

# **A CRITICAL ANALYSIS OF THE TAX DEDUCTIBILITY OF EXPENSES INCURRED IN VIRTUAL WORLDS BY THE SOUTH AFRICAN TAXPAYER**

by

**THEOGAREN MOODLEY**  
Student Number 24101321

Submitted in partial fulfilment of the requirements for the degree

**Magister Commercii in Taxation**

in the

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

at the

UNIVERSITY OF PRETORIA

STUDY LEADER:  
Mr. T.L. STEYN

CO-LEADER:

Date of submission:  
**November 2011**

## ABSTRACT

### A CRITICAL ANALYSIS OF THE TAX DEDUCTIBILITY OF EXPENSES INCURRED IN VIRTUAL WORLDS BY THE SOUTH AFRICAN TAXPAYER

by

THEOGAREN MOODLEY

STUDY LEADER: MR THEUNS STEYN  
CO-LEADER:  
DEPARTMENT: TAXATION  
DEGREE: MAGISTER COMMERCII (TAXATION)

The arrival of the Internet and the World Wide Web has had a radical impact on commerce and people's ability to interact virtually. Through these channels various new methods of earning income have been created.

Income earned virtually creates a new type of commerce not previously envisioned whilst the South African Income Tax Act was drawn up. The revenue earned is, however, encompassed in the Act. South African residents have as a result entered the taxation net of the South African Revenue Services without understanding the full implications of being taxed. Of particular importance are the deductions available to residents whose incomes are earned through virtual worlds. The various deductions available in the South African Income Tax Act do not specifically deal with the expenses incurred in the production of virtual world income.

South Africans are thus exposed to taxation implications not fully explored by the South African Revenue Services nor the general public. The public needs guidance on this matter and the South African Revenue Services needs further research to be conducted in this area.

The study revealed that deductions would be allowed against taxable income earned through conducting virtual world commerce. The general deduction formula should be applied to all expenses. Capital expenses should be researched further, for application in terms of the Act. However, it appears that the Act can be applied to non- capital expenses incurred for trading in virtual worlds.

**Keywords:**

*General deduction formula*

*e-commerce*

*Tax deductions*

*Virtual income*

*Virtual worlds*

*Virtual world commerce*

## OPSOMMING/SAMEVATTING

### **‘N KRITIESE ANALISE VAN BELASTINGAFTREKKING VAN UITGAWES VIR DIE SUID-AFRIKAANSE BELASTINGBETALER WAT VERBAND HOU MET VIRTUELE WÊRELDE**

deur

THEOGAREN MOODLEY

STUDIELEIER: MNR THEUNS STEYN  
MEDE-STUDIELEIER  
DEPARTEMENT: BELASTING  
GRAAD: MAGISTERCOMMERCII (BELASTING)

Die aankoms van die Internet en die Wêreldwye Web het reeds ‘n geweldige impak op die handle en mense se vermoëns om virtueel in wisselwerking te wees. Deur middle van hierdie kanale het verskeie nuwe metodes ontstaan om ‘n inkomste te verdien.

‘n Inkomste wat virtueel verdien word, skep ‘n nuwe sort handle waarvoor daar geen voorsiening gemaak is toe die Inkomste Belastingwetgewing opgestel is. Die inkomste wat verdien word is wel binne die bestek van die Wetgewing. Suid-Afrikaanse inwoners val dus binne die belastingsnet van die Suid-Afrikaanse Inkomste Dienste sonder om die volle implikasies van die belasting te begryp. Van besondere belang is die belastingsaftrekkings wat vir inwoners, wie se inkomste in die virtuele wêreld verdien word, beskikbaar is. Die verskeie aftrekkings beskikbaar in die Suid-Afrikaanse Inkomste Belastingwetgewing maak nie spesifiek voorsiening vir die uitgawes wat aangegaan word terwyl ‘n inkomste in die virtuele wêreld verdien word nie.

Suid Afrikaners word duw aan belastingsgevolge blootgestel wat nie ten volle deur die Suid-Afrikaanse Inkomste Dienste, of die algemene publiek verken is nie. Die publiek het

leiding in die opsig nodig en die Suid-Afrikaanse Inkomste Dienste benodig verdere navorsing in die verband.

Die studie toon dat aftrekkings toegelaat sou word teen belasbare inkomste wat verdien word, deur handel in die virtuele wêreld te dryf. 'n Algemene formule moet op alle uitgawes toegepas word. Kapitale uitgawes moet verder nagevors word vir toepassing op die Wetgewing. Nieteenstaande, wil dit voorkom dat die Wetgewing op nie-kapitale uitgawes wat in die proses van handel dryf in die virtuele wêreld, toegepas kan word.

