted, or eroded by competitors (Porter, 2001). Traditional cinema has enjoyed a competitive advantage over forms of entertainment for over a century now, as the foundations upon which this was built are now being undermined. In its first century, the movie industry’s first-release retail markets were the cinemas. As technology evolves it saw movies being broadcasted on TV in the late 1950s and then came videos. Cinema has been the primary medium for watching movies on large screens until the introduction of other delivery technologies and big television screens. (www.eprints.qut.edu.au). The cinema industry in Zimbabwe is faced with this competition and there is need for it adapt to new technology to safeguard its viability and survival into the future.

The evolution of technology has seen a major impact on the cinema business presenting a major threat to the existence of the cinema. Technology also brought with it negative impact like piracy which is a major threat to the cinema industry and
its coming out in different forms like pirated DVDs, movie downloads on all forms of media and devices like U-Tube, iPhones, iPads, internet, laptops, memory storage devices and others. The cinema industry in Zimbabwe is forced to upgrade its facilities so that it moves from the old 35mm movies reels to digital for them to cope with ever-changing technology worldwide if they are to survive. Not much study had been done on cinema in Zimbabwe and as such the cinema industry in this country still lags behind in terms of technology as compared to its neighbours like South Africa which now is exhibiting movies in the latest technology formats like 3D and it looks like it is the way to go in the new world if the industry is to survive thereby justifying this study.

At present my working definition of digital cinema is ‘the process of mastering a motion picture in digital form, distributing the digital file to cinemas via satellite or over broadband connections and screening the movie using a digital projector’. Digital cinema, then, involves placing onto a cinema screen an image that has been supplied as digital data rather than, as is presently the case, a 35 mm reel of film. It should be distinguished from Digital Cinematography which is the process of recording an image digitally rather than on film stock. This definition currently excludes the production and post-production stages of movie-making.

The research will be in a form of a case study of Rainbow Cinemas in Zimbabwe, which is the oldest and biggest movie house or cinema in the Zimbabwe with over 80% of the market share. Case study is a preferred strategy in this study because it helps to answer “how” and “why” questions in which this researcher has little or no control over events in this industry, (Yin, 2003, 1).

1.1 Background of the Research
Necessity is the mother of all inventions and when things change they change for a reason. According to Schumpeter (1975), continued business survival is premised on innovation. Most developments that have taken place in the history of cinema came about for a reason and mostly attributable to innovation. The evolution of technology has seen a major impact on the cinema business presenting a major threat to the existence of the cinema. Technology also brought with it negative impact like piracy which is a major threat to the cinema industry and its coming out in different forms like pirated DVDs, movie downloads on all forms of media and devices like U-Tube,
iPhones, iPads, internet, laptops, memory storage devices and others. The cinema industry in Zimbabwe is forced to upgrade its facilities so that it moves from the old movies reels to digital for them to cope with ever-changing technology worldwide. Not much study had been done on cinema in Zimbabwe and as such the cinema industry in this country still lags behind in terms of technology as compared to its neighbours like South Africa which now is exhibiting films in the latest technology formats like 3D and it looks like it is the way to go in the new world if the industry is to survive.

Cinema began perhaps as the novelty of the technology that attracted audiences (Petrie, 1998, 238). However, stories and narratives began to appear when the artistic potential for the new medium began to develop also the budding creative techniques such as montage also came into being. Though the drive for verisimilitude contributed to the development of sound it is still argued that it reinvigorated the sense of novelty amongst the audience as people not only were going out to watch movies but to experience the new spectacle. Gomery argues that the introduction of sound was a result of a model of invention, innovation and diffusion. With the invention of sound recording, Warner Bros. and Fox studios saw an opportunity to innovate and combine it with film for spectacle, and other studios picked it up and the technology diffused (Gomery quoted by Petrie, 1998, 240). As Petrie points out, ‘at each stage, the overriding concern of the companies concerned was the maximisation of long-term profitability’ (ibid).

Whilst television and cinema fought for the attention for viewers, it was arguably a fundamentally different medium and therefore the two co-existed quite successfully. More importantly, the film industry realised that selling their catalogue of movies to television broadcasters brought an extra revenue stream, and perhaps in turn acted as an advert for cinema itself. After all if the audiences enjoy watching their favourite stars on the television, they would be inclined to go and watch their new releases in the cinema so that they do not have to wait for it on television. Perhaps the largest concern for cinema came with the arrival of video recorders. This technology offered one novel difference that had eluded television - control. However, video enabled the audience to record television, watch it at their leisure, collect their favourite shows, and most importantly, skip to their favourite bits by fast-forward and rewind, but it interestingly sparked an economic advantage for studios. Once again, they were
able to market their back catalogues upon another platform, which saw people buying their favourite films on VHS to watch at their leisure. This lead to the increase in piracy which is the most serious threat facing the cinema industry in Zimbabwe today.

Digital product permits non-physical delivery to the viewer and there is no need to manufacture prints unless we choose to. Where copies of an original are made, each is a perfect clone of the original and there is no deterioration with each subsequent showing. Because the movie is stored digitally, its physical size is no longer an issue and once loaded into the server and the movie calibrated, it does not require the attendance of the projectionist to do any more than start the show. However, for the moviegoer, concerned with the cinema experience rather than the technologies behind it, the outcome is that the presentation will be of exactly the same standard with each projection.

Distributing digital files should not only yield great benefits in terms of the clarity and quality of the image seen by cinema audiences, but also offer greater security for the distributor and more flexibility for the exhibitor. For example, it affords bestsellers easy expansion to more screens and allows different versions of trailers to be matched to the demographics of a particular audience. A ‘digital print’ can contain multiple subtitled and dubbed language versions. Furthermore, the potential savings on the cost of manufacturing and shipping prints provide a powerful impetus for change.

1.1.1 Digital Technologies
The following technological developments drive the change in the cinema industry.

- broadband Internet connection,
- digital file compression,
- streaming media,
- encryption

These technologies allow video files to be digitized, stored, and transmitted via digital networks, which in turn made video-on-demand (VOD) possible. VOD allows the viewer to choose from a large database of movies located on a video server, and have full control on playing the movie (e.g. start, pause, replay, rewind and fast
VOD is transmitted primarily through two media i.e. digital cable network and the Internet. With broadband Internet connections reaching more and more households, VOD through the Internet is also becoming a viable media for movie distribution.

**Digital Cable Networks**

The movie media is first uploaded to the mainframe computer for storage and distribution to allow customers to select the movie from a standard database. The storage library accepts media from different formats and stores them in the library. The movies are then digitally uploaded to the video server of the cable company where the viewers can select the movie through the set-top box to the television. The selected movie is then uploaded to the digital link, which converts the MPEG file to a RF signal for transmission. Then the link establishes a one-to-one connection to the serving residence and the movie is ready to be viewed.

**Internet VOD**

The Internet VOD sites provide similar services except they bypass the cable company and play directly to the computer rather than to the television. VOD sites such as Mediatrip.com and Sightsound.com host the movie databases that the viewers can download to their computers. The movie files downloaded are usually compressed to speed up the download time. A typical movie is about 200 to 500 megabytes. Download time varies depending on the connection speed (presently about 20-40 minutes with a T1 connection). After downloading, the viewer has full control over the movie similar to VOD through the cable TV network (replay, rewind, fast forward). The file is viewed using a media program such as Windows Media Player or Real Player. In order to view the movie, a password is necessary to launch the file. The files are encrypted to prevent file swapping. The movie can either be purchased or rented. In the case of rentals, the movie has a time limit at which the viewer can access at will, after which the authorization code has to be renewed prior to further viewing.
1.2 Industry Analysis

Borg and Gall (1998) argue that PESTLE analysis is the best tool to explore the Political, Economic, Social, Technological, Legal and Ecological dynamics affecting business in a country. On the other hand, Mukarati (2005) admits that this type of analysis is limited in that PESTLE analysis only gives a snapshot of the concerned factors at a particular point in time. Thus, such an analysis should be carried out continuously as market dynamics evolve.

Zimbabwean movie theater attendance has, in the period under review, have been affected by the completion from substitute products coming up due to technological innovation. Current release windows between cinemas and DVDs has been shrinking recently due to the increase in the DVDs market thereby making the future of cinemas houses to be uncertain because they will no longer have the firm competitive advantage that they historically enjoyed. This study considers how the Zimbabwean cinema industry, in light of the direct threats from new technologies, can re-establish a sustainable competitive advantage today for their survival into the future. In addition, it identifies some innovations that may be relevant toward that end.

1.2.1 Regional Cinema Industry

The regional cinema industry in the Southern Africa is mainly dominated by two South African cinema houses which have branches in a number of countries in the region. These cinema houses have managed to dominate the industry in the region because besides owning cinemas they also own the supply side of movies in Africa. They do own companies that are the distributors of the movie products from production houses like Warner Bros, Universal Pictures, Fox, Disneyland Paris and many others. Though there are other smaller movie suppliers like United Independent Pictures Ster-Kinekor and Nu-Metro remain the market leaders maintaining their monopoly both in movie products supply and exhibition in Africa. They have also taken the lead in digitalising their cinemas ahead of other cinema houses in the region and they are the first movie houses to bring 3D cinema in Africa. The impact of digital technology on cinema has seen these companies responding to the call and because of their financial muscle they have managed to change the landscape of cinema in Africa. The Zimbabwean cinema houses depend
entirely on these South African companies for movie product supply and obviously the lead they have taken is going to affect the Zimbabwean market in a big way.

The following media articles adapted from http://www.balancingact-africa.com do reaffirm what these movie houses have done in response to needs of the ever-changing digital technology that have taken centre stage worldwide, and affecting the production, supply, distribution and exhibition chain of film products. Zimbabwe movie industry will affected by these changes either in the positive or negative way depending on way they respond to them. If it chooses to ignore these changes they run the risk of going into extinction because they will not be able to get movie product in the 35mm reels which are the current movie format that is being replaced by digital technology.

“Digital Cinema has the capacity to take Africa’s under-invested cinema industry out of the woods

A number of African countries outside of Sub-Saharan Africa there are very few cinemas relative to the sizes of population and in most cases they are in a very bad or poor state. The recent technological changes that saw the digitalisation of South African cinemas shows that Africa is keeping pace with technological innovations in this industry. The impact of digitalising cinemas does have a role to play in reviving the viability of most cinemas in Africa especially in face of the upsurge in piracy and declining cinema attendance.” (www.balancingact-africa.com).

The problems affecting movies distribution, the cost of making the 35mm film prints is set to be solved by the digitalisation of the cinemas as there will be no need for these and placing of advertisements will be easy and this will present any extra avenue flow for the cinema industry. Digital cinema also offers opportunity for live transmission events like soccer matches or shows thereby offering a better viewing experience and excitement of a live event.
1.2.2 Cinema Industry in Zimbabwe

Zimbabwe industry currently does have only two players i.e. Rainbow Cinemas and Ster-Kinekor. Rainbow Cinemas is Zimbabwean whole owned company whereas Ster-Kinekor a South African franchise. The cinema industry in Zimbabwe have gone through tough times over the years and the state of the current cinemas have gone down due to lack of maintenance owing to viability problems as a result of the economic status of our country. This saw small players like Liberty cinemas closing shop and the major players closing most of their branches in most towns leaving only Harare and Bulawayo. The impact of digital technology had taken toll not only in this industry but even in the music industry as well. This effect had a ripple effect also on the local film production where there local productions could not reach the cinema audience due to the closure of cinemas leaving only the available movie houses to exhibit the international movie products that made sense to screen for them to sustain their operations.

The following articles adapted from [http://www.nai.uu.se/research/finalized_projects/](http://www.nai.uu.se/research/finalized_projects/) do bear testimony to why this analysis is necessary so as to proffer solution to this industry that was once viable in Zimbabwe and which is doing well in other countries worldwide.

“Zimbabwe’s film industry which has shown some growth in over the past few years is set to be hit hard by the closure of cinemas halls, especially in the capital city, Harare. Rainbow’s Avondale movies houses namely Elite 100 and 7 Arts were closed with the latter now reserved for conferences and events and the Westgate division of Ster Kinekor was also closed limiting movie lovers to Ster Kinekor at Eastgate, Rainbow City Robert Mugabe and the less fashionable Liberty cinema which is located along Cameron Street in down town Harare. This development has also affected the blooming film industry in the country. The numbers of audiences and viewers for all the movies that are coming out have been cut as the concentration when marketing the films is focused in the CBD only”.

“Cinemas play a vital role in marketing a movie. People will get to buy a movie mostly when it is showing in the movie house as there is a general competition between the movie house and the extreme movie lovers. Movie enthusiasts mostly buy films that are on the next attraction just to beat the
cinema. With all the movies that have come out in Zimbabwe since the closures, it can be said that sales of the movies could have been pushed up. This has forced the current trends of DVD marketing. The kind that was used in the selling of Lobola where there vans, mini buses and trucks going around the country selling the movie for a little price, US$1 to be precise. But funny enough they managed to make profits of over US$70 000 which was added upon to bring out another movie, The Gentleman”.

“Another challenge is that the open places seem sceptical to showing local products. 2011 has seen over 5 movies being launched but of those only one hit the movie house. If there is no active interaction between the films and the consumers, room for improvement in the film industry will be very slim. Movies such as Think, You Owe Me, Twisted, City of Dreams, Playing Warriors and The Gentleman to mention a few were all good in their own right but the biggest problem is that people will only get to see the movies on the posters as they get advertised. All these great art works have potential to hit the market and make it big but the channels for them to reach the public have been grossly limited”.

1.2.3 Macro-Environment Analysis
Changes in the macro environment for the cinema industry can have a direct impact on the attractiveness of the industry. People across all demographics are considered movie watchers. Youth and young adults make up the majority of people that frequent movie houses. The current economic slowdown that our country is currently experiencing leads to a reduction in consumer expenditures, and increases the competitive pressures within the industry. Movies are a very popular source of entertainment. There are movies that fit each consumer’s personal preference. The youth of this generation are constantly seeking cinemas for the movie experience.

1.2.3.1 Political
Developments within a country’s political system have implications to the country’s macroeconomic policies, as well as laws and regulations (Jones and Hill, 2006). Business only thrives if government successfully plays its role of creating an enabling environment Maignan and Lukas (1997) and enabling environment necessary for business to thrive (McCarthy and Perreault, 1993).
The political situation in Zimbabwe at the moment is stable and does provide a conducive investment climate for the current cinema houses to attract investors as technical partners to capitalise the industry so that they upgrade their projection equipment to digital cinema. The investment partners are still sceptical about the situation in the country due to the impending elections which can be called at any time from now and the current disagreements over the draft constitution which is being drafted. All these affect the delivery of the inclusive government which is supposed to turn the fortunes of the country’s economy.

1.2.3.2 Economic
The macro-environment is affected by economic changes. The ability of firms to earn an adequate rate of return on their investment is dependent on national macroeconomic conditions (Hill and Jones, 2006). Cinema industry is a heavily capitalised industry that acts as an entry barrier to new entrants and those companies in the Industry, like Rainbow cinemas, stand to benefit from this factor and it is actually strength on their part and they are already established. Rentals for cinema space is quite expensive in Zimbabwe as properties rentals are quite high and cine by the nature of the business occupy huge floor space and most property owners are preferring to partition their properties and let them to small retail shops especially the clothing and motor parts shops owned by Nigerians which are fast invading the city. Cinemas by their nature and by world standards are supposed to pay rentals based on turnover not per square metre but in Zimbabwe the cinemas house are facing a major challenge in that they are paying rentals per square metre and this is not in tandem with the revenues they generate, posing a serious threat to their survival. This is also coupled with the liquidity crunch that is besieging the country at the moment. The hyper inflationary environment period took spending money away from consumers and cinema attendance declined significantly. Cinema is a luxury and most people prefer to provide their families with the basic requirements like food, shelter and clothing leaving them with very little to spend on entertainment like cinema, thereby affecting the survival of cinema in Zimbabwe.
1.2.3.3 Social
The society in Zimbabwe is a conservative society where some movies which are
allowed to be exhibited in other countries are barred from being screened in the
cinemas by the Censor Board because of the cultural differences, e.g. movies with
strong language, violent scenes, sex scene are not allowed in Zimbabwe and these
are the movies that make money in the cinema business and all this is attributed to
culture. Social ills like poverty and diseases are also affecting the industry in that
most people don’t have disposal income to spend in the cinemas. The social
environment has also evolved over the years. Cinema houses have changed from
one-film movie houses to cinemas offering multiple screens’, food and beverages (eg
Rainbow cinemas’ Robert Mugabe road multiplex has 5 screens, a bar, fast food
outlet and sports shop all under one roof). Movies houses therefore are now in
competition with other forms of entertainment, because cinema is the cheapest form
of entertainment world wide.

Demographically the cinema industry has catered for the teenage consumer. For
years teenagers have used cinema houses for both entertainment and social
interaction. Today, the industry still caters to the teenager; however, now the
cinemas realize the profit potential from middle-aged consumers by offering product
ranges that cater for different age groups.

1.2.3.4 Legal
Piracy is a major threat to the cinema industry in Zimbabwe in that most movies are
now sold in the streets for a very cheap price. The absence of an effective legislation
that governs piracy and copy right issues is making it difficult to police the industry to
protect the players from piracy. The only government body that regulates the
industry is the Censor board which does not have the capacity to police the industry,
thereby making it very possible for piracy to thrive. The advent of technology has
also contributed much to the thriving of piracy because people can now down load
movies using the different digital technologies like internet broadband and others
from sites such as U-Tube, thereby contributing to piracy.
Today, cinemas have many regulations with which they must comply. Legal issues like council by-laws that require cinemas to meet certain standards are also making it difficult for the operations of the cinemas to be smooth. For instance, cinema houses now serve food and beverages; therefore, they must comply with health and safety requirements regarding food service. Laws also provide that cinemas auditoriums and toilets must be equipped to accommodate persons with disabilities and must have fire exit points and fire extinguishers fitted. Poor revenues in the cinemas due to some of the reasons mentioned above are contributing to the cinemas house to be in a position where they are not able to pay reasonable salaries and wages culminating in labour disputes. The indigenisation laws that require foreigners to give 51% to the locals are also hindering the cinema industry in attracting foreign partners to capitalise the industry. The banking capital requirements recently revised up by the central Governor has also made it difficult for banks to provide loans for businesses to capitalise.

1.2.3.5 Technological

The fast changes in digital technology have lead to major technological advancements in the cinema industry. The size of the screens and the quality of sound of the movies houses have improved significantly over the past years. Some cinemas houses like Ster-Kinekor now have digital surround sound that makes the moviegoer’s experience more realistic. With where technology is taking us the 35mm reels will be phased out and replaced by digital films when the industry fully embrace the new technology. This will enable other forms of entertainment like live soccer matches to be screened live on the big screen.

Technology has been ever increasing and has upgraded the quality of the cinema experience. Cinemas introduced Cinemascope and stereo sound to make the visual experience more stimulating. Some cinemas in the region like those in South Africa now use Internet technology to make tickets available online for customers with access to a computer. Other types of cinemas with 3D have even developed hydraulically mobilized seats and computers to synchronize seat movements with the film. These specialty cinemas give movie watchers the sensation of being in the film.
1.2.4 Industry Scope
The scope is based on the cinema or motion picture theatre industry. As the scope is widened, the medium scope becomes cable television and VHS/DVD rentals, while the broad scope entails all entertainment.

Key Players
- Suppliers: Movie Studios, distributors
- Buyers: Final buyers who watch movie in cinemas
- Substitutes: DVD/VHS rentals, cable television, and other entertainment
- Rivals: Ster-Kinekor Cinemas

1.2.5 Porter's Five Forces Analysis
Competitive Analysis of the Cinema Industry

Disruptive Technologies
- P2P File sharing systems.
- Digital Recording and reproduction

Potential Entrants
- Online video stores
- New production studios

Industry Competitors

Intensity of Rivalry
- Promotion, publicity, branding, loyalty (eg concerts, premiers)
- Changing tastes, demographics and attitudes.

Synergy of Interests
- DRM Technologies
- RIAM/MRAA
- Litigation, lobbying
- Education

Suppliers
- Artists/writers guilds.
- Production staff.
- Media/Equipment manufacturers

Buyers
- Channels (eg retail/rental stores, cinemas, television, radio, online stores
- End users

Substitutes
- Internet
- Video games
- MTV
- DVDs

Complimentors
- Audio/Video/TV recorders
- iPods and other devices
- Internet
- Agents/Publicists
- Pay Pal, Netflix, Online Jukeboxes
- ISPs and Portals (eg AOL)
- Virtual communities (eg Chat and searches)

Source: Porter, Michael E. (2001)
Substitutes
Cinemas face competition from other ways of accessing films, including DVD players, home theatre systems and downloading or streaming content from the internet, as well as from other forms of entertainment, such as video game consoles or sports. The rapid penetration of in-home entertainment equipment such as projector screen TVs affects industry revenue by competing with cinema houses for a share of household disposable income spent on entertainment. The growing prevalence of online content, though, has become a greater threat to the industry during the past five years. Since 2007, the number of broadband connections has grown at an annualized rate of 16.4% and is forecast to expand 6.6% per year on average through 2017. As more consumers become comfortable with downloading and streaming movies onto their computers, smart phones, mobile devices like iPods and tablets like the iPad, demand for theatres falls.

Furthermore, the substitute’s industry is very profitable. Video rentals generate more revenue than cinemas, while costs are often minimized. Pay-per-view is another substitute (offered by cable and satellite companies) with a large profit potential. This is also significant and delivers more power to substitutes. By and large, substitutes to the cinema industry have a high level of power.

As a people become busy in their lives they will have less time to go out for entertainment such as cinemas. On average people now spends 50% more on DVDs than on cinema tickets as evidence by street vendors on all corners of the streets of Harare selling pirated DVDs for $1.00 for a disc with 5 or more movies. This sharp increase in DVD sales is also a reflection of new technology in plasma televisions and home theater equipment which has dramatically improved in quality and price. Additionally, the computer game industry eg the fantasyland at Joina City and Eastgate, now competes against cinemas industry spending. Young people today have very different perceptions about entertainment, and value their mobile phones and Internet access over TV (Parson, 2006).

In general, the attractiveness of the cinema industry is medium-low. The biggest threat to the cinema industry is the power of substitutes. As ticket prices continue to increase and the cost of substitutes decreases, more and more consumers may opt for substitutes such as video rentals.
Buyers
It is important to note that the direct buyer is the final customer, also known as a moviegoer. The concentration of buyers relative to the cinema industry is low. Moviegoers purchase tickets individually and rarely in bulk, which weakens the power of buyers. This factor is somewhat important and the volume of purchase of each buyer is low. It may take millions to deliver motion pictures to audiences, yet the buyer pays under $5 for viewing rights. This, too, decreases the power of buyers. Product differentiation and switching costs are ranked medium-low. Many moviegoers have preferences as to which cinemas they wish to patronize, whether it is based on the seating format, proximity, kind of films showing (i.e. low-budget independent films or blockbusters), or cost. Furthermore, movie listings are easy to access and compare. This increases the power of the buyer, and is somewhat significant.

Suppliers
The major production houses like Warner Brothers and their distributors like Nu-Metro and Ster-Kinekor studios, as a collective of suppliers of high-quality movies, have great market power because they enjoy overwhelming channel dominance. The availability of substitute supplies is low. Movie distributors are limited in number due to the huge capital required to produce a film. This strengthens the power of suppliers and cinemas, as buyers, are left in a disadvantaged position because they lack have limited sources to procure good product. Most movie supply contracts favours the distributors in the first weeks of release as they share the box office revenue on almost 50/50 basis. Cinemas are forced to maintain good relations with the suppliers in order to get a constant supply of new movies for them to generate good profits. There is also a slight threat of forward integration, as many movie studios distributors (eg Ster-Kinekor and Nu-Metro of South Africa) own cinemas as well. Switching costs are low. If a film is not selling tickets, then it won’t be showing for a long interval. This decreases the power of the supplier.

Barriers to entry
There is not a significant threat of new entrants into the Cinema industry in Zimbabwe. Barriers to entry are very high in the Zimbabwean cinema industry, unless the new player targets a niche market that has not been well served. The costs of purchasing and operating capital equipment such as digital projection
systems, screens and speakers are high, as are the costs of establishing auditoriums on par with the quality offered by the industry's major players. Opening a large multiscreen complex entails high rent and utilities costs. Economies of scale within this industry are high for the major players. Entry into the industry involves high risks by entering on such a large scale with high capital costs. Ground up construction costs can easily reach into thousands of dollars. The main dominant players in the Zimbabwean cinema industry (like Rainbow cinemas and Ster-Kinekor) have been in the cinema industry for many years. They have managed to perfect their business aspects such as efficiency and marketing through trial and error and now they are market leaders. Consumers are familiar with the quality of service offered by these movie houses they have therefore established high product differentiation and brand loyalty. Furthermore, they are generally located in favourable or strategic locations, which are readily accessible by the customers.

Technology is another mobility barrier that bars new entrants. E.g. Ster-Kinekor, is digitalised its cinemas at a cost of “$80,000 to $100,000 per screen.” Projection equipment is also very expensive and is required to show the films. These improvements will dramatically improve the position of the cinema house in consumers' minds. Such cinema houses have the ability to fund big capital projects, due to huge corporate capital resources, while the smaller cinema or new entrants cannot compete. Scale economies will enable existing firms to price below a potential entrants cost of production while still making a significant profit. Switching costs are relatively low to the buyers. Most Cinemas have little difference in price, and service and movie goers are able to have many movie options to choose from no matter which firm they decide to frequent. Product differentiation is medium in the cinema industry as the product is differentiated in cinemas that don't offer the current new releases and those that offer foreign or educational films.

**Rivalry**

The intensity of rivalry in the cinema industry is high and the industry is considered a consolidated industry that is dominated by a small number of large companies. Movie theatres compete against one another primarily on the basis of film offerings, ticket prices, and auditorium quality and concessions offerings. The popularity of certain films is the most important determinant of demand for a theatre, and the ability to secure the license to exhibit a season's biggest hit is a theatre’s strongest
competitive advantage. Strong links with movie distributors that have a strong slate of film releases ensures that a theatre can offer the most popular films. Additionally, the capability to show 3-D films expands a theatre’s range of exhibition options and can attract moviegoers seeking the 3-D experience.

Firms in this industry are interdependent and the competitive actions of one may directly affect that of another. Exit barriers for cinemas houses are high due to the design of multiplex which are expensive to convert for use for other forms of business, (e.g. Rainbow Cinemas converted the Old Broadcasting Houses along Robert Mugabe road into a 5 screen multiplex.). This has resulted in intense rivalry within the industry, with Ster-Kinekor opening up a 5 screen multiplex as well at Eastgate in the same street. The two cinema houses that dominate the industry have similar market power and offer the consumer the same unique product. The cinemas require specialized assets that include projectors, screens, and certain types of seating making the exit barriers in the industry to be high because of equipment costs and capital investment involved. This makes it more practical for the firm to stay in the industry and compete with other existing rivals.

Both multiplex cinemas receive newly released movies from the same South African suppliers at the same time and customers can easily switch between the movie houses. However, fixed costs and exit barriers are high throughout the industry. There are no price wars in the industry because all players are charging the same ticket price.

1.2.6 The Movie Value Chain

The value chain of a movie includes production and distribution. The production of a movie is a complex process that involves many different owners and suppliers. Owner scan include the screenwriter, producer and the movie production studio that will ultimately distribute the finished movie. The creators of the movie, the content producers, can operate independently of the movie studios that market and distribute the movies. In this case, the movie studios act as the aggregator and distributor of the finished movies. Suppliers in the motion picture industry include the people that work on the movie, such as the actors and editors, the equipment manufacturers, the suppliers of the film stock, and the companies that develop and duplicate the finished film.
1.2.6.1 Production
The production phase is where the actual shooting of the movie takes place. The film that is shot each day is sent to the film lab for development into “dailies” so that each day’s shooting can be reviewed during the production of the movie. The “dailies” allow the movie producers to monitor the creation of the movie as it’s being shot. After shooting has been completed, the movie is assembled during the postproduction stage. During this phase, the raw film footage is edited and reduced into the final movie. Visual effects, music, sounds, and voice-overs are also added during post-production. Once the movie has been completed, it moves on to the duplication phase where thousands of copies are made for distribution.

1.2.6.2 Distribution
Movies are typically distributed through multiple channels. Consumers differ in their taste, preference, urgency, and willingness to pay for the movie. In order to maximize revenues, production studios release films to the distribution channels in sequential release windows, typically in the following order: movie theaters, video rental stores, sell-through videos, pay-per-view television, premium channels, and finally basic cable/network/syndicated television. A film’s success depends largely on its cinema theatrical performance, which in turn affects the performance in video rental and other distribution channels.
Figure 1.3: Distribution model in digital cinema
Source: Küng (2008),

- **Content Provider** is the digital rights owner of the digital content, who wants to protect these rights of theirs against the act of piracy. In the context of digital cinema, content providers will be movie studios who produce the films.

- **Distributor** is a party who provides the distribution channels for digital content to be delivered from content providers to consumers. Upon receiving the digital content, distributors create a catalogue presenting the content and the right metadata for the content promotion.

- **Consumer** is a party who accesses and uses the digital content. Consumers obtain the digital content from the distributors and buy licenses to access the content from clearinghouse. In the context of digital cinema, consumers correspond to movie theaters where digital movies are shown to the viewers.

- **Clearinghouse** is a party who handles digital licensing by issuing and controlling the rights to access the content. Clearinghouse issues a digital license in exchange with consumer’s payment. Royalty fees and distribution fees will then be paid to the content provider and the distributor, respectively.
1.3 Background of the Case Study Organisation

Rainbow Cinemas, a leading movie exhibitor in Zimbabwe, is being used as a case study in this study. Rainbow Cinemas is the biggest movie house in Zimbabwe with almost 80% market share in the movie business. It has got branches in the four major cities in Zimbabwe, with its competitors with branches only in Harare.

Independent Theatres (Pvt) Ltd, Trading as Rainbow Cinemas, was formed in 1965. It opened its first cinema, the Rainbow Park Lane, in March 1966. The company was very much under-capitalized to the tune of $20,000. With the help of a bank loan help it bought Duthie Hall in Park Lane for $30,000 and proceeded to make extensive alterations and fitting it to reasonably modern standards. No reserve bank approval was required at the time as the business was wholly funded from local capital sources.

At the time their competitor, Ster-Kinekor had three branches in Harare, namely the Palace, Rhodes and the Royal. These were poorly managed, with no showmanship and Rainbow Cinemas took advantage of this opportunity to become the market leader. Soon afterwards Rainbow made its first modern development in terms of seating and screen size during that time, the Vistarama cinema at Avondale Shopping centre, Harare, in 1971. Subsequent years saw the opening of more cinemas in Mutare, Masvingo, Bulawayo, Gweru, Kwekwe and major investments into existing cinemas and live theatres in Harare and Bulawayo (i.e. 7 Arts). Rainbow also expanded into Drive-in Theatres in Bulawayo, Harare, Kwekwe and Mutare, although these later on became the first casualties of post-Independence market dynamics which led to their eventual closure. Until then the business targeted only white audiences while the black patronage was negligible.

The company undertook a strategic review to retain its position as having the highest occupancy rates in Africa, with 90% black audiences. The era of the multiplex came as the company opened Harare City multiplex (5 screens) and Bulawayo City multiplex (4 screens). These today are the company’s flagships and the company has also closed shop for most branches remaining with only the Harare and Bulawayo branches due to most of the reasons mentioned above.
1.3.1 Rainbow Cinemas Organogram

Figure 1.4 Rainbow cinemas organogram

Vision
To be the preferred motion picture cinema house and total entertainment partner in Zimbabwe.

Mission
To create value for all our stakeholders with the delivery of innovative total entertainment products combined with dining products that enrich our customers’ lives in a fun and friendly environment.

Our Value Proposition
- Trusted quality content
- Trusted brands
- Multiple channels
- Talented people

Values
- Joy everyday – bring pleasure and entertainment to people’s lives
- Innovation – seek out illuminating discoveries
Empowerment – reflect diversity, encourage development of our patrons and staff.

Treat all people with respect and dignity - value differences

Pursue an unrelenting quest for quality

Conduct ourselves with the highest level of integrity and business ethics

Place the interests of customers first; our success depends on your success

Commit to teamwork; seek out and use the ideas and skills of all associates

Our strategic focus

- Operational focus
- Investment in digital
- Human capital
- Growth

1.3.2 Business model

According to Hamel (2000) a business model is a business concept put to practice and it consists of four elements that are customer interface, core strategy, strategic resources and value network. Mansfield and Fourie (2004: 39) define a business model as a linkage between firm’s resources and functions and its environment. A business model’s strength as a planning tool is that it concentrates on the way that all the elements of the system fit together. (Magretta 2002: 90)

Timmers (2000: 32) defines a business model as 1) an architecture for product, service and information flows, including a description of the various business actors and their roles, 2) a description of the potential benefits for the various business actors and 3) a description of the sources of revenue. In the same way as Timmers, Dubosson-Torbay et al. (2001: 7) understand a business model as the architecture of a firm and its network of partners for creating, marketing and delivering value to one or several segments of customers in order to generate profitable and sustainable revenue streams. According to Mansfield & Fourie (2004: 39) a business model is a contingency model that discovers an optimal mode of operation for a specific situation in a specific market. According to Magretta (2002: 87) business models are stories that explain how enterprises work. A good business model tells who is the customer, what does the customer value, how does a company make money in its business and what is the underlying economic logic that
explains how the company can deliver value to customers at an appropriate cost. Similarly to new stories, new business models are, to some extent, variations on old ones. (Magretta 2002: 87-88)

![Business Model Diagram](image)

According to Chesbrough & Rosenbloom (2002: 532) a business model offers a consistent framework that takes technological characteristics and potentials as inputs and converts them through customers and markets into economic outputs. The business model is therefore considered as a mechanism that mediates between technology development and economic value creation.

(a) Target Market

Customers are the livelihood of every company since revenue streams come from them and successful organisations understand their customers. The current target market comprises the teenagers and the young adults in the age groups 15-35 years. The company also caters for children under the age of 12 by screening children's movies eg Madagascar, Ice Age etc mostly during school holidays. The organisation’s customers are segmented into high, middle and low income earners and spenders. The high and middle income segment of its customers is catered for by the Avondale cinemas which screen movies which are meant for that type of market. The area does have plenty of parking spaces and that’s where most of the white community come to watch their favourite movies. The Avondale Cinemas also charge a premium price which is slightly higher than what is charged in the CBD cinemas which caters for the middle and low incomes earners. The movies screened in Avondale are different from the ones screen in the CBD or downtown cinemas in Bulawayo because of the differences in taste eg mostly the low income black movie goers love action
packed movies, horror and movies with sex episodes whereas the high income especially the white community love romantic and comedy type of movies.

(b) Value proposition/offering – what do we offer each of our client segments
Our offer is what attracts our clients and it is the value that they are willing to pay for and this value is described as a value proposition for each customer segment. Rainbow cinemas do offer a variety of movies and live theatre performances at 7 Arts in Harare and Bulawayo. The different type of movies that the company offers include Action packed, Horror, Comedy, and Romantic, Thrillers, Sex, Documentaries and drama. The theatres are also hired out for live shows especially musical shows and churches on Sunday morning.

Movies are a form of entertainment that also helps in relieving stress among people and also provide people with an opportunity to meet with friends. The business has also diversified by adding among its product range the screening of live soccer matches and other sporting activities like rugby on the big screen. By watching soccer on the big screen the company provide customers with the opportunity to watch soccer in an environment which is similar to the soccer stadium. Besides screening current movies the company have set aside one auditorium in Harare and Bulawayo where it screens old and repeat movies that people want to watch again and refresh their memories or they will have missed it when it was in the theatrical release circuit.

(c) Value Chain – Communication and distribution channels
A company reaches its customers through various communication and distribution channels. They represent the interface between a company, its value propositions and its customers. Rainbow cinemas do communicate with its customers through a number of ways or channels. The company does screen at every show before the main movies forthcoming attractions so that the customers are kept updated of the new movies that are coming. Most customers make decisions on which movie to watch after watching the movie highlights or trailers or seeing a poster. The company does also advertise in both the print and electronic media the forthcoming movie attractions they also display posters on display windows at the cinema venues for convenience of the customers to make
choices. The company also get feedback through the website and suggestion boxes at its cinemas.

The company’s movies are supplied by South African movie distributors namely NuMetro, United Independent Pictures, Ster-Kinekor and Independent Film Distributors. The movies come in the form of 35mm reels which are run on the film projectors to produce sound and picture on the screen. The movies are sent from South Africa via freight companies like DHL or FedEx and they subject to import duty at the country’s entry points. All movies are censored by the Censor Board, a government board set up to censor and regulate the industry before they are screened for public consumption and it is the board that set up the age restriction for all movies to be screened for the public they ensure that they do conform to the Zimbabwean culture, values, norms and beliefs and they have the powers to ban any movie that portrays things that go against the morals that are upheld by the Zimbabwean society.

(d) Revenue Streams – how do we earn our money?
Our business model’s sustainability depends on the revenues we can capture from our value creating and customer facing activities. Revenues streams come from segments of clients who are willing to pay for the value they get from our offer.

Cinema is the cheapest form of entertainment world over but it is a capital intensive business which requires a huge capital outlay to set up a new cinema. Once the business is set it is very profitable as long as the organisation is giving the customers the right product. The ticket price to watch a movie is shared between the cinema and the movie suppliers as the movies are supplied on a hire basis and usually it’s on 50/50 sharing basis. 50% of the company’s revenue comes from confectionery, popcorn, variety of non-alcoholic and alcoholic beverages that are on sale to customers in the cinemas. The company’s pricing policy is a 50% mark-up on all items sold in the cinemas. Popcorn and drinks are the fastest moving lines in the cinema and these contribute over 60% of the revenues from the items sold inside the cinemas. Besides the screening of movies the cinema also screen live sports like soccer and they do hire the cinema auditoriums on Sunday mornings to churches and live performances like musical shows and festivals like NAMA and HIFA.
Most of the revenues that the company gets goes into operational expenses such as staff costs, rentals, utility bills like ZESA and city council, cinema equipment maintenance and film hire. However the company is facing some challenges from piracy which is the biggest threat to the survival of the cinema industry in Zimbabwe.

**Key Resources – based on which assets are we running our business**

There is need to analyse the key resources we need to make our business model function with the aim of identifying the key tangible and intangible resources which are the fundament of our business model.

The key resources that cinema have as a business is the staff especially the management, technicians and projectionists. These are the people who take care of the projection equipment that is used in the cinema and ensure that the film is on the screen and that there is adequate sound and fine picture quality and this is the heart of the cinema operations. The film projectors are a key resource in a cinema because without a projector there is no movie on the screen and consequently there is no cinema and most projectors are cinema specific with little or no alternatives. The auditoriums must be fully sound proof and air-conditioned to provide comfortable facilities. Safety of customers is also vital as the structure of the cinema building must have enough fire exits and fire extinguisher equipment in place in case of emergency. Health of the staff and customers is also important hence every cinema does have enough clean toilets with running water and well air-conditioned facility.

**Competitive Strategy**

At present, Rainbow Cinemas is the only movie house with presents in most towns in Zimbabwe. Its competitor Ster-Kinekor is only operating one 6 cinema multiplex in Harare leaving Rainbow to have a monopoly in other towns. Rainbow controls about 80% of the cinema market share in Zimbabwe by virtue of that it is the market leader who dictates the pricing structure in the industry. The company has managed to build a strong brand over the past 45 years of its existence in Zimbabwe. It has also managed to create customer loyalty among its customers where some of them have a club which gets discounts from Rainbow on events
like soccer world cup. The company also run promotions where every Tuesday customers pay half price to watch a movie.

Cinema is a heavily capitalised industry and this acts as a barrier to entry by new players and the fact that cinema is the cheapest form of entertainment in the world one will not expect to reap super profits in the short term.

Although this model is working well currently, the company is facing a lot of challenges from piracy and the advent of new technology in the form of DVDs, and the internet where people can now download movies thereby poses a threat to the cinema industry. However the company have shifted its focus to promote the cinema experience not necessarily the movie products. There is great need for the company to give its cinemas a facelift so that they make their facilities comfortable and to embrace new technology trends by digitalisation of its cinemas to enable it to make this new thrust a reality of making cinema an experience. Rainbow Cinemas has a working model that has served it well for the past years but this needs review in terms of the revenue generation aspects. This is where the greatest challenge towards sustainability is being encountered.