**Sleutel woorde:**

*Algemene aftrekkingsformule*

*e-handel*

*Belastingaftrekkings*

*Virtuele Inkomste*

*Virtuele wêreld*

*Virtuele wêreldhandel*

## TABLE OF CONTENTS

1	CHAPTER 1 INTRODUCTION .....	4
1.1	BACKGROUND .....	4
1.2	PROBLEM STATEMENT .....	5
1.3	PURPOSE STATEMENT .....	5
1.4	RESEARCH OBJECTIVES .....	5
1.5	IMPORTANCE AND BENEFITS OF THE STUDY .....	6
1.6	DELIMITATIONS .....	6
1.7	DEFINITION OF KEY TERMS .....	7
1.8	CONCLUSION .....	9
2	CHAPTER 2 UNDERSTANDING OF VIRTUAL WORLDS .....	11
2.1	INTRODUCTION .....	11
2.2	USERS OF VIRTUAL WORLDS .....	11
2.3	HOW A VIRTUAL WORLD WORKS .....	13
2.4	REASON FOR TRADE IN VIRTUAL WORLD GOODS .....	15
2.5	THE SMARTPHONE AS A MEDIUM FOR VIRTUAL COMMERCE .....	22
2.6	SELLING VIRTUAL ITEMS .....	25
2.7	CONCLUSION .....	27
3	CHAPTER 3 THE DETERMINATION OF DEDUCTIONS IN RESPECT OF EXPENSES INCURRED TO PRODUCE INCOME FROM VIRTUAL WORLDS .....	28
3.1	INTRODUCTION .....	28
3.2	DEDUCTIBILITY OF EXPENSES .....	28
3.3	GENERAL DEDUCTION FORMULA – SECTION 11(A) AND SECTION 23(G) ...	29
3.4	CONCLUSION .....	39
4	CHAPTER 4 ASSESSMENT OF EXPENSES .....	41



4.1	INTRODUCTION .....	41
4.2	TAXABLE INCOME .....	41
4.3	COSTS INCURRED.....	41
4.4	CONCLUSION .....	54
5	CHAPTER 5 CONCLUSION .....	55
5.1	INTRODUCTION .....	55
5.2	SUMMARY OF OBJECTIVES .....	55
5.3	SUMMARY OF FINDINGS .....	55
5.4	CONCLUSIONS.....	57
5.5	SUGGESTIONS FOR FURTHER RESEARCH.....	57
	LIST OF REFERENCES .....	59

## LIST OF FIGURES

Figure 1: Virtual world registered accounts: second quarter of 2009 .....	12
Figure 2: Breakdown of Facebook revenues.....	17
Figure 3: Facebook forecast revenue.....	19
Figure 4: United States virtual goods market 2008-2010 (dollars millions).....	20
Figure 5: United States population 1910-2010.....	21
Figure 6: United States smartphone spend on virtual goods 2009-2010 .....	23
Figure 7: USA smartphone market 2010 .....	24

## LIST OF TABLES

Table 1: Abbreviations used in this document.....	9
---	---



# **A CRITICAL ANALYSIS OF THE TAX DEDUCTIBILITY OF EXPENSES INCURRED IN VIRTUAL WORLDS BY THE SOUTH AFRICAN TAXPAYER**

## **CHAPTER 1 INTRODUCTION**

### **1.1 BACKGROUND**

According to eBay's financial report (eBay, 2009:11), in 2009 approximately ninety million people bid on, bought or advertised a product for auction on "eBay", one of the world's largest internet-based trading platforms. This figure, when compared to the fifty-six million people in 2004 (eBay, 2004:5), and the twenty-eight million people in 2002 (eBay, 2002:6), indicates that an increasing number of people are exploring the possibilities of trading virtually.

Over twenty-two billion United States Dollars was spent in 2009 on Internet-based advertising in the United States alone (Interactive Advertising Bureau, 2010:6). This suggests that e-commerce has become a multi-billion United States dollar industry. The term used when describing business conducted on the Internet is e-commerce, which is short for electronic commerce.

Thus, the understanding of the taxation implications to which this industry is exposed is of vital importance to the millions of people conducting business electronically and the further potential millions of people who will be engaging in e-commerce in the future.

Virtual world commerce is a type of e-commerce. This is the type of trading that occurs with non-real world items. For example a virtual watch or virtual diamond ring are items that do not exist in the real world. These items are therefore not tangible but exist within the realms of the virtual world for which it was created.

Previous research has been conducted around the taxability of income earned in a virtual world (Camp, 2007; Lederman, 2007), and has been replicated in a SA context (Pienaar, 2008).

A search of Google Scholar and Emerald, however, suggests that scarce research, on the deductions available against income generated virtually has been replicated in a SA context.