1.3.3 SWOT Analysis of Rainbow Cinemas
According to Thompson and Strickland (1990), a SWOT analysis consists of sizing up a firm’s internal strengths and weaknesses and its external opportunities and threats. It therefore suggests that the strategy must produce a strong fit between a company’s internal capabilities and its external situation. Grant (1995) argues that the SWOT analysis framework is handicapped by difficulties in distinguishing strengths from weaknesses and opportunities from threats. Ultimately, the focus then centres on the potential implications of factors in order to classify them as strengths and weaknesses. After the PESTLE analysis, the task is then to carry out a SWOT analysis of Rainbow Cinemas.
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<tr>
<th>Internal Factors</th>
<th>External Opportunities</th>
<th>External Threats</th>
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</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td>- Market leader in terms location and number of screens</td>
<td>- Competition-unregistered cinema houses</td>
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<td></td>
<td>- 46 years of cinema industry experience</td>
<td>- Economic slowdown</td>
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<td></td>
<td>- Offers live soccer screen on the big screen</td>
<td>- Product substitution – video games Home theatres, Free to air TV channels</td>
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<td></td>
<td>- Brand familiarity</td>
<td>- Pay-Per-View – DSTV TV.</td>
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<td>- Geographical spread</td>
<td>- Consumers’ low disposable incomes and liquid crunch.</td>
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<td></td>
<td>- Movies territorial rights with South African suppliers</td>
<td>- Government and Censor board regulations are becoming high due to the increase of adulthood and violence scenes in movies and cultural influence</td>
</tr>
<tr>
<td></td>
<td>- Huge asset base</td>
<td>- Piracy - CDs and DVDs impose a major threat for this industry. Movies are watched and shared across internet eg P2P file sharing.</td>
</tr>
<tr>
<td><strong>Weaknesses</strong></td>
<td>- Lack of access to film supply funding, - finance and incentives</td>
<td>- Technological advancement leading to equipment to become obsolete.</td>
</tr>
<tr>
<td></td>
<td>- Poor internal capacity to secure funding from elsewhere</td>
<td>- Negative movie reviews on websites and social media are major threats</td>
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<td></td>
<td>- Lack of market research and pre market survey</td>
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<td></td>
<td>- Not innovative</td>
<td>-</td>
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<td></td>
<td>- Not diversified</td>
<td>-</td>
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<tr>
<td></td>
<td>- Weak management team</td>
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<tr>
<td></td>
<td>- Weak, damaged brand</td>
<td>-</td>
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<tr>
<td></td>
<td>- High operating expenses / overhead</td>
<td>-</td>
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<tr>
<td></td>
<td>- Failing business model</td>
<td>-</td>
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<tr>
<td></td>
<td>- Facing bankruptcy – mounting utility builds like ZESA, City Council, etc</td>
<td>-</td>
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<td></td>
<td>- Poor customer service and low revenue generation</td>
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<tr>
<th>Environmental Factors</th>
<th>Strategies to make use of Opportunities through our Strengths</th>
<th>Strategies to prevent Threats through our Strengths</th>
</tr>
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<tr>
<td></td>
<td>- The huge asset base can be used as security to secure funding to capitalise the business by digitalisation of the business.</td>
<td>- Digitalisation is the way to go to curb most threats bedevilling the industry like piracy. Because the company have territorial exhibition rights and a strong relationship with its movie suppliers it will be able to get new movies on day and date releases with other markets around the world.</td>
</tr>
<tr>
<td></td>
<td>- The brand built over the years can be capitalised by opening up new locations and since the company have secured territorial exhibition rights in Zimbabwe and this also acts as a barrier to entry by new players in the industry.</td>
<td>- Diversifying into other forms of entertainment like screening live soccer matches and fast food outlets will help the company starve off the threat of substitutes and cultural influences on movies.</td>
</tr>
<tr>
<td></td>
<td>- With its vast experience in the industry the company can diversify its business by offering live matches in all its cinemas and also take advantage of its geographical spread in the country more than its competitors.</td>
<td>- Revenues bases can be improved in face of the current economic slowdown and the company can also take advantage of the brand loyalty that has been built over the years to starve off completion from new entrants</td>
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<td></td>
<td>- The company can also create a niche market for its bars which are exclusive to Rainbow cinemas as its competitor currently is not diversified to that extent.</td>
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<tr>
<th>Strategies to make use of Opportunities to minimize Weaknesses</th>
<th>Strategies to minimize the potential dangers lying in the sectors where our Weaknesses meet Threats</th>
</tr>
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<tbody>
<tr>
<td>- Digitalize the cinemas so as be innovative and create more and new revenue streams through diversifying by offering cinema advertising and live soccer screenings and also hire out the venues for live events, conferences and churches to get extra income.</td>
<td>- Even though funding for digitalisation and capitalisation is difficult to get in the current economic situation the company can still turnaround the business by minimising its overhead costs through cost cutting measures aimed at streamlining its staff, doing away with shows that do not generate enough revenues to match costs incurred during the show e.g. the late night and morning shows where the attendances are very low.</td>
</tr>
<tr>
<td>- Change management as part of the turnaround strategy to bring in new blood with fresh ideas so that they can revitalise the business and come up with new business models.</td>
<td>- The company can partner with Government bodies e.g. Censor board and ZRP in fighting piracy through sponsoring these organisation by providing resources like vehicles and funds t for them to be able to police and arrest pirates in the industry.</td>
</tr>
<tr>
<td>- Digitalisation will also help in bring down the high operating costs especially electricity because the current 35mm projectors are heavy electricity consumers contributing much to the power utility bills.</td>
<td>-</td>
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1.4 Problem Statement

Necessity is the mother of all inventions and when things change they change for a reason. According to Schumpeter (1975), continued business survival is premised on innovation. Most developments that have taken place in the history of cinema came about for a reason and mostly attributable to innovation. The distribution and exhibition of motion pictures/movies has been changing over the years due to innovation. The basic manner in which movies are distributed and displayed is experiencing the most significant change in its century-long history; film is being replaced by electronic (digital) images of equal or superior quality. This transition is now underway and capital equipment purchases will begin to support installations in many cinemas the world in the coming year. The digital cinema revolution is not just a change in the technology of the medium but also a completely new system change that will add a variety of experiences for the viewing customer. It will change the way theaters do business, with the possibility of new revenue sources, new cost structures and new players. These new models obsolete the term “film exhibition industry” in favor of a more general term such as “theatrical presentation industry.” (MPAA, 2000, Economic Review).

The technology now exists to shoot, edit, distribute and exhibit a movie entirely digitally and the pace of change is increasing rapidly. As cinemas continue to switch to digital and 3-D projection systems, revenue increases because higher ticket prices can be justified. Advances in movie-making and projection technologies have helped to stimulate demand for cinematic screenings. This driver is expected to increase during 2013.

The immediate justification for digital cinema technology is the elimination of print costs. A large blockbuster release in North America will use around 6000 prints. At US$1000 to US$1200 per print (and more in Europe) this will add up to US$6.2m, a significant cost, to the distribution of one movie (ibid). Besides the giving a better image quality there are other advantages that digital cinema technology have on film than the 35mm reels i.e. the shape and colour of images can be transformed with more precision, and elements from both original cinematography and computer generated imagery can be seamlessly composited.
However, the most important consideration is financial savings and it is this that will ensure that digital cinema will predominate. For digital cinema to be successful any savings must be made throughout the distribution and exhibition chain, as it is highly unlikely exhibitors would be amenable to incurring the expense of new equipment if only the distributor will gain. Today, approximately $700 million is annually spent on movie distribution in the United States. (MPAA, 2000, Economic Review). This is one driving force that will motivate the conversion of cinemas to digital over time. Furthermore, the potential savings on the cost of manufacturing and shipping prints provide a powerful impetus for change.

Estimates for the amount the global film industry loses each year to piracy range from US$2 to US$10 billion. The MPAA estimates that its member companies lose between US$3 and US$4 billion annually due to piracy but this does not include potential losses due to online piracy (ibid). Digital cinema technology however cannot possibly hope to end piracy but it does represent an opportunity to reduce this amount significantly. With digital, encryption is easier and can be done in such a way as to make copying impossible in the first place. If as a result the income lost to piracy were to drop by a third this would approximate a saving to the studios equal to that expected on print costs.

Digital cinema technology offers the opportunity to reduce staffing costs. Once roll-out is complete and traditional film projectors become obsolete, then the need for projectionists is removed. Whereas film is labour intensive requiring it to be made up onto reels, laced up in the projectors prior to screening as well as focused and racked (ensuring the whole picture is shown and black bars do not appear at the top or bottom), digital technology does not require this. Once a film is loaded onto a server connected to a projector (either with a physical medium or by terrestrial broadband or satellite) then the only input from the cinema is the information on when the screening should start.

Digital cinema can help exhibitors reach broader audiences and compete more effectively for consumers’ disposable income because it makes possible the display of any image that can be supplied electronically. In addition to digitized film and digital renderings from movie studios, alternative sources including concerts, live events e.g. soccer matches, recorded or live stage productions become available for theatrical quality display. These varied sources may be merged, edited and played out as data files. Further, management of these resources requires much less labor
than today’s film-based theater systems and it also offers exhibitors increased operational efficiency. The electronic file media of digital cinema distribution allows a multiplex to instantaneously change its screen allocations and optimize revenue based on dynamic observation of attendance.

Zimbabwe cinema industry is still lagging behind in terms of technology and they are not in a position to enjoying all the benefits mentioned above. As revealed through the industry analysis, there is need for the cinema industry in Zimbabwe to invest in digital technology to capitalise on these gains and for it to survive. Implementation of digitalisation of cinemas in Zimbabwe will not only bring financial gains but also help to solve the piracy problem that has devastated the industry threatening its existence, thereby putting the lives of those people who are depended on those employed in the cinema industry at risk. It is unfortunate that the Zimbabwean cinema companies are not able to capitalise their businesses, hence this study will contribute in highlighting areas where the industry needs to focus on and save itself from collapse.

1.5 Research Objectives
The major objectives for the research have been identified.

1.5.1 Primary Objectives
To evaluate the impact of digital technology on the viability of the cinema industry in Zimbabwe during the era 2007 to 2012.

1.5.2 Secondary Objectives
1. To establish the major drivers and critical success factors of digital technology in Zimbabwe.
2. To evaluate the impact of piracy on cinema due to technological advancements.
3. To evaluate the impact digital technology on the movie distribution chain.
4. To recommend the best practices for the cinemas to adopt and establish the patterns of the Zimbabwe movies goers in terms of preferences.
1.6 Research Questions
The research seeks to answer the following questions

1. What are the major drivers and critical success factors of digital technology in Zimbabwe?
2. What is the impact of piracy on the viability of cinema due to technological advancements?
3. What is the impact of digital technology on the movies distribution value chain?
4. How has digital technology influenced the customer preferences and taste in the industry?
5. What are the recommendations for the Zimbabwean industry to adopt for them to survive and avoid industry collapse?

1.7 Research Proposition
Digital Technologies have an impact on the viability of the cinema industry in Zimbabwe in enhancing their profitability.

1.8 Significance of the Research
The study aims at making an in-depth analysis of the impact of digital technology on the viability of cinema in Zimbabwe and how the industry can mitigate the impact for them to survive and be viable. It will also look at the strategies that the cinema industry can employ to survive and how the industry can take advantages of the opportunities that come as a result of technology. It will also seek to ascertain the impact of piracy that has threatened the industry and what role it can play to curb piracy. The study will also give an insight to the academics about the industry and how they can contribute to the growth of the industry. It will also help the research to contribute to the body of knowledge and the cinema industry as a whole for the benefit of all stakeholders. We also aim to share insights into the cinema industry in such a way that they will stimulate managerially relevant research.
1.9 Scope of Research
This research will be mainly confined to Rainbow Cinemas Head Office and its Harare branches. It will also look at its competitor Ster-Kinekor Harare branch to compare the two. In conducting the research, the researcher will interview Head Office Management as the decision makers of the company to find out how they have been affected by digital technology and piracy and what they are doing to mitigate the effects. Middle management at the branch will be also be interviewed in order to analyse the impact at branch level and also cinema patrons at the cinema will be interviewed to get their views on the impact of technology and what their preferences are.

1.10 Theoretical Framework
A theoretical framework guides one’s research, determining what things one needs to measure. The theoretical framework is the foundation on which the entire research project is based. According to Sekeran (2003), theoretical framework is a conceptual model of how one theorizes or makes logical sense of relationships among the several factors that have been identified as important to the problem. A theoretical framework discusses the interrelationships among the variables that are deemed to be integral to the dynamics of the situation being investigated.

The figure below is a schematic diagram that illustrates the researcher’s theoretical framework adapted for tackling this research study.

![Theoretical Framework Diagram]

Figure 1.6: Theoretical Framework Diagram
Research studies conducted by Ensign (2004) suggest that Digital Technologies may have a positive impact in business. As such, the Digital Technologies need to be effective enough in order to work as pull factors to support the productivity levels of a firm and thereby in turn eventually boosting the economy through contributions to the National Gross Domestic Product. Therefore, the Digital Technologies are the independent variables and the economy growth is the dependent variable.

In this particular study, the performance of cinemas in Zimbabwe has deteriorated to an alarming rate with calls to recapitalise the industry through digitalisation to curb threats bedevilling the industry. The impact of the Digital Technologies is the moderating variable, theorizing that robust and well digitalised cinemas are likely to result in higher growth and profitability of the cinemas thereby contributing to the growth of the industry and the economy at large. The levels of profitability are the intervening variable.

1.11 Dissertation Outline

The first chapter of this dissertation details the background to the study and the research problem that prompted the researcher to undertake the study. It also outlines the objectives of the study and the associated research questions, proposition, key assumptions, delimitation and limitations of the study.

The remainder of the dissertation proceeds as follows:

Chapter 2 reviews available literature relating to Digital Technology and its impact on the viability of Cinema.

Chapter 3 looks at the research methodology and approach used to obtain data for the research.

Chapter 4 presents the results of the study of evaluating the impact of Digital technology on the viability of Cinema.

Chapter 5 provides the conclusions from the findings of the study. It also details out the researcher’s recommendations and areas of further research for future researchers.
1.12 Summary
In conclusion, the chapter looked at the introduction and background of the problem in an attempt to highlight the magnitude of the problem to cinema industry in Zimbabwe. The research problem was given in this chapter to highlight the theme that inspired the researcher to carry out this study and to remove the problem from being a claim to a fact respectively. Objectives of the study, research questions, research proposition and significance of the study scope were also covered in this chapter. The following chapter reviews the literature related to the whole concept of the Impact of Digital technology on the viability of Cinema in Zimbabwe as a remedy for enhancing their operations and profitability and increase their contribution in the national economy.
CHAPTER 2
LITERATURE REVIEW

2.0 Introduction
This chapter provides a theoretical background to the research in order to place the study within a conceptual framework derived from empirical and other works in the field. It begins by discussing the concept of Technological change and cinema history. It reviews literature and empirical evidence on the subject matter.

2.1 Technological change and cinema history
Necessity is the mother of all inventions and when things change they change for a reason. According to Schumpeter (1975), continued business survival is premised on innovation. Most developments that have taken place in the history of cinema came about for a reason and mostly attributable to innovation. The evolution of technology has seen a major impact on the cinema business presenting a major threat to the existence of the cinema. Technology also brought with it negative impact like piracy which is a major threat to the cinema industry and its coming out in different forms like pirated DVDs, movie downloads on all forms of media and devices like U-Tube, iPhones, iPads, internet, laptops, memory storage devices and others.

When cinema began, it was perhaps the novelty of the technology that attracted audiences (Petrie, 1998, 238). However, the artistic potential for the new medium certainly developed and stories and narratives began to appear, budding creative techniques such as montage. The development of sound could be attributed towards the drive for greater verisimilitude but it arguably reinvigorated the sense of novelty amongst an audience, and therefore became an economic bonus as people went to experience the new spectacle. Gomery argues that the introduction of sound was a result of a model of invention, innovation and diffusion. The invention of sound recording had been developed, Warner Bros. and Fox studios saw an opportunity to innovate and combine it with film for spectacle, and other studios picked it up and the technology diffused (Gomery quoted by Petrie, 1998, 240). As Petrie points out, ‘at each stage, the overriding concern of the companies concerned was the maximisation of long-term profitability’ (1998, 240). It is interesting that development of sound was contentious, as many felt that it did not take the visual art form forward. Indeed, it can be argued that the introduction of sound saw filmmaking regress,
returning to the studio from location, and problems were created in the fields of lighting and also film stock (Wollen quoted by Petrie, 1998, 241).

The introduction of colour was equally contentious. Once again, it could be deemed a novelty factor for audiences and therefore a motivation for development. Indeed, it was deemed such a novelty by filmmakers that some believed that the technology impacted upon audience reaction to their films – ‘the ideological appeal of colour, it seems, was both as a signifier of spectacle and as a self-conscious celebration of the technology itself’ (Petrie, 1998, 240). Indeed, far from being used to heighten the verisimilitude of the ‘real’ world, colour was almost exclusively used in its infancy for fantasies, animations and musicals, which perhaps dispels the theory that every technological development was made in an attempt to recreate the ‘reality’.

If technological advances had been made at this stage to refresh and renew the novelty for visiting audiences, the creation of widescreen was arguably cinema’s attempt to reassert the cinematic experience against the novelty of television. Petrie points out that the Hypergonar lens had been available in the 1920s but it was not until the 1950s that the similar Cinemascope was adopted, once the medium was under threat (1998, 240). This perhaps illustrates that technology is often developed for experimental or aesthetic reasons, but then it is not necessarily adopted or ‘rolled out’ until it is economically advantageous or necessary. Once again, this shall be explored later in digital distribution, whereby the technology seems ready but the business model does not.

Whilst television perhaps fought cinema for the attention for viewers, it was arguably a fundamentally different medium and therefore the two co-existed quite successfully. More importantly, the film industry realised that selling their catalogue of movies to television broadcasters brought an extra revenue stream, and perhaps in turn acted as an advert for cinema itself. After all if the audiences enjoy watching their favourite stars on the television, they would be inclined to go and watch their new releases in the cinema so that they do not have to wait for it on television. Perhaps the largest concern for cinema came with the arrival of video recorders. This technology offered one novel difference that had eluded television - control. Television was essentially a live broadcast medium, you essentially had to sit in front of it at the time the programme was broadcast in order to see it, much the same as cinema. However, video enabled the audience to record television, watch it at their
leisure, collect their favourite shows, and most importantly, skip to their favourite bits by fast-forward and rewind, but it interestingly sparked an economic advantage for studios. Once again, they were able to market their back catalogues upon another platform, which saw people buying their favourite films on VHS to watch at their leisure.

Ever since the medium was invented in the 1890s the ‘picture’ has been brought to the spectator in the form of photochemical images stored on strips of celluloid film passed in intermittent motion through a projector. Now at the beginning of the 21st century, an entirely new method has emerged, using digitally stored data in place of film and barely needing any physical support other than a computerised file. The technology now exists to shoot, edit, distribute and exhibit a movie entirely digitally and the pace of change is increasing rapidly. In both Los Angeles and London, digital cinema test beds have been established to allow manufacturers and others to evaluate technologies and provide demonstrations. With technology continuing to develop, it is possible that technology will equal the quality of the best conventional cinema has to offer within 1-2 years. Already to some expert eyes there is very little to choose between a good 35 mm release print and the digital projection in flagship cinemas.

The traditional viewer experience is often diminished by the use of third generation (release) prints manufactured on high speed printing machines, and by the wear and tear of a mechanical exhibition process that results in them frequently being scratched, dirty and faded, resulting in a degraded presentation. In any case, prints are bulky and their manufacture, distribution and exhibition are labour intensive. Furthermore, in a world ever more pre-occupied with the impact of industry on the environment, the continuing reliance on a technology (film manufacturing) which involves environmental risks is harder to justify in the presence of a cleaner alternative.

Digital cinema has none of these drawbacks. Digital product permits non-physical delivery to the viewer and there is no need to manufacture prints unless we choose to. Where copies of an original are made, each is a perfect clone of the original and there is no deterioration with each subsequent showing. Because the movie is stored digitally, its physical size is no longer an issue and once loaded into the server and
the movie calibrated, it does not require the attendance of the projectionist to do any more than start the show. However, for the moviegoer, concerned with the cinema experience rather than the technologies behind it, the outcome is that the presentation will be of exactly the same standard with each projection. Distributing digital files should not only yield great benefits in terms of the clarity and quality of the image seen by cinema audiences, but also offer greater security for the distributor and more flexibility for the exhibitor. For example, it affords bestsellers easy expansion to more screens and allows different versions of trailers to be matched to the demographics of a particular audience. A ‘digital print’ can contain multiple subtitled and dubbed language versions. Furthermore, the potential savings on the cost of manufacturing and shipping prints provide a powerful impetus for change.

From the filmmaker’s point of view, digital technology has the advantage of preserving creative intent because all versions of the picture can be extracted from the same master with minimal adjustment. Furthermore, it may open up opportunities for independent filmmakers as costs reduce and barriers to entry fall. The possibilities thus offered by digital cinema have led to a surge in interest and information in recent years; however, much of this has focused on the technology, or the impact on the creative process, rather than the financial implications for the industry and the search for new business models.