## **1.2 PROBLEM STATEMENT**

As indicated above even though studies have been conducted on the taxability of income earned from virtual worlds, very little, if any, research appears to have been conducted on the deductibility of expenses incurred in the production of virtual world income from a SA residents perspective.

This is an academic problem as little is known about the deductions available to this expanding industry. This study attempts to provide research on those deductions in order to expand the knowledge base on this subject.

## **1.3 PURPOSE STATEMENT**

The main purpose of this study is to critically analyse the general deductions contained in the SA Income Tax Act No. 58 of 1962 (The Act) with specific reference to expenses incurred in virtual worlds.

## **1.4 RESEARCH OBJECTIVES**

The study is guided by the following specific research objectives:

- To critically analyse the concept “virtual world” in order to provide background for the study.

- To critically analyse the deductibility of expenses incurred by SA residents in producing income virtually, specifically in terms of section 11(a) and section 23(g) of the Act.

## **1.5 IMPORTANCE AND BENEFITS OF THE STUDY**

From a theoretical perspective, the proposed study initiates research around the application of basic principles regarding general deductions, but focuses on an industry not contemplated at the time of writing the Act.

As far as could be determined, the research appears to be unique in its application in a SA context.

From a practical perspective, the findings may assist SA residents incurring expenses relating to income earned from virtual worlds to comply with the Act and to take advantage of any deductions to which they may be entitled. It may also create a platform for the SA Revenue Services (SARS) to build on when performing their own research regarding amendments to the Act, in order to accommodate expenses incurred in earning income from virtual worlds.

## **1.6 DELIMITATIONS**

The proposed study has several delimitations related to the context and constructs and theoretical perspectives of the study.

Firstly, it is limited to the context of expenses incurred by residents of SA in the production of income from virtual worlds. As a result the study will not examine the impact of expenses incurred in producing income from virtual worlds by non-residents.

Secondly, the study focuses on expenses incurred in the production of virtual world income. Therefore, the study does not deal with whether the income itself is taxable or not and assumes that the taxpayers intention is to generate income as a result of incurring the expense he or she wishes to deduct.

Thirdly, the study focuses on income earned from virtual worlds only. These virtual worlds are environments in which simulated realities are created through which trade may occur only within the realm of that virtual world. An example of such a world is FarmVille and is explored in this study.

Finally, the study focuses only on the general deductions available under section 11(a) and section 23(g) of the Act and does not examine the applicability of other specific deductions or capital deductions available in the Act.

## **1.7 DEFINITION OF KEY TERMS**

This study revolved around a number of key concepts, namely *avatar*, *commerce*, *e-commerce*, *free-to-play business model*, *in-app commerce*, *in-game commerce*, *monetisation*, *real world money*, *smartphone*, *smartphone application*, *virtual item or good*, *virtual world*, *virtual world commerce*, *virtual world credit* and *virtual world user*.

The manner in which these key terms have been defined for the purpose of this study is considered below:

### **Avatar**

An avatar is defined by Camp (2007:3), as an online persona created by a virtual world user to assume a role within the virtual world.

### **Commerce**

Commerce, defined as buying, selling or trading of any item in exchange for any item of equal or similar value (Clarendon Press, 1994).

### **E-commerce**

E-commerce or electronic commerce is defined as “the ability to perform transactions involving the sale or exchange of goods or services between two or more parties using electronic tools and techniques” (Sher, 2000).

### **Free-to-play business model**

Free-to-play business model is defined by Graft (2010), as a model where monetisation occurs through usage of the application and not the downloading of the application.

### **In-app commerce**

In-app commerce is commerce that takes place virtually within the realms of a smartphone application.

### **In-game commerce**

In-game commerce is commerce that takes place virtually within the realms of a game which supports trading activities.

### **Monetisation**

Monetisation is the process of earning revenues from a business model (Graft, 2010).

### **Real world money**

Real world money is any currency that is used or traded with, in the real world.

### **Smartphone**

Scott Steinberg, editor at Digital Trends, describes a smartphone as a mobile or cellular phone that has access to high speed internet and is capable of allowing users to access, send and receive e-mails as well as download and utilise smartphone applications with additional functionalities (Mombert, 2009).

### **Smartphone application**

A smartphone application is a program that is run on certain smartphone devices.

### **Virtual item or good**

A virtual item or good is a graphically simulated item that exists only within the virtual world for which it was created.

### **Virtual world**

A virtual world is a graphically simulated environment that contains elements of reality (Camp, 2009:3).

### **Virtual world commerce**

Virtual world commerce is commerce that occurs within the realms of the virtual world.

### **Virtual world credit**

Virtual world credit is positive virtual money that can be exchanged for items within the virtual world.

### **Virtual world user**

A virtual world user is a person who participates in the activities of a virtual world.

The following abbreviations are used in the document.

**Table 1: Abbreviations used in this document**

<b>Abbreviation</b>	<b>Meaning</b>
App	Application
BLNS	Botswana, Lesotho, Namibia, Swaziland
OECD	Organisation for Economic Co-operation and Development
SA	South Africa (n)
SARS	South African Revenue Services
The Act	The South African Income Tax Act No. 58 of 1962
USA	United States of America

## **1.8 CONCLUSION**

In Chapter One, the study motivated the need for research on deductions from income produced in the virtual world. Delimitations, outlines and definitions of key terms were provided.

In Chapter Two the extant literature relevant to deductions of amounts incurred in the production of income generated from virtual worlds is reviewed and critically analysed to determine its applicability within a SA context. Chapter Three and Four further analyses the expenses typical of a business generating income from a virtual world. Lastly Chapter Five of the study summarises the findings of the research conducted and suggests areas of further research.

## **CHAPTER 2 UNDERSTANDING OF VIRTUAL WORLDS**

### **2.1 INTRODUCTION**

Chapter One motivated a need for research on deductions from income produced from virtual worlds.

This chapter provides an understanding of virtual worlds. It also provides an understanding of how virtual worlds work by exploring some of the transactions that occur within the realms of these graphically simulated environments.

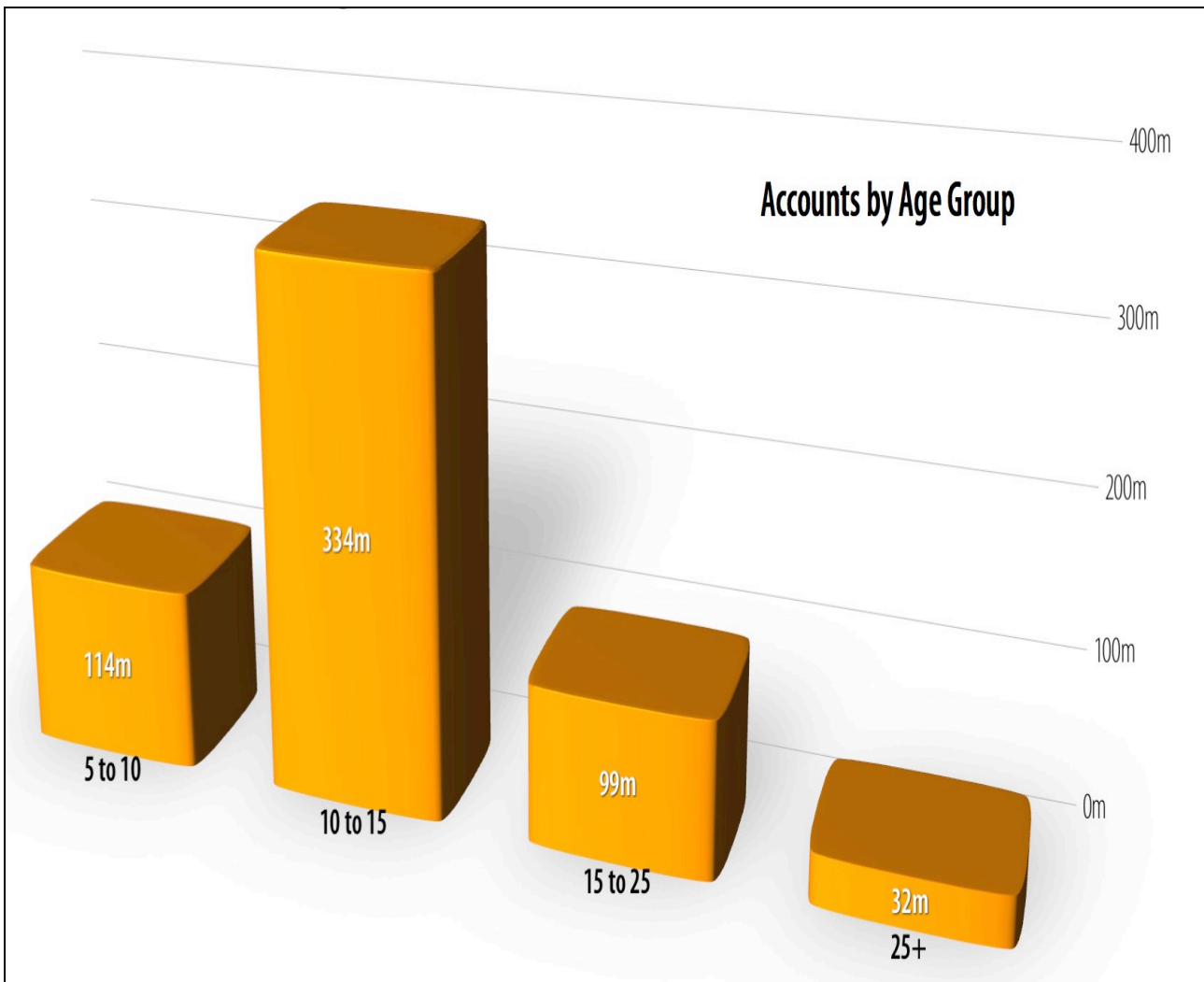
To gain an understanding of virtual worlds this chapter looks at who are the users of virtual worlds. Secondly, the chapter looks at how the virtual worlds work. Thirdly, the chapter looks at what the reasons are for trade in a virtual world. Fourthly, the chapter looks at the smartphone as a medium for virtual commerce and the impact this has on the virtual goods market. And finally the chapter discusses how virtual worlds generate profits.