### 2.2 Development of Digital Cinema technology

Besides the giving a better image quality there are other advantages that digital cinema technology on film than the 35mm reels i.e. the shape and colour of images can be transformed with more precision, and elements from both original cinematography and computer generated imagery can be seamlessly composited. Digital technology also makes the product less vulnerable to piracy as the digital file will be encrypted and decrypted for validated users using the appropriate keys.

Digital Cinema, referring to production and distribution of a motion picture in a digital format along with the use of a digital projector for exhibition purpose (Bloom 2003), promises both producers and cinemas a higher presentation quality and a significantly lower production and maintenance cost. Since digital movies can be duplicated very easily without loss, it is now very simple to produce high quality
copies of a movie at a very low cost. Another problem in traditional cinema is that film medium deteriorates pretty quickly due to repeated use. These degenerated prints have to be replaced in order to maintain a good show quality. Digital projection eliminates this problem (Kirovski et al 2001).

In addition, the advances in computing and networking technologies have enabled high-speed communication throughout the Internet. Alongside this communication technology, digital cinema provides a very convenient and fast way to distribute video content, an easy and immediate access to film libraries, and a strong potential for developing new business models (ibid).

However, the most important consideration is financial savings and it is this that will ensure that digital cinema will predominate. For digital cinema technology to be successful any savings must be made throughout the distribution and exhibition chain, as it is highly unlikely exhibitors or cinemas would be amenable to incurring the expense of new equipment if only the distributor will gain. Digital cinema technology has been anticipated for nearly a decade but recent technological advances have led cinemas worldwide to install digital projectors on approximately 165 screens, about half of them in North America. Groups have been set up by the National Institute of Standards and Technology (NIST), the Motion Picture Association of America (MPAA) and the Society of Motion Picture and Television Engineers (SMPTE) in the USA and the European Commission in Europe, to promote the best way forward (Brown 2001). Significant factors that remain undecided are: at what rate will this change be effected globally? And who will be the eventual financial beneficiaries within the industry? Whilst some companies have taken steps to promote their own solutions to the conversion, it is the major Hollywood studios that possess the financial clout to make the final decision on the pace of change.

**Digital cinema system**

Film-based movies have been physically delivered and screened by 35mm film projector for over a century since their invention. Recent concerns about increasing manual operating cost, security, and environmental issues have led to the digitalization of cinema production and screening processes. Innovative filmless digital cinema has emerged, thanks to advances in digital technology. Digital cinema
operation follows the “DCI standard” of digital cinema specifications first established in 2005, and the standardization has been promoted by SMPTE with more than 100 specifications releases.

If the movie is transmitted by non-physical means to the theatre, d-cinema increases its advantage over conventional cinema. The movie can be delivered as quickly to a cinema in Russia or Japan as to one in Los Angeles. Furthermore, physical delivery no longer contributes to the cost and the sole charge is that of the data carrier. There are two possible solutions:

(a) **Satellite technology**

Satellites are a transmission medium that sends the digital data to anyone who has the capability to receive. It can transmit to anywhere in the world and once set up, incurs little further expense beyond transponder cost. Recent advances to satellite communications and telephony have also made the possibility of narrowing down the area of reception to a smaller (5-mile) radius rather than an area as large as the satellites capacity (www.fe.up.pt).
(b) Terrestrial Broadband

Terrestrial broadband is fed through fibre optics (normal telephone lines are not sufficient at the required data rate) and has also proven to be reliable. Like satellite transmission, terrestrial broadband can accommodate the requirements for the delivery of a digital cinema movie to a cinema on a DS3 line and current costs are approximately US$4000 per line per month, which could reasonably be expected to drop over time. In contrast to satellite, terrestrial broadband is a point-to-point transmission, meaning that only the intended recipient receives the message (ibid).

The status of digital cinema today

In December of 2011, some 60,000 digital cinema systems were installed worldwide. Some countries have approached or are rapidly approaching 100% conversion. The US reached the 50% conversion level mid-2011. The following is an analysis of the growth of digital cinema, and the distribution of 2-D versus 3-D screens and the prediction for reaching 50% conversion worldwide by end of 2011, as well as future growth (Screen Digest, (2011).

![Figure 2.2: Growth and Distribution of Digital Cinema in 2011. Source: Screen Digest, (2011).](image-url)
2.3 Impact of Digitalisation on Cinema viability in the Southern African region
Outside of Southern Africa’s larger country markets, Africa’s cinemas are few in number relative to population sizes and are always in poor shape. The recent transition to digital cinema in South Africa shows that Africa have embraced digital technology and innovations it brings along. But the impact of digital cinema may also have a role to play in reviving the sagging fortunes of Africa’s cinemas elsewhere. South Africa’s Central Point Communications with the support of Argil Venture Capital (a technology fund whose investors include Ernst & Young) has concluded the roll-out of digital cinema servers in 36 Nu-Metro cinema complexes around SA, aiming to enable these cinemas to exhibit high definition advertising and full length feature movies from a digital platform. (www.balancingact-africa.com).

Digital cinema technology answered or provided the solution to the problem affecting movie distribution i.e. the cost of making the 35mm prints at release date was eliminated as these prints are very are expensive and prohibitive. Digital movie prints are produced at a very low almost marginal cost and either distributed physically or by satellite. Digital technology makes it easier to insert advertisements thereby opening up more revenue stream for the cinemas. Digital cinema also enhances the viewing experience of the audiences and the excitement it brings to a live crowd as digital projectors can throw images that can cater for any number of people.

2.3.1 Ster-Kinekor to convert all screens to full digital
Ster-Kinekor Theatres has partnered with Arts Alliance Media (AAM) in a deal that will see its 400+ screens converted to digital within the next 12 months, as they currently work together to establish the optimum equipment configuration for the new installations. The rollout is expected to begin shortly. In addition to digital cinema hardware, all of the cinema’s 59 sites will be installed with AAM's proprietary TMS software, Screenwriter, to efficiently manage all digital screens and content. CEO of Ster-Kinekor Theatres, Fiaz Mahomed, was quoted saying, "Converting to digital is a critical step in the company’s progression, as we continue to grow our business and lead South Africa’s movie exhibition industry. It is also important in meeting the real demand from the cinema patrons in seeing the best content on offer in an all-consuming, all entertaining environment".
The investment into the digital conversion in their cinemas would mean rapid and, in certain instances instantaneous, release of movie titles as well as alternative content such as sporting events and live concerts. The benefits to the consumer are the most exciting part of the project for as this digitalisation rollout will result in more 3D content being screened, superior picture quality, new genres of film content and closer alignment of local release dates with international ones. Ster-Kinekor did contract a Canadian company, Christie Digital Systems to convert all its cinemas to digital in 2008 which saw five 3D screens being installed. The company has set to be 100% DCI-compliant by mid-2013 and has gone into partnership with Arts Alliance Media to speed up the digital conversion project.

Ster-Kinekor Theatres is opening its first cinema multiplex in the mountain kingdom of Lesotho, as part of the company's strategy to expand into Africa. The new six-cinema complex in the Lesotho capital of Maseru houses almost 1000 seats. Ster-Kinekor currently operates cinemas in South Africa, Namibia, Zimbabwe and Zambia.

### 2.3.2 Nu-Metro claims lead in 3D cinema race

The following article adapted from [http://www.bizcommunity.com](http://www.bizcommunity.com) shows that Nu-Metro cinemas in South Africa is leading the pack in terms of digitalisation.

"Two 3D screens will be installed in Nu Metro cinemas at Galleria, the new shopping centre opening in Amanzimtoti, and three will be installed in Emperor's Palace during November and December 2009," says Popcorn Cinema Advertising Sales’ GM Karen Bailey. "3D is definitely the future of cinema and advertisers taking advantage of this trend can get great bang for their advertising buck with our custom made packages," says Bailey.

"Our nearest competitor has a total of only seven 3D screens nationwide whilst Nu Metro, by the end of the year, will double that at 14. We are therefore in prime position to give advertisers who want to engage with cinema-goers in the 3D environment far greater reach." Nu Metro's current 3D screens are in Montecasino; The Glen; Hyde Park; Bedford Centre; Menlyn Park; Canal Walk and Westville's Pavillion.
2.4 Digital Technology and the Cinema Viewing Experience
Innovation in the form of digital technology has brought about new taste of viewing experience in the form of 3D thereby changing the viewing experience of cinema. The advent of digital cinema projection systems has brought about a rebirth of 3D efforts on the part of the movie studios. Previously, 3D using 35mm film was a tedious process to project and you were limited to wearing those odd-looking red and blue 3D glasses. Today's 3D Digital Cinema systems still use glasses, but they are mostly clear and are capable of delivering a better picture and sound quality that the 35mm reels.

When you see a movie digitally, you see the movie in the way its creators intended you to see it: with incredible clarity and detail. In a range of over 35 trillion colors and whether one is watching that movie on opening night or months after, it will always look its best, because digital movies are immune to the scratches, fading, and pops and jitter that 35mm film reels are prone to with repeated screenings. That's why directors love digital cinema: it ensures that their creation will be reproduced with total fidelity at every screening.

2.5 Digital technology and its impact upon cinema viability.
It could be argued, ironically, that it is digital technology itself that has lead to the greater economic push for digital technology within film production and exhibition. Whilst the number of cinema screens in the UK in 2002 and 2003 grew by 2.4%, admissions fell by 5.1% (Allison, 2006, 81), and DVD sales and rentals have grown, with the primary UK DVD rental website Lovefilm seeing 530% increase in business last year. Is it therefore, that the greatest impact that digital technology has had upon the filmmaking production process, are the DVDs and the Internet?

Presently once release 35mm reel prints are struck they are sent out via courier or airfreight and because of their size and weight (typically 25kg), their distribution is expensive. Coupled with the cost of shipping the prints, the cost of acquiring multiple prints can become prohibitive. Hence to reduce their costs many countries purchase used prints and this can create a significant logistical problem. The availability of used prints is dependent on two factors: the number of new prints that were struck and the release dates of both the new print exhibitor and the used print exhibitor.
Digital cinema technology reduces the cost of production of multiple prints, eliminates the need for used prints and provides a solution to the problem of delivery. Once the movie has been transferred into digital form, it can be copied quickly as many times as is necessary. The medium through which digital cinema is distributed is integral to the technology’s evolution. Digital movies that have been projected so far have been supplied primarily on DVD (Morley. 1998). DVDs can be reused once the movie has been loaded onto the projector’s hard drive, without any loss of quality, as many times as required.

Digital cinema technology offers the opportunity to reduce staffing costs. Once roll-out is complete and traditional film projectors become obsolete, then the need for projectionists is removed. Whereas film is labour intensive requiring it to be made up onto reels, laced up in the projectors prior to screening as well as focused and racked (ensuring the whole picture is shown and black bars do not appear at the top or bottom), digital technology does not require this. Once a film is loaded onto a server connected to a projector (either with a physical medium or by terrestrial broadband or satellite) then the only input from the cinema is the information on when the screening should start. Because nothing on the projector moves once the projector has been calibrated it remains in focus and rack, with maybe a weekly or monthly maintenance check. Assuming an average projectionist’s salary of around $4,800 per annum in the Zimbabwe, the elimination of this cost could mean a saving of tens of thousands of dollars to exhibitors, increasing the viability of cinemas.

Most piracy takes the form of copying a film onto digital video for circulation during the interval between first release of a film and its arrival in a subsidiary market. There are two ways of combating it. One is to ensure that the original is well encrypted so that a pirate copy either cannot be made or will show tell-tale signs of its illegitimate origins. The other is to shorten the period during which piracy is most lucrative by, for example, releasing new films in all major markets simultaneously.

Movies are generally pirated within days of a release. This is normally done either by illegitimate copying, someone taking a video camera into a legitimate screening or a projectionist being paid to run an extra show during which a video camera is set up. In countries like China where the legitimate importation of foreign films is still highly restricted, piracy accounts for 100 per cent of the home video market (Morley and
Hahn. 1999). With digital, encryption is easier and can be done in such a way as to make copying impossible in the first place. If as a result the income lost to piracy were to drop by a third this would approximate a saving to the studios equal to that expected on print costs.

2.5.1 Implications of the Digital Technology for Stakeholders

2.5.1.1 Movie Production Studios

When a movie production studio releases a new feature, it effectively has a monopoly product – no one else can provide that same product. Thus, the studios release movies through sequential distribution channels to extract incremental sources of revenue by price discrimination. The fact that movie production studios have control over the content will enable them to retain a powerful position in the new value chain. Still, to accommodate film releases over the Internet, production studios may need to modify the release windows. When the Internet becomes a financially attractive means of distribution, studios may also need to revise the release windows – perhaps at the detriment of other distribution channels.

While increasing consumer convenience, video-on-demand also provides the studios with instant feedback on the film from its viewers. Studios need to adapt their abilities to become providers of all future content in digital form – not just feature films, but also short films, and direct to video releases. The Internet short films can be a “farm league” for identification of promising actors, directors and writers. Future release plans can be adjusted with information from viewer feedback to maximize further revenue. Hence, the interconnectivity of the Internet allows studios to capitalize on the data and information of customer preference and demand, which would otherwise be difficult to collect without the Internet and VOD.

2.5.1.2 Distributors

The role of the film distributor is to acquire film masters from the movie production studio, copy them onto the media (reels for cinemas, videocassettes for consumers), and distribute the product to different types of customers. This is the aspect of the value chain that will suffer most as VOD becomes more prevalent. The technology of VOD will entice movie houses to invest in the equipment necessary to “download” the films directly from the movie production studios, instead of paying a distributor’s
mark-up to purchase a film. Even though the equipment would be expensive, movie houses would realize that the investment would pay off, as the marginal cost per film would decrease substantially.

As cinemas migrate towards this new model, the importance of the movie distributor will decrease. Both movie production studios and cinemas stand to gain by disintermediating the distributors and splitting the distributors’ margin between them. The cinema houses can now circumvent the distributor and acquire the movie/film at a lower unit cost, while production houses will encourage the rapid adoption of VOD because of the lower distribution costs. As a result, distributors will find themselves squeezed from their customers and suppliers simultaneously.

**2.5.1.3 Cinemas**

Most cinemas are closing older-style multiplex screens in favour of newer, larger multiplex that feature more amenities. These include stadium seating, bigger screens, plusher seats, and other amenities. Video-on-demand will heighten the trend toward multiplex. A similar situation occurred with the advent of the videocassette coupled with the inception of the video store. The pressure from videocassettes has forced cinemas to make movie-going much more meaningful than just sitting down and watching a movie on a screen. It also forced them to show “blockbuster” movies more than before. If a movie did not do as much as expected, the cinema would pull the movie because the consumers chose to “wait until it comes out on video.” Video-on-demand will intensify the pressure; it will make the cinema business more differentiated with added valuable social experience, as VOD will enable the potential moviegoer to stay home, download virtually any movie they want in a relatively short time, and watch it at the exact time they want to watch it.

In terms of the risk of disintermediation, unlike the video rental stores, cinemas are unlikely to be disintermediated. Watching a movie in a cinema – with high-quality sound and lighting effects – is a unique and valuable experience that cannot be replicated easily over the Internet and it is a social experience that consumers value. It could be argued that the movie going experience is ultimately what the cinemas add value and not necessarily the movie itself. With most cinema houses going to a “multiplex” model, the intensified competition will force them to attract moviegoers with even more amenities than before.
2.5.1.4 Reacting to Disintermediation: New Business Models

In order to survive, these companies must redefine their competition to include video-on-demand, pirated DVDs, and recognize this as the primary competitive threat facing their traditional business models. With the upcoming digital distribution – whether it is conducted by studios or by Internet-based distributors – video rental chains will be forced to adopt the Internet. Otherwise, it is possible that digital films’ displacement of videos as the dominant means of distribution may eliminate the video industry altogether.

2.6 The DVD

The technological development of the DVD fulfils all of Bordwell and Staiger’s three factors of being advantageously economic, novel and aesthetic. The arrival of video initially concerned cinema, but the film industry soon saw it as a format that could be exploited to bring in a new revenue stream. The same could be said of DVDs, which have greater consumer appeal as they do not deteriorate in aesthetic quality (unlike VHS) and they offer many other novel features, such as extras and chapters. Importantly, there has been an increase in the availability and affordability of domestic sound systems and larger, high definition screens. Is it ‘home cinema’ that is creating a decline in conventional ‘cinema’ audiences, and forcing the film industry to turn to the economic benefits of digital? (Lookabaugh and Sicker 2004).

Digital movies that have been projected so far have been supplied primarily on DVD. DVDs can be reused once the movie has been loaded onto the projector’s hard drive, without any loss of quality, as many times as required. The provision of the movies on DVDs reduces the cost of transport. Approximately 25 films can be transported for the same cost as one print, and with an increased number of cinemas using the technology the cost per DVD reduces, enabling each movie to be supplied for considerably less than US$100. However, using DVDs to distribute movies is effectively substituting one physical medium for another. Films will still take several days to be delivered from studio to cinema and there will still be countries that will try to reduce their costs by acquiring used DVDs (Morley 1998).

Laura Mulvey 2006, 147 argues that: Even on an intermediate level, as carriers, video and DVD keep the old cinema alive. More and more people, beyond the world of buffs and cinophiles, are taken into its history – perhaps most especially in the
case of the DVD, as commentaries, interviews and documentation expand the consumption of film from its traditional format into a new context of knowledge and critical self-awareness.

Mulvey and Tashiro suggest that digital has afforded us the control of the images, and that we can use them to fulfil our own wants. Play separate sequences in the order that we choose. ‘It is because they offer 39 each viewer the possibility of becoming a producer that digital technologies can be spoken of as creative tools’ (Tashiro, 1996, 117). This is indeed a big impact of digital technology, and one that surely requires a restructuring into how we understand our consumption of cinema. ‘Digital technology isn’t … simply shifting the viewing practices of audiences. It’s also changing a culture’s ideas about movies and stories and their place in everyday life’ (Pramaggiore & Wallis, 2005, 396). So is the experience of the cinematic ‘aura’ becoming lost? Tashiro argues that DVDs attempt to provide a different ‘aura’ through their expensive packaging and ‘special edition’ versions (Tashiro, 1996, 115).

By offering the possibility of control, and by shifting the emphasis from time to space, from experience to object, it opened the door to the further manipulations of digital technology. The special, public, “sacred” character of watching a film has been transformed from an all-encompassing, engulfing process, to an occasionally interesting one subjected to the stop and go realities of daily life. (Tashiro, 1996, 116). Indeed, the element of control can be taken further. Whereas DVDs afford us the pleasure of controlling the way in which we watch things, they, combined with the Internet, now offer us control over what we watch. As Tashiro pointed out earlier, if audiences are bored with the narratives that are presented to them in cinemas, the Internet and DVDs can offer an exciting alternative.

2.7 The Internet and the Long Tail
The arrival of the Internet, unlike video, does not seem to have opened up many new economic opportunities to the larger studios. They certainly have another platform for marketing, and the telecommunications advancement will be the catalyst for digital distribution, but it does not offer a real advantage to them, especially in balance of its disadvantages. Primarily, the Internet is another contender for people’s leisure time. Another screen to sit at instead of cinema. Secondly, it has enhanced the volume of
piracy with their material. After all, the liberty of digital cloning brings about the limitation of digital piracy. Thirdly, it offers opportunities for other smaller independents to compete with them for audience attention.

The emerging digital entertainment industry is going to be radically different to today’s mass market. If the 20th century entertainment industry was about hits, the 21st will equally be about misses. For too long we’ve been suffering the tyranny of lowest-common-denominator fare, subjected to brain-dead summer blockbusters and manufactured pop. Why? Economics. Many of our assumptions about popular taste are actually artefacts of poor supply-and demand matching – a market response to inefficient distribution (Anderson, 2004). However, whereas before there was arguably a marginal sector within the film industry market that was made up of independent releases, there is now a large element of independent companies shooting their own material and distributing it via the Internet, and generating revenue from it. This has become known as the ‘long tail’.

Anderson argues that the physical world puts two limitations upon our media entertainment – the need to find local audiences and the constraints of broadcast technology (screen time, bandwidth etc) (Anderson, 2004). The way the ‘long tail’ works is simple. Online Internet companies like Amazon, iTunes & Netflix have built a huge market upon stocking material that doesn’t make it into the mainstream shopping mall. Not limited by the locality and size of a shop space, these companies can afford to keep marginal products that may not sell in quite the same bulk as a ‘hit’ movie. But as they sell many of the so-called ‘misses’, they find the money adds up to be more profitable than the ‘hits’. As Anderson points out, ‘popularity no longer has a monopoly over profitability’ (ibid). He gives the example that an average Blockbuster store has fewer than 3000 titles, yet a fifth of Netflix online rentals are outside its top 3000 titles (ibid).