### **2.2 USERS OF VIRTUAL WORLDS**

In Sher's (2000) research on taxation of e-commerce, Sher comments "the virtual market place of e-commerce will offer an ever-expanding range of goods and services to an increasingly computer literate population." This appears to be the reality with reports, as depicted in Figure 1, suggesting that around 579 million registered virtual world users were in existence worldwide at the end of the second quarter of 2009.



Figure 1: Virtual world registered accounts: second quarter of 2009



Source: Adapted from Virtual World News (2009).

According to the above graphical representation from Virtual World News (2009), of the number of virtual world registered users, the largest group appears to be between the ages five and fifteen. These persons are generally considered minors in section 28(3) of the SA Children's Act (2005), which defines a major as a person eighteen years or older.

A person's age is, however, not a pertinent matter in relation to the topic of taxation. The reason for this is that the Act has no bias against age when determining a person's tax liability. As a result the Act is also not prejudiced against such person's ability to reduce his or her liability by making use of the available deductions within the Act.

This is clearly demonstrated in section 1 of the Act where a resident is defined to include any person from the first day they become an ordinary resident of the republic. That is the day they are born in SA.

Considering that virtual worlds attract users of all ages, it is important to understand how a virtual world works. This is discussed below.

### **2.3 HOW A VIRTUAL WORLD WORKS**

According to Camp (2007:3), a user creates an online persona called an avatar to assume a role within the context of the virtual world. The user then agrees to adhere to a set of rules and regulations which govern the social interaction within the virtual world (Bartle, 2004:23).

Users may perform tasks or partake in routines that occur within the realms of the virtual world (Camp, 2007:3).

The user therefore has the ability to experience and engage within the realms of the virtual world. These experiences are, however, limited to the rules programmed into the virtual world.

Consider the case of FarmVille, a social virtual world created to allow players to virtually farm with their friends. This virtual world, which was created by Zynga, has reported just fewer than sixty million active monthly users (Facebook, 2010). The social virtual world allows players to trade with their friends as well. To facilitate such trade the virtual world has its own currency called Farm Coins (Zynga, 2009).

FarmVille players may partake in activities, which include planting, growing and harvesting of virtual crops, trees and livestock.

Players may harvest crops, sell livestock and trees for Farm Coins. With their earned Farm Coins players can purchase more seeds, trees, livestock, buildings, decorations and land.

FarmVille players may interact with other players and assist or receive assistance from them on their farms.

Gifts may even be given and received and these can then used on the virtual farm (Zynga, 2009).

FarmVille sets certain tasks to be performed by the player in order to gain experience and to advance within the virtual world. These tasks are typical farming targets, such as harvesting a certain amount of crop within a certain amount of time. The tasks, mentioned above, have been programmed into the virtual world and become more challenging as the user progresses through the game. The experience gained through completion of tasks enhances the user's ability to perform within the virtual world. Therefore, once a user completes a certain task they earn experience that in the virtual world equates to skill and credibility that allow the user to progress through certain task quicker. Plants grow quicker, crops ripen faster and farmlands are harvested in less time. This in turn allows for stock to be sold earlier, with higher grades and possibly for more Farm Coins (Zynga, 2009).

FarmVille also has a market place that sells virtual items like tractors, fuel, land and other special items. These special items are only available from the FarmVille market. In other words to obtain the use of these special virtual items a player needs to purchase these from the FarmVille market.

To buy items from the FarmVille market the player needs to pay with Farm Cash that is virtual credit different from Farm Coins. Farm Cash is bought using real world money.

These special items are used by players on their virtual farms to advance their player levels at a quicker pace.

Therefore players are able to buy skill and ability that they would otherwise have to work through the game to achieve. In this way they allow themselves to catapult their growth and development within the game (Zynga, 2009).

The virtual world items are sold within the game itself using virtual world credits such as Farm Cash in FarmVille. These credits are electronically allocated to the players account once they have bought them from the developers, using real world money.

Developers have their own currency conversion rates that they apply at the time of the transaction (AU, 2008:9).

The demand for virtual world credit is so high that there are even websites dedicated to selling different virtual world credits. An example of such a website is GameCoins.com.

This website is dedicated to the sale of virtual world credits and at the time of this study, boasted the sale of sixty-eight different virtual world's credits (Game Coins, 2010).

According to Game Coins (2010), visitors to their sites also have the opportunity of winning virtual world credits that they could then spend in the virtual world.

It is therefore the sale of both the virtual world currency and the sale of virtual world items that give rise to virtual commerce. As with real world commerce virtual commerce gives rise to inherent tax consequences.

To understand these tax implications, the research must first understand why there is trade in virtual world goods.

## **2.4 REASON FOR TRADE IN VIRTUAL WORLD GOODS**

### **2.4.1 Players**

Virtual world players buy virtual items to inflate their status. In this way they may portray themselves as players with higher statuses and abilities (Bartle, 2004:39-40).

By doing this, players obtain higher levels within the virtual world at a faster pace than they would have reached that level had they completed the tasks according to the virtual world's normal progression.

This allows for players with more money and less time to gain status and credibility by purchasing virtual items.

In some cases these virtual items are earned by other players who progress within the virtual world at a normal pace. These other players may have more time and possibly less money than the players to whom they sell their virtual accounts and thus related virtual items, skills and abilities too (Lederman, 2007:1628-1629).

### **2.4.2 Revenue**

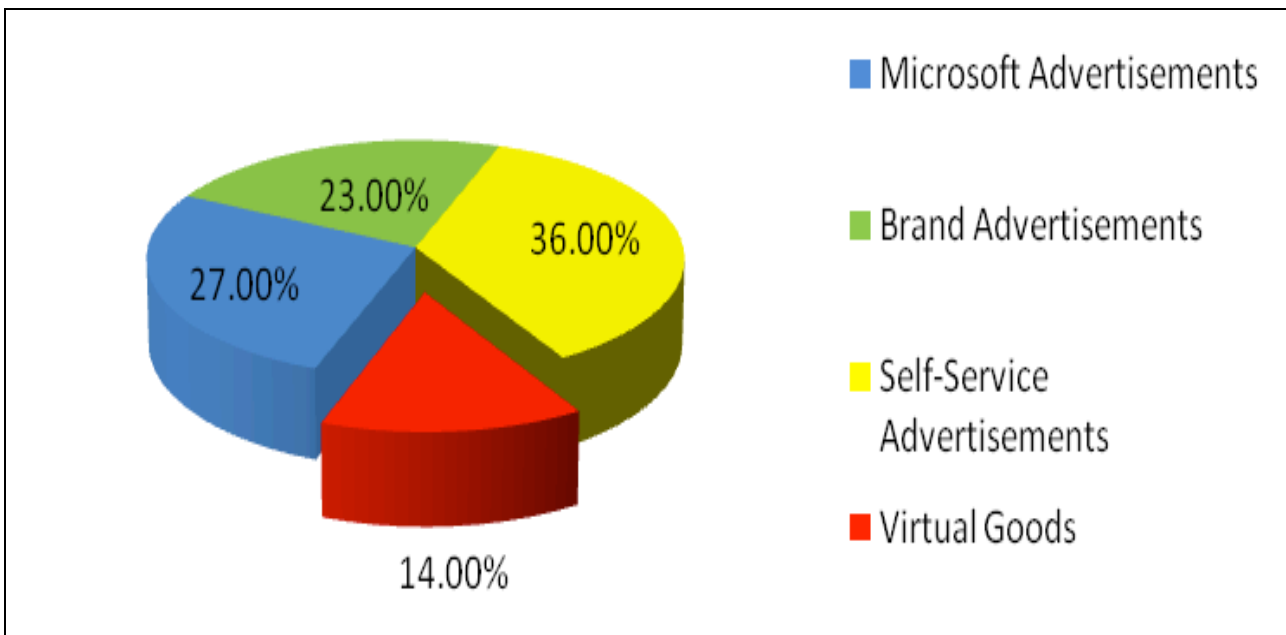
The real world monetary implications of selling virtual world items appear highly profitable. The Chief Executive Officer of Zynga, the company that developed FarmVille, has reported revenue of 460 million United States Dollars. Of this reported revenue 90 per cent is expected to come from the sale of virtual goods (CNBC, 2010).

Another example of a virtual world is Facebook. This social virtual world creates a forum for users from which, they may meet with friends, chat, share pictures, poke each other (a virtual way of greeting someone on Facebook), and buy each other virtual gifts. Facebook allows users to send virtual items like drinks, meals and jewellery to their friends. These items can cost a few United States Dollars each.