Anderson argues that there are three rules to the new entertainment economy:

- make everything available,
- cut the price in half and then lower it,
- help audiences find the product.
The advantages are spread widely. For the entertainment industry itself, recommendations are a remarkably efficient form of marketing, allowing smaller firms and less mainstream music to find an audience. For consumers, the improved signal to noise ratio that comes from following a good recommendation encourages exploration and can reawaken a passion for music and film, potentially creating a far larger entertainment market overall. (The average Netflix customer rents seven DVDs a month, three times the rate at brick and mortar stores.) And the cultural benefit of this is much more diversity, reversing the blanding effects of a century of distribution scarcity and ending the tyranny of the hit. (Anderson, 2004). It certainly seems that as consumers we are becoming empowered with choices and trade-offs. What do you want? Cinematic experience? Then go to a cinema, but the choice of films may not be very good. You want choice? Go online, and you can order a DVD, but you won’t have the cinematic experience and you’ll have to wait for it to arrive. You want speed and choice? Download something, but the quality will be questionable and you won’t have the ‘aura’ of either the cinematic experience or the collector’s edition box set.

2.8 The Resolution

Conventional cinemas seem to have a paradoxical situation being brought about by the impact of digital. Digital perhaps offers consumers speed in a world where time is a commodity and the word ‘instant’ is synonymous with the word ‘better’. We do not want to wait anymore. Allison argues that multiplexes are expected to offer cinema ‘on demand’; i.e. the customer turns up and expects to see the blockbuster being screened at multiple times (Allison, 2006, 88). This leads to many screens showing the same thing, and lack of choice. Indeed, when ‘Die Another Day’ (Tamahori, 2002) opened in the UK five days after ‘Harry Potter and the Chamber of Secrets’ (Columbus, 2002), the two films accounted for 66% of the national screens (Allison, 2006, 88). This lack of choice does not please the consumer who has multiple channels at home upon the television. This means that the customer stays at home and revenues drop in theatrical release attendance. This in turn leads studios to find ways to increase production efficiency, and the solution appears to be a production process that resides entirely within the digital domain. But, as illustrated in Chapter Two, in some areas digital does not provide an economic, aesthetic or novel incentive to the industry, especially in the areas of distribution and exhibition. So what can be done to save cinema?
2.9 The Spectacle that needs spectacles: 3D
In the brave new digital world, form is defining content. Because the toys are so cool, directors make movies to exploit their technical possibilities. That’s why James Cameron, after doing Titanic, the all-time top grosser, stopped making features to shoot underwater documentaries with his favourite new toy, the 3-D camera (Corliss, 2006, 41).
Valentine argues that 3D is more than just a toy, it is Hollywood’s answer to getting audiences back to the cinema, recreating the ‘event experience’ (ibid, 8). Indeed, Valentine notes that if digital projection doesn’t lure audiences in, perhaps 3D will, and it will inadvertently bring digital projectors with it (Valentine, 2006, 8).

But theatres have had 3D before, and it has not been economically successful as it is expensive to shoot on film (for Stereoscopic 3D, each movie needed two prints and often two projectionists). But perhaps digital can make the spectacle cheaper and therefore more economically viable for the cinema? ‘Spy Kids 3D: Game Over’ (Rodriguez, 2003) was commercially successful in cinema release, although not so successful on DVD as suppliers did not want to deal with paper spectacles (Valentine, 2006, 10). Indeed, when juxtaposed alongside the historical development of other technologies within cinema, 3D seems to make sense as the next logical step. After all, using Bordwell and Staiger’s model, it offers novelty to audiences. Using Bazin’s argument, it extends cinema’s development towards a verisimilitude with the ‘real’ world. But Corliss’ assertion that form is defining content is perhaps a little premature. Steven Spielberg recently said that he makes movies ‘for a movie theatre… but I also realise on a laptop on an airplane or, even worse, an iPod, they are never going to see that character and an element of the story will be lost’ (Corliss, 2006, 41). This suggests that filmmakers are not shifting their practices to take into consideration the other platforms that it may be consumed upon. Furthermore, it cannot be really be argued that they are making films to ‘exploit their technical capabilities’ (2006, 41) when the first rumoured releases in 2007 are supposedly re-releases of films such as ‘Top Gun’ (Scott, 1986), and once again, the ‘Star Wars’ trilogy. Indeed, the recently digitally shot movie ‘Superman Returns’ (Singer, 2006) got simultaneous release upon 3D as well as conventional print earlier this year. Whilst it may have pushed the envelope in terms of what digital can achieve, the re-make is hardly a quantum leap in terms of narrative. Perhaps the technology is changing, but the stories stay the same.
2.10 IMAX

Once again IMAX offers spectacle and novelty to the audience, but simply on a larger scale. IMAX uses a 70mm negative and therefore offered a future to celluloid film that digital could not manage until recently because of resolution (Gluckian, 2006). This has subsequently changed, ‘Superman Returns’ (Singer, 2006) is now the first feature length film to be released upon 3D IMAX, and it was shot upon the Genesis camera. However, IMAX is hardly a new spectacle (it was exhibited in a Canadian Expo in 1967) and it has so far not offered a secure future to cinema exhibitors. It has become, and may remain, a niche that operates alongside conventional cinema as opposed to a replacement.

2.11 Financing Digital Cinema

The immediate justification for digital cinema is the elimination of print costs. A large blockbuster release in North America will use around 6000 prints. At US$1000 to US$1200 per print (and more in Europe) this will add up to US$6.2m, a significant cost, to the distribution of one movie. For the North American film industry, with approximately 200 releases among the major studios over the course of a year and assuming an average of 3000 prints, this totals US$600m. If other countries are added into this equation, then even with the allowance for a majority of smaller territories taking used prints the figure rises to nearly US$1 billion (www.natoonline.org).

There are approximately 35,000 screens in North America and 115,000 across the rest of the world. Using the current cost of Texas Instruments DLP cinema projector (US$100,000) and factoring in an extra ten per cent for the installation of storage area networks, servers, satellite dishes, hire of satellite channel time and digitisation of the movies, a North American operation could be recouped in under seven years and a global rollout within fourteen, but only if 100 per cent of current print costs are eliminated in digital release. Since that is not realistic, a 50 per cent cost reduction would double the recoupment time. A reasonable estimate lies within these extremes (ibid).
2.12 Piracy

Movie Piracy by definition is the illegal copying of movies for personal or commercial use. This is a new epidemic that is affecting the film industry financially on a global level. Estimates for the amount the global film industry loses each year to piracy range from US$2 to US$10 billion (MPAA, 2000). The MPAA estimates that its member companies lose between US$3 and US$4 billion annually due to piracy but this does not include potential losses due to online piracy. D-cinema cannot possibly hope to end piracy but it does represent an opportunity to reduce this amount significantly. Most piracy takes the form of copying a film onto digital video for circulation during the interval between first release of a film and its arrival in a subsidiary market. There are two ways of combating it. One is to ensure that the original is well encrypted so that a pirate copy either cannot be made or will show tell-tale signs of its illegitimate origins. The other is to shorten the period during which piracy is most lucrative by, for example, releasing new films in all major markets simultaneously.

In digital cinema, a pirate is a person who illegally reproduces and distributes other’s digital content without the content owner’s consent. It is clear that the objective of a pirate is to get an access to (newly released) very high value entertainment content of a cinematic title, which can later be duplicated and redistributed without restriction (Kirovski et al 2001). A pirate can be either a participant of the production or distribution process (an insider) or a person who is totally not involved (an outsider). While most of researchers have been emphasizing their works on protection system against outsider attacks, it is reported that 77% of illegal movie samples are originally leaked out by industry insiders (Byers et al 2003). Thus, building a protection system against these insider attacks is equally important.

Movies are generally pirated within days of a release. This is normally done either by illegitimate copying, someone taking a video camera into a legitimate screening or a projectionist being paid to run an extra show during which a video camera is set up (Kundur and Karthik, 2004). In countries like China where the legitimate importation of foreign films is still highly restricted, piracy accounts for 100 per cent of the home video market. It is possible to mark film prints such a way that illegitimate video copies can be traced back to the print from which they are taken, the process is hard
to police and by the time the illegal act has been traced the harm has already been done. With digital, encryption is easier and can be done in such a way as to make copying impossible in the first place. If as a result the income lost to piracy were to drop by a third this would approximate a saving to the studios equal to that expected on print costs.

Piracy has always been an issue to resolve in film industry. Illegal reproduction and distribution following unauthorized interception while films are on distribution chain from movie studios to theatres, and then to viewers, have been robbing content providers of what actually belongs to them. When analogy media was reigning, although illicit copying had been causing movie studios a big revenue loss, it used to be less threatening, due to the inferior quality of the result. The complex and expensive nature of the copying process limited the quantity of illicit copy available in the market, whereas poor quality of such copy hindered people from purchasing them, giving pirates relatively little benefit from their unlawful deed. When the world switched from analogy to digital technology, an opportunity was opened for film industry to grow as digital technology promises a more affordable and easier way to produce and distribute their commercial goods.

Nevertheless, digital technology and the widespread use of Internet have caused piracy to become a much more serious concern. Unlike in the past, once pirates have access to the video data, they can now duplicate and distribute it effortlessly. Perfect duplication of digital data not only guarantees the high quality of movies distributed to cinemas, but enhances the quality of a pirated copy as well. Considering the pervasive use of Internet, which provides a fast and convenient communication channel, and the availability of peer-to-peer file sharing systems, like Napster, Kazaa, Gnutella, Freenet, etc, it is well understood how easy an illicit copy can be distributed extensively to end-users. Internet is also an open insecure channel that enables pirates to easily intercept any data sent through it. The Cinema industry in the U.S. estimates its revenue loss due to unauthorized duplication and redistribution of movies via physical media, like video cassettes, VCDs, DVDs, etc, exceeds $3 billion annually (Byers et al 2003). It is also reported that there are 350,000 to 400,000 illegal movie-downloads done every day. The revenue loss due to Internet redistribution of illicit copies is estimated to be up to $4 billion annually (ibid).
Despite all the advantages promised by digital technology, many movie studios are still reluctant to make use of these technologies because of this piracy threat and the lack of technology that can securely protects their rights upon their digital assets. Content creators and owners are concerned about the consequences of illegal copying and distribution on a massive scale. Therefore, there is a demand for a protection system that can enforce access control and, at the same time, manage the content usage rights, such that unauthorized access can be prevented. This protection system should be able to ensure that a digital movie is played by authorized operators, on authorized equipments, and at authorized times only. Simultaneously, it must guarantee that only certain actions under certain conditions specified by content owner can be performed on the digital content.

Digital Rights Management (DRM) system has been proposed as the solution to the security problem in digital cinema. It is the core system that allows movie studios to disseminate their cinematic assets in a secure and restricted way. As content owners specify the operations and the conditions under which they can be performed on the content, a DRM system will ensure that a digital movie can only be accessed according to the rules specified by the producing studio. In general, DRM refers to a system that protects high-value digital assets by controlling the distribution and usage rights of those digital assets.

According to Eindhorn, DRM entails the operation of a control system that can monitor, regulate, and price each subsequent use of a computer file that contains media content, such as video, audio, photo, or text (Fetscherin and Schmid, 2003). The core concept used in DRM is the separation between the digital content and the rights ruling the content access. Instead of buying the digital content, the consumer purchases a digital license granting certain access rights to him. A digital license is a digital data file that specifies certain usage rules for the digital content (Liu et al 2003). The idea is to allow protected content to be distributed without restriction and to ensure that this protected content is nothing, but garbage without the presence of a valid digital license. As the consequence, the protection and distribution of the content can be separated from those of the rights.
The first distinctive characteristic that a digital movie has is its huge volume. Compared to audio and image, video data has much larger size and contains more redundancy. The redundancy is caused by the high degree of similarity between neighbouring video frames and the overlapping information they share. Furthermore, for the purpose of providing a high quality show, we are dealing with video data which is of higher spatial resolution, causing it to need even larger storage. Knowing this fact, we can easily see why compression plays a vital role in digital cinema.

The second feature differentiating a digital movie from other multimedia is its value curve. When it is first released, a movie has an extremely high value. This initial value can be up to hundred million dollars. However, it never lasts long; it declines very rapidly after few weeks from its release date. It is reported that the value can go down by millions of dollars in one day. For example, DreamWorks’ Shrek 2 grossed about US$270 million dollars within the first two week of its release in the U.S. (Tistaert, March 2005). However, it made only about US$100 million dollars during the next two weeks, which indicates more than 60% decrement from that in the first two weeks. Overall, Shrek 2 managed to make 83.5% of its total revenue of US$436.722 millions within one month of its release in the U.S.

![Figure 2.3: Distribution model in digital cinema](image-url)
The distribution process usually flows in the following way:
First, the content provider encodes the digital content and then packs it for the preparation of distribution process. Subsequently, the digital content is transferred to the distributor, whereas the usage rules are sent to the clearinghouse. Consumer will then get the digital content from the distributor and request for a valid license from the clearinghouse. Upon receiving a license request, the clearinghouse will authenticate the consumer. Only after verifying consumer’s identity and receiving consumer’s payment, a digital license indicating the usage rules and the rights given to the corresponding consumer is sent to the requesting consumer. The consumer will now be able to access the digital content according to the usage rules specified by the content provider. As the digital content moves from the content provider to the consumer, the payment moves in the opposite direction, that is from the consumer to the content provider.

The distribution model explained above is a simplified form of the real world situation. In real life, as digital cinema involves a vast market, scattered all over the world, the distribution process is done in a multi-layered manner and the digital content must go through a chain of distributors before it can reach the consumer. As the result, distribution process can be pictured as a tree-like hierarchy.
2.13 Other Events
A digital cinema is significantly more versatile than a conventional cinema. The technology exists that can allow a cinema to receive and project a high-definition program television program in real-time. Consequently, the cinema could exhibit events such as live sporting fixtures, music concerts, business conferences or other activities (Kwok, 2003). Although in practice the volume of events open to this type of arrangement will vary according to the region and cultural habits, the idea does possess the potential to utilise some of the unused capacity of cinemas.

2.14 Chapter Summary
The literature review has looked at definitions, approaches, related strategies and several of international marketing strategies to apply to the case of Econet Wireless Holdings Limited, where applicable. This literature review has also provided substantial guidance for identifying the businesses’ arrears of improvement. Identifying the appropriate entry strategy is complex as it requires a thorough analysis of various international considerations in so far as the political, economic, social and technological aspects are concerned. Various international entry modes have been outlined.
3.0 Introduction
Kumar (2005) defines research methodology as a procedural plan adopted by the researcher to answer research questions validly, objectively and economically. Leedy (1993) argues that research methodology forms an integral part of any research by assisting in explaining the data as well as highlighting methods that would have been used to generate appropriate conclusions. The chapter outlines the research design and techniques used in the study of Rainbow Cinemas to meet the research objectives. This chapter covers the methodology that was used in the research. In this chapter, the researcher describes the research design, the research philosophy and the research strategy that was used to carry out this study. The Case Study methodology which the researcher used for this study is discussed in detail in this chapter. Here the researcher looks at the arguments in favour and against the use of case studies and the reasons for selecting the case study strategy. The research design which includes the sampling techniques, population of the study, data collection and data analysis are also described in detail in this chapter. Furthermore, the research looks at how data collected in the research will be processed, organised and presented in order to reveal patterns upon which interpretations will be made and conclusions drawn.

3.1 Research Design
Research design comprises the strategy, the plan and the structure of carrying out a research project (Carriger, 2000). It is the master plan that enables the researcher to investigate and devise appropriate solutions to the identified problem. In other words it is a framework that guides the research through the various stages of the research project (Frankfort-Nachmias & Nachmias, 1996:99). The main purpose of a research design is to provide a plan or framework of study that allows accurate assessment of the cause and effect relations that exists between variables under study (Jang, 1980). Jang (1980) goes further and gives a controlled experiment set-up as a good example of a research design. He also points out that a research design should be able to answer the questions being investigated, enable extraneous factor to be controlled and that the generalization that can be made from the research results are valid. A good research design aims to integrate different components of the research
project cohesively and coherently (Bryman, 2004). Yin, 2003, 20 defined it as a logical plan from getting here to there, where here is defined as the initial set of questions to be answered and there as the some set of conclusions (answers) about these questions. And between here and there are major steps including the collection and analysis of relevant data.

In this research, the Researcher used a single case study design. The main important point to note when using a case study is that the case should be representative of the population under study. The organisation under study include Rainbow Cinemas Headoffice where all company strategic decisions are made and its Harare City multiplex cinema with 5 screens which is its flagship branch contributing to over 70% of the company’s revenue. Interviews of customers will also cover customers from its competitor Ster-Kinekor at Eastgate. As such, the research is based on a case study procedure with structured questionnaires, personal interviews, observation and desk studies being used as data collection methods. After collection of data, the researcher will present the data in the form of tables, graphs and pie charts.

Although the research will be done in Harare, the results can be generalized to the sentiments of the Zimbabwean cinema industry. The elements of the research design are discussed in detail in sections 3.7 to 3.8.

3.2 Research Philosophy
A research philosophy contains important assumptions about the way researchers view the world and these assumptions are the major drivers of research strategies and methodology (Saunders et al, 2009). Guban and Lincoln (1994) explained a paradigm as a set of basic beliefs that deal with ultimate first principles. In other words research philosophy/paradigm represents a world view that defines for the holder:

- nature of the world
- individual’s space in it
- possible relationships to that world and its parts.
An exploration of research philosophy or paradigm helps the researcher in carrying the research in the following ways (Crossan, 2002):

- It helps in the refinement and specifying of research methods to be used in a study by clarifying the overall research strategy to be used.
- It helps the researcher to evaluate the appropriateness of methodologies and methods to be used in the research by revealing the limitations that are associated with particular approaches before the research commences.
- It allows flexibility to the researcher in the selection and reconfiguration of methods which are ordinarily outside the researcher’s experience.

Although there are various literatures on the research philosophy debate, an analysis of the literature reveals basically two views to the research process that dominates literature, namely positivism (quantitative) and phenomenology (qualitative). Kato (2002), argue that no study depends solely on one approach and this sentiment is further confirmed by Nau (1995) who stated that although distinctions are commonly made between qualitative and quantitative the two approaches basically compliments each other. Saunders et al (2009), shares the same view when he stated that research rarely falls neatly into the positivist and phenomenological camps, and that business and management research is often a mixture between the two. In light of Kato (2002), Saunders et al (2009) and Nau (1995)’s observations noted above the researcher used a blend of qualitative and quantitative approaches in carrying out this study.

3.2.1 Positivism/ Quantitative

This approach is distinctly deductive and seeks to explain casual relationships between variables and usually uses quantitative data and structured methodology to facilitate replication. (Gill and Johnson, 2001) as cited in Saunders et al 2005. Quantitative research is more scientific in approach and aims to be objective by collecting and using numerical data (Saunders et al, 2009). The underlying principle is that the researcher is independent of and neither affects nor is affected by the subjects of the research (Frankel and Wallen, 1996).

Levin (2006) in the same vein contends that positivism regards reality as stable and observable and also that knowledge can be classified as true or false, solid and concrete. As a scientific approach, positivism is objective as conclusions are drawn
from more credible numeric data. The positivist researcher assumes the role of objective analysts and makes detached interpretation about the data collected in an apparent free manner (White 2000). The positivist approach requires structured methodologies to facilitate replication. (Gill and Johnson, 2001).

According to Robson (2003), the following are the features of positivism:-

- Normally uses quantitative data
- Employs controls to allow hypothesis testing
- Testing
- Deductive – theory is tested by observation.
- Uses a highly structured methodology to facilitate replication
- Seeks to explain casual relationships between variables.

Due to the complexity of the world of business and management it would be difficult to theorize certain phenomena using definite laws in the same way physical science do hence the need to combine both qualitative and quantitative. In this research quantitative approach was used to analyze the performance of Rainbow Cinemas Harare City multiplex in terms of cinema patrons’ attendance and movie releases.

3.2.2 Phenomenology/ Qualitative

Unlike quantitative approach that assumes objectivity, the qualitative approach takes the view that it is difficult for researchers to be objective or seen to be objective (Saunders et al, 2009). The process views knowledge as the relative, fluid, elusive and circumstantial and it further argues that meaning is not largely shared, and is contextual therefore the researcher and subject are inextricably linked such that one has to experience a situation in order to understand it (Saunders, 2003). The phenomena also argue that the business and management world is too complex and unique for a scientific approach which cannot be generalised through statistical analysis. However, Strauss and Corbin (1990) argues that qualitative research tend to put considerable emphasis on situational and often structural context compared to quantitative research that is often multivariate but weak on context. In addition to that the approach allows the researcher to properly examine perceptions in order to gain an understanding of social and human activities.
A phenomenologist is one who wants to discover ‘the reality working behind the reality’ (Schein 2002). Robson (2003) identified the following three features of phenomenology:

- A qualitative approach
- More applicable for small samples
- Provide a better understanding of the social processes but the disadvantages being that clear pattern may not emerge.