According to Galan (2009), a journalist for an online financial reporting company, Facebook earns a large portion of its combined revenue, from sale of virtual items. Based on his analysis of Facebook's financial records for 2009, Galan estimates this figure to be around 14 per cent.

The total revenue from virtual items sales when compared to other revenue streams is shown in Figure 2 below.

**Figure 2: Breakdown of Facebook revenues**



Source: Adapted from Galan (2009).

From the above it can be seen that Facebook depends to a large extent on revenue generated from virtual world goods.

The revenue generated from virtual goods is shown to be more than 50 percent of income from brand advertisements.

### **2.4.3 Interaction between virtual worlds**

Facebook allows for its users to participate in other virtual worlds. FarmVille is one such virtual world offered as a downloadable application to be linked to a player's Facebook account (Facebook, 2010). In this way virtual worlds are able to gain momentum from each other and therefore grow rapidly.

### **2.4.4 Value of shares**

The profits a virtual world can make have created a demand for the shares of the companies who develop these virtual worlds.

Sharespost.com is an online private stock market place where, users can sell their shares in private companies such as Facebook.

Microsoft, a large software company, purchased a two per cent stake in Facebook for 240 million United States Dollars due to its popularity.

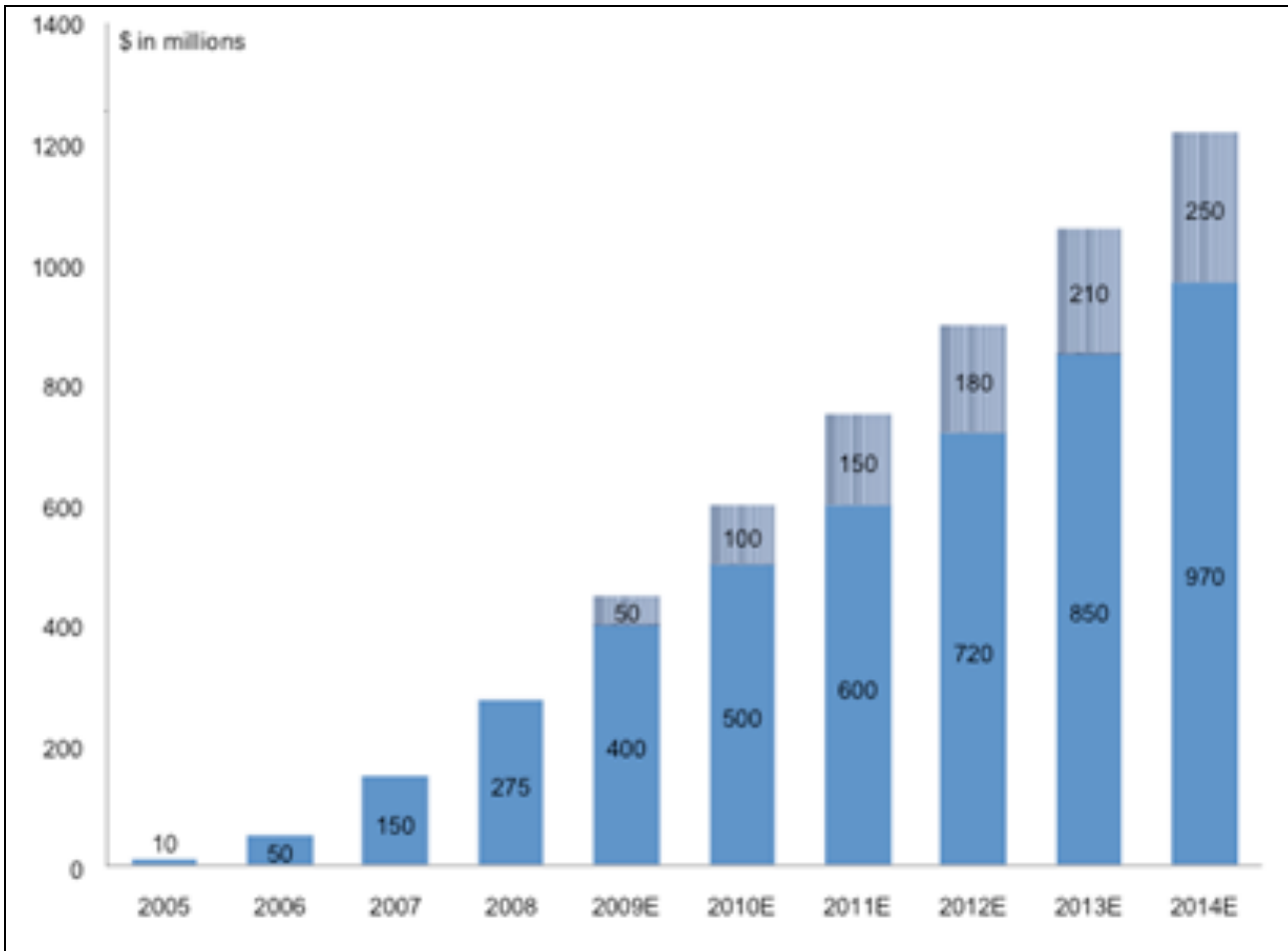
The total value of the company in 2007 was calculated to be around fifteen billion United States Dollars by extrapolating the two per cent purchased by Microsoft to the rest of the company (Stone, 2007).