The researcher applied the qualitative research by sending questionnaires and conducting interviews with the selected subjects in order to understand the attitudes and behaviours of Rainbow Cinemas management and staff in their decision making and view of the industry they are operating in. Both customers for Rainbow Cinemas and its competitor Ster-Kinekor were interviewed to get their opinions on the cinema industry in Zimbabwe. It should be noted that these aspects are subjective and can largely be based on individual opinion. This study goes further in evaluating Rainbow Cinema’s strategies in embracing digital technology and combating the effects of piracy paying particular attention to the senior level management and some senior staff members. The chosen approach is in line with the research objectives as recommended by Saunders (2003). Qualitative research will be used to evaluate the impact of digital technology on the company’s viability, on an in depth understanding of issues of piracy and to understand relationships identified.

3.2.2.1 Advantages of qualitative methods

The qualitative methods are flexible compared to the quantitative method which is one of the advantages that the researcher would base their choice of a particular method (Mark et al, 2005). It allows respondents to respond to research questions in their own words compared to the quantitative method which has fixed responses to choose from (White, 2000). Conger, 1999; Bryman et al (1988) and Alvesson (1996) summarised the common advantages derived from the use of qualitative methods in research as follows:

- “The method allows flexibility to follow up on spontaneous ideas during research and explore the processes effectively.
- It allows sensitivity to contextual factors.
- Gives the ability to study symbolic dimensions and social meaning.
Increased opportunities to develop empirically supported new ideas, for in depth and longitudinal explorations of leadership phenomena and for more relevance and interest for practitioners”.

### 3.3 The most suitable approach to use

As stated by Saunders et al (2009), research rarely falls into clearly defined areas of qualitative and quantitative methods the trend has been to blend the two approaches. This approach has been supported by Nau (1995) in that such a blend will bring a final project that is rich in the advantages provided by both methods as opposed to using one method at a time. The method to be used however, largely depends on the type of research, type of information required, and availability of resources such as time, finance and human resources as well as the context in which the study is being carried out (Yin, 2003).

This research employed predominantly the qualitative approach due to the fact that the case study methodology is qualitative in nature. However, information pertaining to the cinemas occupancy and number of movie releases can only be analyzed using quantitative approach hence the result has been a blend of qualitative and quantitative approaches. The information required to answer the research questions was obtained through the use of questionnaires and interviews which enabled the researcher to gain a thorough understanding of the impact of digitalization on the viability of the Zimbabwe cinema industry in face of negatives brought about by technology such as piracy. This is made possible by the ability of the researcher to immediately probe further the respondents on certain responses and where possible adapt the questions according to the information provided. The understanding has also been helpful to the researcher on proffering appropriate recommendations on how the industry can come up with strategies to mitigate the negatives and take advantage of the innovation for their competitive advantage and sustain its viability in the future.

### 3.4 Research Strategies

Multifarious research strategies abound, but these should not be thought as mutually exclusive. Each research strategy has merits and demerits, (Saunders et al 2003:91) argues that there are eleven different types of research strategies namely;
experiment, descriptive, casual, comparative, survey, exploratory, case study, grounded theory, ethnography, action research, cross sectional and longitudinal research design. Strauss (2002) emphasises that the use of more than one research strategy has significant advantages as each strategy has its unique strengths and weaknesses that affect the research results. One should also be able to identify some situations in which a specific strategy has a distinct advantage.

Yin (2003) proposed three conditions that might influence the choice of a research strategy used and they are:

- The type of research question.
- The degree of investigator control possible.
- The degree of focus on contemporary events desired as opposed to historical events.

The table below summarizes the structure of how a decision regarding the choice of a research strategy is taken:

Table 3.1 Relevant Situations for Different Research Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Forms of Research Question</th>
<th>Requires control over behavioural events</th>
<th>Focuses on contemporary events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>How, why</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Survey</td>
<td>Who, what, where, how many, how much</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Case Study</td>
<td>How, why</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Archival Analysis</td>
<td>Who, what, where, how many, how much</td>
<td>no</td>
<td>Yes/no</td>
</tr>
<tr>
<td>History</td>
<td>How, why</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

Source: Yin (2003)

The “What” questions point to an exploratory research which is further confirmed by the “how” and “why” question which are explanatory in nature. When the above questions have been identified the researcher need to determine the degree of control required in the research. In the case where control is not required, histories are the most preferred method as opposed to case studies that have a bias towards contemporary.
3.4.1 Experiments
Experiments by their nature are done in a highly controlled environment such as a laboratory that allows the researcher to control directly, precisely and systemically the variables under study (Yin, 2003). The major objective in an experiment is to observe the effect on the depended variable when the independent variable is adjusted.

3.4.2 Surveys
Surveys involve the study of a sample drawn from the subject and the results will be inferred about the population. The survey method is most appropriate where the required information cannot be obtained easily or cheaply from other sources (Katz, 1953).

The survey strategy is used in this research to obtain both primary and secondary data whereas literature review will be used as a guide to generate questionnaires and data analysis. This strategy offers several advantages on easy data analysis and is mostly associated with the deductive approach and often used in business and management research. The main limitation is that there is a limit to the level of detail that can be gathered.

The table below summarizes the purpose, foci, key terms and characteristics of a survey research strategy as illustrated

Table 3.2 Summary of Survey Research Strategy

<table>
<thead>
<tr>
<th>Model</th>
<th>Purpose</th>
<th>Foci</th>
<th>Key Terms</th>
<th>Characteristics</th>
</tr>
</thead>
</table>

Source: Cohen, Manion and Morrison, 2006
3.4.3 Case Study
A case study can take the form of qualitative or quantitative which allows the researcher to deal with a wide range of evidence such as interviews, observation and documents. The focus of this research was to answer “how”, “why” and “what” questions about the impact of digital technology on the viability of the Zimbabwean cinema industry hence a case study methodology was appropriate.

This research focused on the case study. Yin (1984:23) defines a case study as “an empirical enquiry that: investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used”, a definition which is supported by Stake (1995). Mitchell (2000:169) states that the “case study refers to an observer’s data: that is, the documentation of some particular phenomenon or set of events which has been assembled with the explicit end in view of drawing theoretical conclusions from it”. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. Social scientists, in particular, have made wide use of this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods.

A case study can take the form of qualitative or quantitative which allows the researcher to deal with a wide range of evidence such as interviews, observation and documents. The focus of this research was to answer “how”, “why” and “what” questions about the impact of digital technology on the viability of the Zimbabwean cinema industry hence a case study methodology was appropriate.

3.4.3.1 Justification of using the case study strategy
The researcher adopted a case study strategy due to its suitability in qualitative research as stated by Riessman (2008). Some of the advantages include:

- The ability of cases studies to produce context knowledge essential to the development of a field or discipline. For example most experts operate based on detailed case knowledge. This is also the case in most professional schools that make use of cases taken from real-life situations such as in strategy courses.
If carefully chosen, cases and experiments combined with much flexibility results in the development of major scientific knowledge.

Cases allow the interrogating of a typical, extreme or paradigmatic case that is necessary to extend theory about a general problem.

Case studies can zero-in on everyday situations and test how something occurs in social life.

Case studies have the ability to focus attention on narrative detail of issues deemed to be of little significance.

3.4.3.2 Reasons against the use of Case Study strategy
Despite the above advantages, case studies have received criticisms and the major concerns identified by (Yin, 1984) are as below:

- Case studies are often accused of lack of rigour and depth. This is revealed in the following quote from Yin (1984:21); “too many times, the case study investigator has been sloppy, and has allowed equivocal evidence or biased views to influence the direction of the findings and conclusions”.

- Case study method offer no grounds for establishing reliability or generality of findings because of the use of a small number of subjects and some are sometimes conducted with only one subject.

- Others feel that the intense exposure to study of the case biases the findings. Some dismiss case study research as useful only as an exploratory tool.

- Tellis (1997) shares the same sentiments as Yin (1984) when he stated that the case study method depends on a single case exploration which makes it difficult to reach a generalizing conclusion to the whole population. In support of the case studies Yin (2003) stated that in the case studies just like in experiments, the results are generalized to theoretical propositions and not populations.
3.5 Data collection

3.5.1 Population
A population is defined as the total collection of elements about which we wish to make some inferences (Cooper and Schindler, 2003). In statistics population includes all members of a defined group that we are studying or collecting information on for data driven decisions or the entire set of data from which a sample is selected and about which the researcher wishes to draw conclusions (Wegner, 1993). On the other hand Salant and Dillman (1994) defined a population as a set of units, usually people, objects, transactions, or events, that we are interested in studying. The population can further be divided into two groups which are the target population and the study population.

The rationale of any study is to find out something about the population, and it is the group to which the researcher would generalise the results of the study. The population includes all individuals of interests who furnish information required. The population can be in two categories, the target and the accessible population. The target population refers to the actual population upon which the researcher would generalise and is not readily available. Thus the population to which the researcher is able to generalise is the accessible population. Defining the population is pivotal in assisting the researcher to select a sample for the study. In this instance, Rainbow Cinemas is the preferred case study and the research would use two populations one being the senior and middle level management and cinema patrons.

3.5.2 Sampling and Sampling Techniques
MacDougall (2003) define sampling as the way sample elements are to be selected from the entire population to come up with representative samples. A sample is a subset of the target population from which information is gathered to infer something about the population. Lincoln and Dale (1998) recommended that a sample should be a near replica of the population under study to enable correct inference to be made about the population with some degree of calculable error. According to Smith et al (2009), the sample size determines the level of reliability that will be placed on the results, that is to say, the larger the sample the more accurate will be the inferences. In this research the sample was made up of Rainbow Cinemas management team, non managerial staff and randomly selected cinema patrons at Rainbow Cinemas.
the both Rainbow Cinemas’ Harare city multiplex Ster-kinekor Eastgate multiplex. Cooper and Schindler (2003), argues that sampling is done to lower costs, provide greater accuracy of results, greater speed of data collection and availability of population elements. This is the case here as the research will be confined to Rainbow Cinemas Head Office and the City centre multiplex cinema. Sampling can be in two forms, either random (probability) or non random (non - probability) Saunders (2003).

3.5.2.1 Probability sampling
Probability sampling affords each element in the sample an equal chance of being selected on a random basis and this method is used when the population is relatively homogeneous with respect to the random variable under study (Wegner, 2000). Probability sampling methods includes simple random sampling, systematic sampling, stratified sampling and cluster sampling. As suggested by Saunders et al (2003), each sampling method has its own advantages and disadvantages and most importantly its suitability to the research objectives and or questions at hand.

3.5.2.2 Non Probability Sampling
Non-probability sampling provides that the chances of each element being selected from the population is not known. In other words this method involves the selection of those elements that are likely to provide quality information or fruitful data. This notion is supported by Bernard (2000) who asserts that the study’s research objectives and characteristics of the population, such as size and diversity, normally determine which and how many people to select. There are a range of non-probability sampling techniques that can be employed in research such as quota sampling, convenience sampling and judgmental sampling.

✓ Quota sampling
This sampling technique is non-random and is normally applied to surveys. Blaxter et al (1997) reckons that this technique is suitable when certain characteristics about the sample are known and are important for the research. The characteristics may include gender, age, class, profession and industry. In certain instances these characteristics are important because the researcher will be able to focus only on those elements or people who are
well versed with the research topic. For example a topic on child birth would be most successful if women are selected for the study.

- **Convenience sampling**
  This method entails selecting sample elements that are easily accessible. This is also known as the haphazard sampling method and an example would include people selected in a shopping mall for an interview. This method will also be used to select the cinema patrons to interview. Although it is widely used this method is prone to external influences and bias that are beyond one’s control (Saunders *et al*, 2005).

- **Judgement sampling**
  Judgemental sampling is common when using small samples like case studies and in the case when the researcher wishes to select elements that are informative (Bernard, 2000). In this research the researcher used judgmental sampling due to its suitability to most qualitative researches including case studies. The management team of Rainbow Cinemas was selected because of their role in making decisions on the type of technology to use in their business which has an impact on the viability of the business and determines the company’s competitive position in the industry.

**3.5.3 Sample elements and size**
Although literature recommends a maximum of ten elements for qualitative researches, the researcher was able to use a bigger sample of fifty elements due to the fact that a combination of qualitative and quantitative method was used in this research. Since the research is on the impact of digital technology on the viability of the cinema industry, it is important that the research focuses on employees who are more informed of the company’s strategic framework as Mintzberg (2009) points out that strategy is crafted at the top of the organisation. Management play a pivotal role in contributing to the company’s competitive strategies decision making and are thus significantly informed to respond to the business strategy research questions.
The targeted sample was made up of as indicated in the following table below.

Table 3.3 Sample Elements

<table>
<thead>
<tr>
<th>Position/Department</th>
<th>Participants for Questionnaires</th>
<th>Participants for interviews</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Managers</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Line Managers</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Supervisors</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Workers’ Committee</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Clerical Staff</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Cinema patrons</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>22</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

Source: Author

3.6 Nature and source of data

There are basically two types of data namely primary and secondary data (Salant and Dillman, 1994). However, for this research both primary and secondary data was used.

3.6.1 Primary data

Primary data was obtained from both personal and indirect interviews conducted by the researcher and was primarily from the Rainbow Cinemas management, staff and cinema patrons for both Rainbow Cinemas and its competitor Ster-Kinekor.

3.6.1.1 Questionnaires

Questionnaire is the most widely used method data collection under the survey method (Saunders et al 2005). In this study the questionnaire was the main research instrument which was supplemented by the interviews.

A structured questionnaire in Appendix A was used to gather primary data from the general sample of study. The questionnaire was designed in such a way that it was mainly based on the objectives of the study. In order to ensure participation and clarity on what was required from the respondents, the questionnaire was divided into two broad parts. The first part consisted of an introductory letter in which the researcher introduced himself, the research topic and purpose of the study. The second part of the questionnaire consisted of research questions. It was divided into
sections that cover general administrative information and sections on the objectives of research.

**Advantages of Questionnaire**

This instrument was used because of the following advantages according to Saunders et al (2005).

- With questionnaires, respondents are given room to respond to questions at the time convenient to them. This is particularly important for most personnel who often get some free time during and after work. Hence they had the flexibility of completing the questionnaires at home or during weekends. This enabled collection of meaningful and thoughtful data.

- Questionnaires also enable respondents to provide answers without bias that often arise when engaging in face to face conversations.

- The use of questionnaires also enable the researcher to cover a large proportion of the sample within a short period of time since no time is spent asking questions to respondents as in face to face interviews or through observing respondents.

**Disadvantages of a Questionnaire**

Despite being the main instrument, it comes with its own weaknesses that affect the results of the research as according to Saunders et al (2005).

- There is a possibility that some questions will be left unanswered as the researcher will not be present at the time of completion of the questionnaire to verify if all questions have been completed.

- Questionnaires do not allow for further probing as is the case with face to face interviews. Thus, the researcher could not ask clarification of issues at the time of questionnaire completion.

- Distribution of questionnaires proved a costly exercise as far as printing the questionnaire was concerned. Some respondents did not return the questionnaires.

- The other limitation of the questionnaire was that spaces provided on the questionnaire may not be enough for the respondent to put all the details, thus it limited respondents to say out their response in full.
3.6.1.2 Personal interviews

Personal interviews involve the researcher interacting on a face-to-face basis with respondents or using the phone. Frankel and Wallen, (2006) states that the advantage of using the interview techniques are that respondent can elaborate in depth in areas of interest. The paralinguistic features or body language of the interviewees emphasising language can also be easily captured. There are two main types of interviews namely personal interviews and focus groups.

Interviews are especially appropriate for revealing in that it is complex and emotionally hidden or for probing the sentiments that may underlie an impressed opinion. Personal interviews will be used as they offer excellent tools for understanding the interviewee perspective and the personal meaning.

Interviews involve direct interaction between two parties namely the interviewer and the interviewee, with the interviewer seeking information from the interviewees who consisted mainly corporate level management. Saunders et al (2003) highly recommend structured interviews because they have very high response rate and assurance that the right person accordingly with clarifications given to ensure clarity of questions and responses thereof. Personal interviews with the cinema patrons would enable the researcher to have unstructured interviews to help avoid researcher bias and allowed for exploration of information even from non-verbal gestures. Where the interviewers skilfully conduct the event, an interview is likely to achieve this more than the use of self-administered questionnaires.

3.6.2 Data Collection Methods – Secondary Data

The advantage of the use of secondary data is that it is collected instantly and can shed light on various problems, lowers cost and saves time as compared to primary data (Holstein and Gubrium, 2005). The researcher will gather from the company’s website, journals, articles, financial statements for the past five years, relevant data bases and the newspapers.
3.6.2.1 Documentary Analysis

This analysis is concerned with the explanation of the status of some phenomenon at a particular time or its development over a period of time. It serves a useful purpose in adding knowledge to fields of inquiry and in explaining certain social events. Best and Khan (2005) state that documents are important source of data in many areas of investigation.

Documents range from public through private to personal documents. The list of public document sources include government publications such as Acts of Parliament, policy statements, census reports, statistical bulletins, reports of commissions of inquiry, ministerial or departmental annual reports, consultancy reports, etc. Private documents often emanate from civil society organizations such as private sector businesses, trade unions and non-governmental organizations, as well as private individuals. They include minutes of meetings, board resolutions, advertisements, invoices, personnel records, training manuals, interdepartmental memos and other annual reports, etc. The list of personal documents include household account books, photo albums, address books, medical records, suicides notes, diaries, personal letters, etc (Scott, 2006).

When using documentary sources, one must bear in mind that data appearing in print are not necessarily trustworthy because corporations can exaggerate their activities that are never implement but are written in their documents or policies. It is therefore the researchers’ obligation to establish the trustworthiness of all data that he draws from documentary sources. In the study document analysis will be used to comparatively assess the viability of Rainbow Cinemas.

3.7 Data Presentation and Analysis

Tables, charts and graphs shall be used in the next chapter to display the research findings. Wegner (2006) argues that statistical or numerical findings are only of value to management if they can be effectively communicated to them. Saunders et al (2003) further posits that there are two types of quantitative data namely, categorical and quantifiable data. If these data types show one variable so that any specific variable can be read it is recommended to use tables or frequency distribution. Categorical data that shows the frequency of occurrences, the use of bar charts is encouraged; for quantifiable continuous data that shows frequency of occurrences
the use of histograms is recommended; for quantifiable and categorical data that shows a trend for a variable use a line graph or bar chart or histogram; for both categorical and quantifiable data that compares frequency of occurrences use multiple bar chart; to compare trends use multiple line graph or multiple bar chart.

3.8 Chapter Summary
This chapter discussed in detail the methodology that was used in the research, the research design and the reasons for selecting certain methods. The research was carried out using a combination of qualitative and quantitative data sets. Data was collected using judgemental sampling technique in order to target the appropriate respondents for the research which is not possible when probability sampling techniques are employed. Secondary data was obtained mainly from Websites and publications such as newsletters, memorandum and newspaper articles. Having articulated the research philosophy, explained the research methodology and justified the data collection methods, the next chapter will analyse the findings of the research.
CHAPTER 4
RESULTS AND DISCUSSION

4.0 Introduction
In this chapter the researcher presents the research findings from in-depth face to face interview as well as questionnaires and analyses these results through the use of graphs, charts and content analytic tables. The results in the charts and graphs were explained followed by the discussion of the implication and link to literature. The chapter comprises of two sections that summarizes the responses of questionnaires and face to face interviews with some member of Rainbow Cinemas management and cinema patrons.

4.1 Response Rate
Table 4.1: Response rate

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Sample Target</th>
<th>Response</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires</td>
<td>18</td>
<td>12</td>
<td>67%</td>
</tr>
<tr>
<td>Interviews</td>
<td>22</td>
<td>22</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>34</td>
<td>85%</td>
</tr>
</tbody>
</table>

Table 4.1 shows that, from a sample target of 40 participants, responses were received from 34 people (85%). The response rate was acceptable and it was well above 67% that is recommended by Saunders *et al* (2009).

SECTION A: Demographics

4.2 Demographic Characteristics of Participants

4.2.1 Age group and Department for Participants
The questionnaire had a checklist on the age group of participants and departments from which they are working from. Most participants fall in the age group of 31-40 years and the majority of the responses were from those in Operations department followed by Finance and Marketing respectively. Operations department form the core of the cinema business and the General Manager is part of Operations where most decisions concerning day to day operations are made which have an impact on the viability of the cinema business.
4.2.2 Period of Employment of Participants
The question on period of employment was asked by the researcher with the purpose of determining whether participants had adequate experience to be able to comment about operations and viability of the cinema business. Findings on tenure indicated that most participants had more than five years with the company. These results showed that respondents had enough experience and are aware of the matters pertaining to the cinema industry the stages it had gone and most of them were there during the period under review. The findings also show that the majority of the participants were male.

4.3 Research Findings and Discussion
Findings from participants did not have major variances. This was because of the fact that all participants were experienced people within the industry and are stationed at Head office and Harare multiplex and concurred in most of their views.

4.3.1 SECTION B: Understanding the drivers and critical success factors of Digital Technology

4.3.1.1 Internet Usage in the Organisation

![Figure 4.1: Internet functions in the organization](image)

Most participants rated internet as a major business tool in organization and the responses shows that internet is used in almost all the departments in the company for business purposes.
Table 4.2: Internet functions in your organization

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
<th>Percentage of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>10</td>
<td>20</td>
<td>83</td>
</tr>
<tr>
<td>Procurement</td>
<td>8</td>
<td>16</td>
<td>66</td>
</tr>
<tr>
<td>Marketing</td>
<td>11</td>
<td>22</td>
<td>92</td>
</tr>
<tr>
<td>Banking</td>
<td>6</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>Research</td>
<td>9</td>
<td>18</td>
<td>75</td>
</tr>
<tr>
<td>Access to services</td>
<td>6</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
<td>417</td>
</tr>
</tbody>
</table>

Dichotomy group tabulated at value 1

Most participants rated internet as a major business tool in organization and the responses show that internet is used in almost all the departments in the company for business purposes.

Table 4.3 Is your ticketing system digital?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>15</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Yes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4.4 Does your system provide management reports?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>10</td>
<td>67</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>Not sure</td>
<td>5</td>
<td>33</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The responses shows that the company’s ticketing systems in not digitalized and therefore management cannot get reports that are important for making informed decision. This shows that the company mostly use internet for communication, and research for new movies but the operations of the business is not digitalized.
4.3.1.2 Type of projectors currently in use and are if they are digital and when they were last upgraded

![Circle diagram showing last time projectors were upgraded]

Figure 4.2: Last time the projection equipment was upgraded

All participants’ responses show that the company is still using 35mm projectors which are not digital. 40% of the participants said the projection equipment was last updated some 10 – 15 years ago and 27% said it was updated about 10 years ago. The responses clearly shows that the machines are now outdated and a lot has happened in the last 10 – 15 years in terms of developments in technology. This clearly shows that the company is still lagging behind in terms of technology and this has contributed to its viability problems.

4.3.1.3 Implications of Digital Technology in relation to ensuring competitive advantage

A – Leverage against our competitors
B – We are not left out on the market and industry trends
C – Increase awareness and interaction with our customers
D – Identify new business opportunities

Table 4.5 Implications of Digital technology

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>6</td>
<td>40%</td>
<td>4</td>
<td>27%</td>
</tr>
<tr>
<td>Agree</td>
<td>7</td>
<td>47%</td>
<td>9</td>
<td>60%</td>
</tr>
<tr>
<td>No Opinion</td>
<td>2</td>
<td>13%</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100%</td>
<td>15</td>
<td>100%</td>
</tr>
</tbody>
</table>
An average of 60% of the respondents agrees there is a relationship between Digital technology and competitive advantage and an average of 35% strongly agree. The results seem to be in line with the literature which finds that when a company is fully digitalised it will stand to have a competitive edge over its competitors. The company is able to save on cost of transport and storage and the product quality is enhanced in terms of picture and sound when it’s on digital (Kirovski et al 2001). All findings does point out that Digital technology does have an impact on the viability of Cinema and those that are left behind risk being extinct in the long run.

Figure 4.3: Implications of Digital technology in relation to competitive advantage

Figure 4.4 Major Operating costs
In Figure 4.4 above shows the five major operating costs for Rainbow cinemas and these costs can be significantly be reduced if the cinema was is to digitalized. 35mm projectors use high voltage electricity where as digital projectors use very low voltage thereby will enable to save the company on the electricity bills. With digitalization there will no need to employee more people than the company is currently employee now because one person can operate a number of projectors where as now each 35mm projector is manned by a projectionist making it a labour intensive operation. Film hire is significant reduced because the middleman i.e. the distributors are done away with since the cinemas will deal directly with the producers (Bloom 2003).

4.3.2 SECTION C: Impact of Piracy on the viability of Cinema Industry due to technological advancements.

4.3.2.1 Business Challenges Due to Piracy

![Business challenges due to piracy](image)

- Low patronage/cinema attendance/low revenue: 33%
- Moves are sold on DVDs before we release them on cinema: 27%
- Lack of proper legislation that govern or restrict piracy in Zim: 27%
- DVDs are cheaper than movies tickets: 13%

**Figure 4.5: Business Challenges due to Piracy**
4.3.2.2 What action have you taken to mitigate the above challenges?

- We have engaged Trade unions like Tumai to help us report pirates to the police.
- Joined the ant-piracy organization that work together with the police.
- To ensure that we release the films earlier and offer competitive movie ticket prices.
- Planning to digitalize so that we get latest movies and also upgrade or face lift our cinemas to improve the cinema experience and diversify by offering other products like soccer screening on big screen.
- Digitalization is the way to go it will allow us to release movies early and beat piracy, to sponsor anti-piracy unit of the police force to monitor and police pirates.
- Stop advertising for forth coming attraction only advertise films available.

The figure 4.5 above shows the major challenges that the company is facing due to piracy. It’s showing that the cinema is facing a major challenge of low cinema patronage as more people now prefer to buy DVDs and watch at home instead of going to the cinemas. The price of DVDs is cheaper than a ticket move and currently there are no stiffer laws that are in place to curb piracy in Zimbabwe and the existing laws are difficult to enforce as the law enforcing agents and the Censor board lack the resources to enable them to enforce the law. All this is making piracy to flourish in Zimbabwe at the expense of the cinema industry as offenders are only made to pay paltry fines which and it’s not acting as a deterrent. The industry has also taken measures to mitigate the challenges they are facing as highlighted above.

4.3.3 SECTION D: Impact of Digital Technology on the movie distribution

4.3.3.1 Movie suppliers, Movie box office revenue sharing and Ticket sales to Cinema revenue

Table 4.6 Movie Suppliers

<table>
<thead>
<tr>
<th>Movie Suppliers</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nu-metro, Ster-Kinekor and UIP</td>
<td>10</td>
<td>67</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>UIP and Ster-Kinekor</td>
<td>5</td>
<td>33</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

87
Table 4.7: Movie box office revenue sharing

<table>
<thead>
<tr>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/80 Supplier/Cinema</td>
<td>4</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>25/75 Supplier/Cinema</td>
<td>4</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>30/70 Supplier/Cinema</td>
<td>5</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Not Sure</td>
<td>2</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.8: Ratio of ticket sales to total cinema revenue

<table>
<thead>
<tr>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>60% - 70%</td>
<td>4</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>65% - 70%</td>
<td>4</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>70%</td>
<td>4</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>70% - 80%</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 4.6: Type of popular movies at Rainbow

Type of popular movies at Rainbow

- Romantic: 37%
- Action: 31%
- Thriller: 14%
- Comedy: 6%
- Horror: 9%
- Drama: 3%

Table 4.6 shows that Rainbow cinemas get their movies from Nu-metro, UIP, and Ster-Kinekor from South Africa. Majority of the films hire ranges between 20/80 and 30/70 supplier/cinema box office sharing. This means that for every $1 of box office ticket sales the supplier gets 20c or 30c and the cinema gets 80c or 70c respectively. On average the box office ticket sales constitute 70% of the total cinema revenue.
This means that if cinema attendances are low the cinema revenues are negatively affected. If a cinema is digitalised the share for the cinema is increased as they eliminate the middle man and cinema attendance will also increase. Figure 4.6 above shows that Romantic and Action type of movies are very popular at Rainbow Harare multiplex and this is in tandem with the age group of the customers that frequent that place.

4.3.3.2 Payment of duty, transportation, storage and theatrical release of 35mm movies reels

Table 4.9: What happens to the 35mm movie reel when they are off the circuit?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispose of the reels by junking them</td>
<td>5</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Return them back to the South Africa supplier</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>We junk them upon instructions from the South African supplier</td>
<td>7</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.10: Archive period of 35 mm reels before they are discarded

<table>
<thead>
<tr>
<th>Valid</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (months)</td>
<td>21.91</td>
</tr>
<tr>
<td>Median</td>
<td>24.00</td>
</tr>
<tr>
<td>Mode</td>
<td>6(a)</td>
</tr>
<tr>
<td>Variance</td>
<td>264.091</td>
</tr>
<tr>
<td>Range</td>
<td>47</td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
</tr>
<tr>
<td>Maximum</td>
<td>48</td>
</tr>
</tbody>
</table>

(a) Multiple modes exist. The smallest value is shown
The findings show that the cinemas in Zimbabwe pay duty at the border entry point when they import the 35mm movie reels and pay for the cost of transporting them. After screening the movies the cinemas archive the reels for a period averaging 22 months or 2 years before they junk/destroy them upon instructions from the suppliers in South Africa. Figure 4.7 shows that Rainbow Cinemas is showing movies that are 3 – 6 months old i.e. from the time the time they are released to the time they are screened in Zimbabwe it’s taking 3 – 6 months making the distribution chain to take long. This time lag is giving chance to piracy to thrive in Zimbabwe because by the time the movie hit the Zimbabwean screens patrons will have watched them on DVDs or other sources. This shows the impact of technology hence the need for the cinema industry to digitalize and mitigate the impact of piracy (Parson, 2006). Digitalization is the key to the viability of the industry as indicated by the findings that they pay duty and transportation of movie reels and storage of which all these will be eliminated by digitalization.
4.3.4: SECTION E: Influence of Digital Technology on Customer preference and taste

4.3.4.1 Age groups that frequent your cinemas most

![Pie chart showing age group distribution]

Figure 4.8: Age groups that frequent the cinemas most

4.3.4.2 Theatrical period for best movie to come off the circuit

Table 4.11: Time taken by the best movie to come off the circuit in the last 2 years?

<table>
<thead>
<tr>
<th>Valid</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (months)</td>
<td>3.17</td>
</tr>
<tr>
<td>Median</td>
<td>3.00</td>
</tr>
<tr>
<td>Mode</td>
<td>3(a)</td>
</tr>
<tr>
<td>Variance</td>
<td>.879</td>
</tr>
<tr>
<td>Range</td>
<td>3</td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
</tr>
<tr>
<td>Maximum</td>
<td>4</td>
</tr>
</tbody>
</table>

Multiple modes exist. The smallest value is shown

The finds shows that the young adults aged between 19 and 35 constitute most of the movies goes at Rainbow Cinemas followed by the teenagers aged between 12 – 18 years. This explains why Romantic and Action movies are popular at this cinema as these movies are associated with such age groups who would want to go out with their partners out and have a good time. It is also this age group that is obsessed and concerned with status that is associated with new technology and most of the
have access to new technology as most of them own the fancy latest phones, iPads, laptops and other gadgets that can transfer of play video files. It is because of the nature of this group that technology has a major impact on the customer preferences and taste because technology does provide substitutes and alter the customer preferences and taste.

4.3.5: SECTION F - Understanding the Impact of New Technology on Movie Theatre Patronage

4.3.5.1 Measuring the 3D Film Revolution – Customers’ view point

**Figure 4.9: Responses if movies where showing on 3D**

**Figure 4.10: What the customers are prepared to pay if movies are on 3D**
Figure 4.11: Places where the customers have watched movies on 3D

Figure 4.12: Is the movie ticket price fair?
Figure 4.13: Current state of the movie houses

- 65% Good
- 20% Satisfactory
- 15% Poor

Figure 4.14: What the customers think about the current movies being shown at Rainbow Cinemas

- 70% Yes
- 20% No
- 10% Not sure
Figure 4.15: Where customers watch most of their movies

The results of the interviews done with the cinema patrons shows that the majority of them would go to the movies is it was showing on 3D and also their attendance will also be determined by the type of movie being screened. This shows a relationship between the two that if it’s not good movie even if it’s on 3D they would not watch it. The survey also shows that the customers are willing to pay more than to watch a movie on 3D and they are happy with the current ticket price of the movies which not on 3D. If the cinemas digitalize they have a opportunity to charge premium prices which the customers are prepared to pay and increase their revenues and this will go a long way in reviving the fortunes of the industry. South Africa’s cinema industry fortunes have been turned for the positive following the digitalization of the industry as revealed in the literature review (www.balancingact-africa.com).

The findings also shows that most Zimbabwean movie goers have watched movies on 3D both on IMAX or normal theatres mostly in neighboring South Africa. It also reveals that customers are not happy with the current movies being screened at Rainbow Cinemas and that explains why they are having challenges of low patronage and poor revenues because the movies are outdated and overtaken by technology. Most customers said they watch most of their movies on DVDs and on their computers. This because they get latest movies at a cheaper price on DVDs in the streets and most have access to internet at work they can download latest movies and either store them on memory sticks or burn them on DVDs. These
possess a serious threat to the viability of the cinema industry unless they digitalize their cinemas to mitigate this challenge. All these are contributing low cinema attendance as the customers find no reason to go to the cinema when they access the movies in the comfort of their offices and homes and on their cell phones. All these have been confirmed in the literature review.

4.3.6: SECTION G - Future of Cinema in the Digital Age

4.3.6.1 The organisation in the next 5 years

Table 4.12: Where do you see organisation in the next 5 years?

<table>
<thead>
<tr>
<th>Option</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>All auditoriums must be fully digitalized, funding permitting including at least 4 x 3D projectors and this will increase our patronage and position us as market leaders</td>
<td>3</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Fully digitalised on all screens and showing 3D movies and showing day and date movies with America</td>
<td>3</td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Funds permitting we must be fully digitalised on all auditoriums and revenues should increase 5 fold</td>
<td>4</td>
<td>27</td>
<td>27</td>
<td>67</td>
</tr>
<tr>
<td>We see ourselves competing well within the region</td>
<td>3</td>
<td>20</td>
<td>20</td>
<td>87</td>
</tr>
<tr>
<td>We see ourselves being a well advanced cinema house in terms of technology</td>
<td>2</td>
<td>13</td>
<td>13</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4.13: Motivation of the company to invest in digital technology

<table>
<thead>
<tr>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>It saves cost on transportation of 35mm reels from South Africa, improves the quality of picture and sound and this will positively impact on our bottom line as we the cinema patronage will also increase.</td>
<td>4</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>The entertainment industry has moved with technology and we cannot be left behind as more movies are now being produced in digital form and the 35mm reels are slowed being phased out and we don't want to be caught unaware.</td>
<td>4</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>We want to keep abreast with world's technological advancements happening in the industry so that we satisfy our customers' needs and be competitive.</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>To move with the times and be able to release day and date movies and increase our revenues streams as well as delivering quality products</td>
<td>2</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>To be able to compete effectively on the market</td>
<td>2</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

### Table 4.14: Advantages of using Digital Technology

<table>
<thead>
<tr>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital technology enables us to be able to release movies on time and the quality of the product in terms picture and sound is bound to be better</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>It helps to mitigate the impact of piracy, and increase our revenue and helps to cut cost of transportation and storage of 35mm reels.</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Movies will be able to be screened on day and date with America thereby mitigate effects of piracy and increase our revenues</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Reduce transport costs, day and date releases and reduce piracy</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Will reduce impact of piracy and increase revenue</td>
<td>3</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 4.15: Challenges of using Digital Technology in the organization

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financing is a major challenge due to the state of our economy, internal resistance to change by staff for fear of losing jobs.</td>
<td>4</td>
<td>27</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>There may be slower adaptation and adjustment from the side of staff directly working the new technology.</td>
<td>3</td>
<td>20</td>
<td>20</td>
<td>47</td>
</tr>
<tr>
<td>Very expensive to install, fear of loss of jobs as some jobs will be replaced by new technology and staff is bound to be resistant to the change</td>
<td>4</td>
<td>27</td>
<td>27</td>
<td>74</td>
</tr>
<tr>
<td>Financing is a major challenge in Zimbabwe as borrowing is very expensive and financial institutions do require collateral security thereby limiting the amounts that can be borrowed to finance the digitalization project</td>
<td>4</td>
<td>27</td>
<td>26</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The findings from the interviews and questionnaires did reveal that the company does have plans to digitalise the cinema in the next five years. All participants concurred that there was need to digitalise the cinemas in face of the technological trends that are there in the industry. The above tables summarise the plans and the motivation why they want to digitalize their cinema. The major reasons are that to turn the fortunes of the company. The company is facing viability problems noted in poor cinema attendances, low revenues, rising operating costs like salaries and wages, utility bills, film hire and rentals. The revenues being generated are not able to meet the operating costs that the company is incurring hence the need to digitalise. Digitalisation will solve most of the problems that are bedevilling the industry as challenges like piracy will be able to be mitigated against. The major challenge that the company is facing is financing which is an uphill as the economic conditions in Zimbabwe are not very favourable. The cost of borrowing is very high in Zimbabwe and the banking sector in the country is facing problems in meeting the minimum capital requirements set by the Reserve Bank of Zimbabwe. This has forced some to merger and others to look for strategic partners from outside the country to bail them out. The cinema industry in Zimbabwe is in dire need of
financing to capitalise the industry in terms of digitalisations and face lifting of the auditoriums. Most customers interviewed were not happy with the state of cinemas which most said was in a poor state besides the outdated movies being screened.

4.4 Chapter Summary

4.4.1 Understanding the drivers and critical success factors of Digital Technology

It was noted that internet is major business tool in the industry and is used in almost all the departments mostly for communication, research. The company’s ticketing systems however is not digitalized and management reports are produced from manually imputed spreadsheets. The company is still using 35mm projectors which are not digital and these were last updated 10 years ago clearly showing that the company is still lagging behind in terms of technology this has contributed to its viability problems. Management does agree that for the company to be competitive, digitalization is the key as indicated by the advantages that they envisage having. It will enable them to have a competitive edge over its competitors and fight challenges like piracy. The company is able to save on cost of transport and storage and the product quality is enhanced in terms of picture and sound when it’s on digital (Kirovski et al 2001). All findings does point out that Digital technology does have an impact on the viability of Cinema and those that are left behind risk being extinct in the long run.

The major operating costs for Rainbow cinemas are staff costs, utility bills, film hire and rentals these costs can be significantly be reduced if the cinema was is to digitalized. 35mm projectors use high voltage electricity where as digital projectors use very low voltage thereby will enable to save the company on the electricity bills. With digitalization there will no need to employee more people than the company is currently employee now because one person can operate a number of projectors where as now each 35mm projector is manned by a projectionist making it a labour intensive operation. Film hire is significant reduced because the middleman i.e. the distributors are done away with since the cinemas will deal directly with the producers (Bloom 2003).
4.4.2 Impact of Piracy on the viability of Cinema Industry due to technological advancements.

Piracy is the major challenge bedevilling the cinema industry in Zimbabwe. Low cinema patronage is attributable to the fact that more people now prefer to buy DVDs and watch at home instead of going to the cinemas. The price of DVDs is cheaper than a ticket move and currently there are no stiffer laws that are in place to curb piracy in Zimbabwe and the existing laws are difficult to enforce as the law enforcing agents and the Censor board lack the resources to enable them to enforce the law. All this is making piracy to flourish in Zimbabwe at the expense of the cinema industry as offenders are only made to pay paltry fines which and it’s not acting as a deterrent. The industry has also taken measures to mitigate the challenges they are facing as highlighted above.

4.4.3 Impact of Digital Technology on the movie distribution

Nu-metro, UIP, and Ster-Kinekor from South Africa are the movie suppliers for Rainbow Cinemas in Zimbabwe and company does pay duty and transport cost of the 35mm movie reel. Majority of the films hire ranges between 20/80 and 30/70 supplier/cinema box office sharing. On average the box office ticket sales constitute 70% of the total cinema revenue. This means that if cinema attendances are low the cinema revenues are negatively affected. Romantic and Action type of movies are the most popular at Rainbow Harare multiplex and this is in tandem with the age group of the customers that frequent that place.

The movie 35mm reel are archived for a period of 2 years after which they are junked upon instructions from the suppliers in South Africa and most movies shown are 3 – 6 months old i.e. from the time the time they are released to the time they are screened in Zimbabwe This time lag is giving chance to piracy to thrive in Zimbabwe because by the time the movie hit the Zimbabwean screens patrons will have watched them on DVDs or other sources. This shows the impact of technology hence the need for the cinema industry to digitalize and mitigate the impact of piracy.
4.4.4 Influence of Digital Technology on Customer preference and taste
The majority of the movie goers at Rainbow are young adults aged between 19 and 35 followed by the teenagers aged between 12 – 18 years. This explains why Romantic and Action movies are popular at this cinema as these movies are associated with such age groups who would want to go out with their partners out and have a good time. It is also this age group that is obsessed and concerned with status that is associated with new technology and most of the have access to new technology as most of them own the fancy latest phones, iPads, laptops and other gadgets that can transfer of play video files. It is because of the nature of this group that technology has a major impact on the customer preferences and taste because technology does provide substitutes and alter the customer preferences and taste.

4.4.5 Understanding the Impact of New Technology on Movie Theatre Patronage
Majority of the cinema patrons interviewed said that they would go to the movies if it was showing on 3D and also their attendance will also be determined by the type of movie being screened. This shows a relationship between the two that if it's not good movie even if it's on 3D they would not watch it. The survey also shows that the customers are willing to pay more than to watch a movie on 3D and they are happy with the current ticket price of the movies which not on 3D.

The findings also shows that most Zimbabwean movie goers have watched movies on 3D both on IMAX or normal theatres mostly in neighboring South Africa. Customers are not happy with the current movies being screened at Rainbow Cinemas and that explains why they are having challenges of low patronage and poor revenues because the movies are outdated and overtaken by technology. Most customers said they watch most of their movies on DVDs and on their computers. This because they get latest movies at a cheaper price on DVDs in the streets and most have access to internet at work they can download latest movies and either store them on memory sticks or burn them on DVDs. These possess a serious threat to the viability of the cinema industry unless they digitalize their cinemas to mitigate this challenge.
4.4.6 Future of Cinema in the Digital Age

The company is planning to digitalise and the major reasons are that they want to turn the fortunes of the company. The company is facing viability problems noted in poor cinema attendances, low revenues, rising operating costs like staff, utility bills, film hire and rentals. The revenues being generated are not able to meet the operating costs that the company is incurring hence the need to digitalise. Digitalisation will solve most of the problems that are bedevilling the industry as challenges like piracy will be able to be mitigated against. The major challenge that the company is facing is financing which is an uphill as the economic conditions in Zimbabwe are not very favourable. The cost of borrowing is very high in Zimbabwe and the banking sector in the country is facing problems in meeting the minimum capital requirements set by the Reserve Bank of Zimbabwe. This has forced some to merger and others to look for strategic partners from outside the country to bail them out. The cinema industry in Zimbabwe is in dire need of financing to capitalise the industry in terms of digitalisations and face lifting of the auditoriums. Most customers interviewed were not happy with the state of cinemas which most said was in a poor state besides the outdated movies being screened.

4.5 Conclusion

This chapter was mainly concerned with reporting the research findings and discussing these findings, their implication and link to literature. The following chapter covers the conclusions made through the research, recommendations, the study limitations and areas for further research.
CHAPTER 5
CONCLUSION

5.0 Introduction
In this chapter the researcher makes inferences and conclusions of the research using the information obtained from the findings as discussed in chapter four. Recommendations and areas of further study will also be given in this chapter.

5.1 Conclusions

5.1.1 Understanding the drivers and critical success factors of Digital Technology
The first major finding of this study was that Rainbow Cinemas is currently using 35mm projectors which are not digitalized and which were lasted updated 10 years ago, a clear sign that the company is still lagging behind in terms of technology. Though the company does use internet as a business tool for communication purposes and research on new movies, the company’s ticketing system is still not digitalized and management reports are produced from manually inputted records. Rainbow cinemas’ major operating costs like staff costs, utility bills, film hire and rentals are a major challenge to the viability of the business against the low cinema patronage translated into poor revenue inflows into the business. All these challenges are due to the outdated equipment that they are using which is labour intensive and consumes a lot of electricity and it has been overtaken by piracy which is now taking advantage of new digital technology. This places the company in a weaker competitive position in the industry compared to its rival, Ster-Kinekor which is now fully digitalized and is now saving on transportation costs, duty payable, and storage of 35mm reel and are now able to show the latest movies.

5.1.2 Impact of Piracy on the viability of Cinema Industry due to technological advancements.
The current research indicated that Piracy is the major challenge bedevilling the cinema industry in Zimbabwe. It is contributing to the low cinema patronage as more people now prefer to buy DVDs and watch at home instead of going to the cinemas. The current legislation is not stiff enough to curb piracy in Zimbabwe and they are difficult to enforce as the law enforcing agents and the Censor board lack the
resources to enable them to enforce the law. All this is making piracy to flourish in Zimbabwe at the expense of the cinema industry as offenders are only made to pay paltry fines which and it’s not acting as a deterrent. The industry has also taken measures to mitigate the challenges they are facing by forming anti-piracy organisations and helping the law enforcements by financial resources to police the offenders though it’s not being effective.

5.1.3 Impact of Digital Technology on the movie distribution

Literature reveals that Digital technology has changed significantly the distribution chain of the movies. This study reveals that Nu-metro, UIP, and Ster-Kinekor from South Africa are the movie suppliers for Rainbow Cinemas in Zimbabwe and the company does pay duty and transport cost of the 35mm movie reel. These suppliers are middlemen who can be eliminated if Rainbow was digitalised as they could get their supply from the production houses. Romantic and Action type of movies are the most popular at Rainbow Harare multiplex and this is in tandem with the age group of the customers that frequent that place and the study shows that box office ticket sales constitute about 70% of the total cinema revenues. This means that if cinema attendances are low the cinema revenues are negatively affected. The study also reveals that the cinema is showing outdated movies which are 3-6 months old thereby giving chance to piracy to thrive in Zimbabwe because by the time the movie hit the Zimbabwean screens patrons will have watched them on DVDs or other sources.

5.1.4 Influence of Digital Technology on Customer preference and taste

The research findings indicated that Romantic and Action type of movies are the most popular among the young adults movie goers aged between 19 and 35 followed by the teenagers aged between 12 – 18 years. These age groups want to go out with their partners out and have a good time. It is also this age group that is obsessed and concerned with status that is associated with new technology and most of them have access to new technology as most of them own the fancy latest phones, iPads, laptops and other gadgets that can transfer of play video files. It is because of the nature of this group that technology has a major impact on the customer preferences and taste because technology does provide substitutes and alter the customer preferences and taste.
5.1.5 Understanding the Impact of New Technology on Movie Theatre Patronage

The research reveals that the majority of the cinema patrons would go to the movies if it was showing on 3D and also their attendance will also be determined by the type of movie being screened. This shows a relationship between the two that if it’s not good movie even if it’s on 3D they would not watch it. The survey also shows that the customers are willing to pay more to watch a movie on 3D. The fact that many Zimbabwean movie goers interviewed have watched movies on 3D both on IMAX or normal theatres mostly in neighboring South Africa and are not happy with the current movies being screened at Rainbow Cinemas it means that the cinema is not up to speed with new technology and that explains why they are having challenges of low patronage and poor revenues because their movies are outdated and overtaken by technology. Most customers do watch most of their movies on DVDs and on their computers as they get latest movies at a cheaper price on DVDs in the streets and most have access to internet at work they can download latest movies and either store them on memory sticks or burn them on DVDs. This shows that the cinemas are lagging behind in terms of technology and this is a serious threat to the viability of the cinema industry.

5.1.6 Future of Cinema in the Digital Age

The company is planning to digitalise and the major reasons are that they want to turn the fortunes of the company. The company is facing viability problems noted in poor cinema attendances, low revenues, rising operating costs like staff, utility bills, film hire and rentals. The revenues being generated are not able to meet the operating costs that the company is incurring hence the need to digitalise. Unless the cinemas embrace new technology their viability is seriously under threat as evidenced by the effects of piracy. However the industry’s major challenge is financing which is an uphill as the economic conditions in Zimbabwe are not very favourable. The cost of borrowing is very high in Zimbabwe and the banking sector in the country is facing problems in meeting the minimum capital requirements set by the Reserve Bank of Zimbabwe. The cinema industry in Zimbabwe is in dire need of financing to capitalise the industry in terms of digitalisations and face lifting of the auditoriums. Most customers interviewed were not happy with the state of cinemas which most said was in a poor state besides the outdated movies being screened.
5.2 Test of the research proposition

The research proposition is restated as follows:

Digital Technology has a major impact on the viability of the cinema industry in Zimbabwe and those that fail to embrace new technology face extinction as changes in new technology are unstoppable and unavoidable and no industry player can afford to ignore them.

To a large extent the study confirms the proposition in that the industry players’ viability is seriously under threat from piracy which is thriving because the industry is slow in embracing new technology and now they have been overtaken.

5.3 Recommendations

In view of the findings cited above the researcher came up with the following recommendation.

5.3.1 Impact of Piracy on the viability of Cinema Industry due to technological advancements

Digitalization is the key to mitigate this serious challenge that is facing the cinema industry in Zimbabwe. The cinema industry has no choice but to go the digitalization route. The industry should review their supplier contracts so that they reduce the time lag between release date and theatrical release dates. Digitalization will help the industry to beat piracy as they will be able to release movies on day and date. There is also the need for the cinemas to not only sell movies but also the experience of going to the movies by coming up with strategies that aim at increasing patronage. There is need to come with programmes that encourage the culture of going to the cinemas by offering promotions especially for those that come as partners and do offer special pricing on certain days per week or on occasions such as valentine’s day.

There is also the need for the industry players to come together and form anti-piracy pressure groups that would work together with the law enforcing agents to enforce the anti-piracy laws. The industry can set up a fund that will help finance a special unit of the law enforcement agents so that resources like vehicles and communication are made available to incentivize the police to curb piracy.
5.3.2 Impact of Digital Technology on the movie distribution

There is need for the industry to digitalize so that they improve the movie supply chain distribution. Currently the cinemas are incurring huge operating costs in terms of film hire, transport costs, storage costs, staff costs and payment of duty at the boarder entry points for the film reels. It will help the industry to eliminate middle men in the supply chain as they will be able to get their supply directly from the production houses and they will be able to show latest movies. Storage and junking costs of 35mm reels will be significantly reduced.

5.3.3 Influence of Digital Technology on Customer preference and taste and movie Theatre Patronage

Customer preference and taste are influenced by technology changes as their needs and wants changes. The majority of the movie goers are young adults aged between 19 and 35 followed by the teenagers aged between 12 – 18 years and this market can be expanded. This explains why Romantic and Action movies are popular at this cinema as these movies are associated with such age groups who would want to go out with their partners out and have a good time. It is also this age group that is obsessed and concerned with status that is associated with new technology and most of them have access to new technology as most of them own the fancy latest phones, iPads, laptops and other gadgets that can transfer of play video files. The cinema industry should do more in getting Romantic and Action type movies to cater for this market and if they digitalise this market is prepared to pay premium prices on 3D. 3D is the way to go in this age as most movie goers have already the chance to watch 3D movie in South Africa and now Ser-Kinekor has taken the lead in Zimbabwe by having 3D projection equipment and the other players have no choice but to follow suit or face extinction. The cinema can also venture into selling original DVDs or rentals so that these customers buy the DVDs from them instead of from the street.

Cinemas should also diversify into screening other products like soccer, rugby as their facilities can present a stadium kind of seating and atmosphere that these people want. In this case the cinema will be offering not only the product but an experience and opportunity for the patrons to enjoy together with friends and loved ones. The cinemas should increase their product range instead of the traditional
popcorn and drink they should consider to offer spiced popcorn and even have fast foods, internet cafes, video games, coffee shops, etc within the cinemas. Those parents that bring in the children for movies can hang out in the cinema by having coffee, a cold beer or snacks or watch soccer all under one roof. This will significantly improve the revenue inflows of the cinemas and makes the cinema experience more enjoyable when the market is expanded by bringing in even those that do not necessarily want to watch a movie but can still hang out in the cinema for other products on offer. The industry players should consider turning their cinemas into one stop entertainment shop with every entertainment under one roof.

5.3.4 Future of Cinema in the Digital Age
Digitalisation also presents an opportunity for the cinema industry to create other revenue streams that were not there before. With digitalisation cinemas can compete well with other media houses like television by offering advertising space during shows to their already captive audience. Companies will have an opportunity to reach their customers and potential customers who would have come to watch movies. The cinema can install TV screens in the foyer and eating areas within the cinema and screen adverts at intervals and at the same time screen the adverts in auditoriums during movies interlude. Government and the financial sector should consider helping in financing this industry as it has a potential of significantly contributing positively to our economy. Policies should be put in place so that the industry can borrow to finance this new technology which is costly but worthwhile investment.

5.4 Study Limitations and Areas of Further Research
The major limitation was the time frame within which the research had to be carried out. Another major limitation was the difficulty in obtaining information as other respondents felt the information was highly confidential. The research was a single case study analysis which only focused on Rainbow Cinemas. The results may be inconclusive since more solid inferences may be made by looking at a number of players in the industry within the country and the region. There is limited literature in this area and there is no literature particularly for the Zimbabwean cinema industry as no research has been carried out before on this industry. The interactions and impact of the impact of this technology can therefore be further studied for the industry to turn their fortunes for sustainable development of this industry into the future.
CHAPTER 6
REFERENCES


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Dear Sir/Madam

My name is Enias Biza and I am a final year student in the Master’s degree in Business Administration programme with the University of Zimbabwe. As part of the programme requirements, the student is required to carry out a research into a business problem.

I have undertaken a research titled “The Impact of Digital Technology on the viability of the Cinema Industry in Zimbabwe: The Case of Rainbow Cinemas Private Limited.” The research covers the period 2007 to 2012.

Kindly fill in the questionnaire attached hereto. Its aim is to make an analysis on the impact that digital technology had on Cinema industry in Zimbabwe and proffer possible solutions to mitigate it. Information provided is solely for academic purposes and will be treated with the utmost confidence that it deserves. Thank you for your valuable time in completing this questionnaire.

For further information you are free to contact the researcher on Cell: +263 772 415 723. Email - bizae2009@gmail.com or my supervisor Eng M Manuhwa on +263 4 764472.

Thank you for your time and your co-operation would be highly appreciated.

Yours sincerely

Enias Biza
RESEARCH QUESTIONNAIRE

Please read the following instructions

1. Please write in the spaces provided where appropriate. If space is not enough, please use a separate piece of paper.
2. Please tick (√) in the appropriate boxes as provided.
3. If a question is difficult for you to answer, please give your best guess.
4. The questionnaire takes about 10 minutes to complete.
5. The time period relates to the years 2007 to 2012

Section A

General Questions

1. Name of organization.......................................................... 

2. Gender (Please tick)
   - Male
   - Female

3. Which age group do you fall under (please tick)
   - 18-30 years
   - 31-40 years
   - 41-50 years
   - Above 50 years

4. In which of the following categories does your department or section fall under (Please tick and specify if not matching categories given below)
   - Human Resources
   - Operations
   - IT
   - Finance
   - Production
   - Procurement
   - Marketing
   - Other specify............................................................

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5. Which group of respondents do you fall under? (Please tick)

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>TICK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Member</td>
<td>☐</td>
</tr>
<tr>
<td>General Manager</td>
<td>☐</td>
</tr>
<tr>
<td>Assistant General Manager</td>
<td>☐</td>
</tr>
<tr>
<td>Senior Manager</td>
<td>☐</td>
</tr>
<tr>
<td>Line Manager</td>
<td>☐</td>
</tr>
<tr>
<td>Non Managerial</td>
<td>☐</td>
</tr>
</tbody>
</table>

6. How long have you been working for Rainbow Cinemas (please tick)
☐ Less than 5 years
☐ More than 5 years

Section B
Understanding the drivers and critical success factors of Digital Technology

7. Would you say that the digital technologies that include reference to DVDs, iPads, You-tube, digital projectors, internet, personal computers, e-commerce are important business tools to Rainbow Cinemas. (please tick)
☐ Yes
☐ No

8. Do you use internet technology as a tool of conducting business?
☐ Yes
☐ No

9. If yes highlight the functions of internet applicable to you? (please tick those applicable)
☐ Communication
☐ Procurement
☐ Marketing
☐ Banking
☐ Research
☐ Access to services

10. Is your ticketing system digitalized
☐ Yes
☐ No
11. If answer to question 10 is yes, does the system produce management reports

☐ Yes
☐ No

12. What are your five major operating costs in your business?

........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

13. What types of projectors are currently using and are they digital?

........................................................................................................................................

☐ Yes
☐ No

14. When was the last time they were upgraded?

........................................................................................................................................
........................................................................................................................................

15. Where do you get support services for your equipment?

........................................................................................................................................
........................................................................................................................................

16. What are the implications of Digital Technology in relation to ensuring competitive advantage for Rainbow Cinemas

<table>
<thead>
<tr>
<th>Implication</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>No Opinion</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage against our competitors</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>We are not left out on the market and Industry trends</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>We increase awareness and interaction with our customers</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>We identify new business opportunities</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Section C
Impact of Piracy on the viability of Cinema business due to technological advancements

17. What challenges is your business facing due to piracy.
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

18. What action have you taken to mitigate these challenges due to piracy
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

Section D
Impact of Digital Technology on the movies distribution

19. Do you use internet technology as a tool of conducting business?
   ☐ Yes
   ☐ No

20. How do you come up with your movie line up at Rainbow Cinemas for your circuit?
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

21. Who is your main movie supplier?.................................................................

22. What is the percentage sharing on movie box office revenue?........................

23. What is the ratio of ticket sales to total cinema sales?....................................

24. Which movie had the highest attendance in last two years?
........................................................................................................................................
25. Do you pay duty on the 35mm reels from your South African movie suppliers?
   □ Yes
   □ No

26. When the movie is off the circuit what do you do with the reels?
   ............................................................................................................................

27. What is the period of archive of reels before they are discarded?
   ............................................................................................................................

28. Approximately what is the time lag between movie release date and theatrical release in your cinemas?
   □ 2 month or less
   □ 3-6 months
   □ 7-12 months
   □ more than 12 months

29. How long your best movie did take to come off the theatrical circuit in the last 2 years?
   ............................................................................................................................

30. How has dollarization affected your business model?
   ............................................................................................................................
   ............................................................................................................................
   ............................................................................................................................

Section E

Influence of Digital Technology on Customer preferences and taste

31. Which age group does frequent your cinemas most?
   □ Under 12 years
   □ 13-18 years
   □ 19-25 years
   □ 26-35 years
   □ 36 years and up
32. What type of movies are popular at your Harare City Multiplex
- Action
- Romantic
- Thriller
- Horror
- Drama
- Animation
- Other

(Specify) ........................................................................................................

33. How much is the movie ticket and how much is popcorn and drink?
Movie ticket $.................. Popcorn $............. Drink $....................

34. How long did your best movie took to come off the theatrical circuit in the last 2 years?
........................................................................................................

Section F
Future of Cinema in the Digital Age

35. Where do you see your company in the next 5 years in terms of technological advancement?
........................................................................................................
........................................................................................................
........................................................................................................

36. What motivates your company to invest in digital technology
........................................................................................................
........................................................................................................
........................................................................................................

37. What are the advantages of using digital technology in your organisation?
........................................................................................................
........................................................................................................
........................................................................................................

38. What are the main challenges in the use of digital technology in your organisation?
........................................................................................................
........................................................................................................

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Section G
Measuring the 3D Film Revolution: Understanding the Impact of New Technology on Movie Theater Visitation

1. Would you go to the movies more often if there were more feature-length films released in 3D?
   - Yes
   - No
   - Depends on film
   - Not sure

2. Would you be willing to pay $5 or more to see a feature-length film in 3D?
   - Yes
   - No
   - Depends on film
   - Not sure

3. If you were to see a 3D film, would you prefer to see 3D effects that give better depth to images on the screen, or 3D effects that appear to come out of the screen at you?
   - Effects that give better depth
   - Effects that appear to come at you
   - Both equal
   - Not sure

4. Have you ever seen a 3D movie at an IMAX® or regular theater?
   - Yes, IMAX®
   - Yes, at both a regular and IMAX® theater
   - Yes, regular movie Theater
   - No/Not sure

5. How often do you go to the movies?
   - Once a month
   - Few times a month
   - Once a week or more
   - Several times a year
   - Once a year or less
   - Never

6. How much is a movie DVD sold in the streets ............................................
7. Do you think the price of the movie ticket is fair?
   - [ ] Yes
   - [ ] No

8. How do you rate the current state of the movie house?
   - [ ] Good
   - [ ] Satisfactory
   - [ ] Poor

9. How do you rate their service?
   - [ ] Good
   - [ ] Satisfactory
   - [ ] Poor

10. Are you happy with current movies being shown by Rainbow Cinemas?
    - [ ] Yes
    - [ ] No
    - [ ] Not Sure

11. Have you seen the current movie on circuit on DVD or other channels?
    - [ ] Yes
    - [ ] No

12. Where do you watch most of your movies?
    - [ ] Cinemas
    - [ ] DVDs
    - [ ] Computer
    - [ ] Cellphone
    - [ ] Internet Café
    - Others (specify)……………………

End of Questionnaire
Thank you for answering the questionnaire