At the time of this research, current bids for privately-owned shares in Facebook were at seventy-six United States Dollars per share. This implies that the current value of Facebook is somewhere in the region of thirty-four billion United States Dollars (Sharespost, 2010).

The estimated revenue figures for Facebook based on prior year actual figures, performed by an independent research company, NeXt Up Research (2009), supports this valuation through its analysis and expectation of Facebook's revenue going forward.

This estimation is shown in Figure 3 below.

**Figure 3: Facebook forecast revenue**



Source: Adapted from NeXt Up Research (2009).

As shown in Figure 3 above, Facebook is likely to surpass one billion United States Dollars in total revenue by the year 2013.

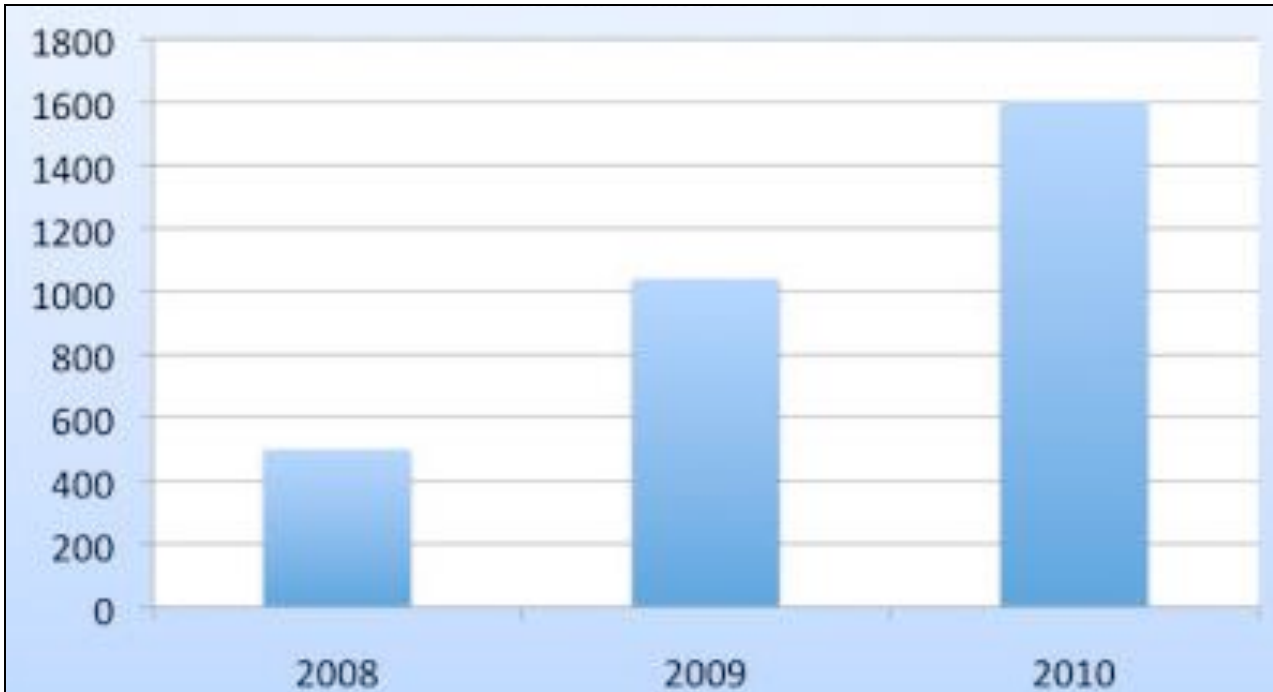
#### **2.4.5 Virtual goods market**

If the current split of revenue, Figure 2 is to be maintained, one can expect 140 million United States Dollars of total revenue to relate to sale of virtual world items on Facebook.



A further study, performed by Inside Virtual Goods (2010), an online research analysis company, suggests that the United States virtual items market grew by around 600 million United States Dollars from 2008 to 2009.

**Figure 4: United States virtual goods market 2008-2010 (dollars millions)**

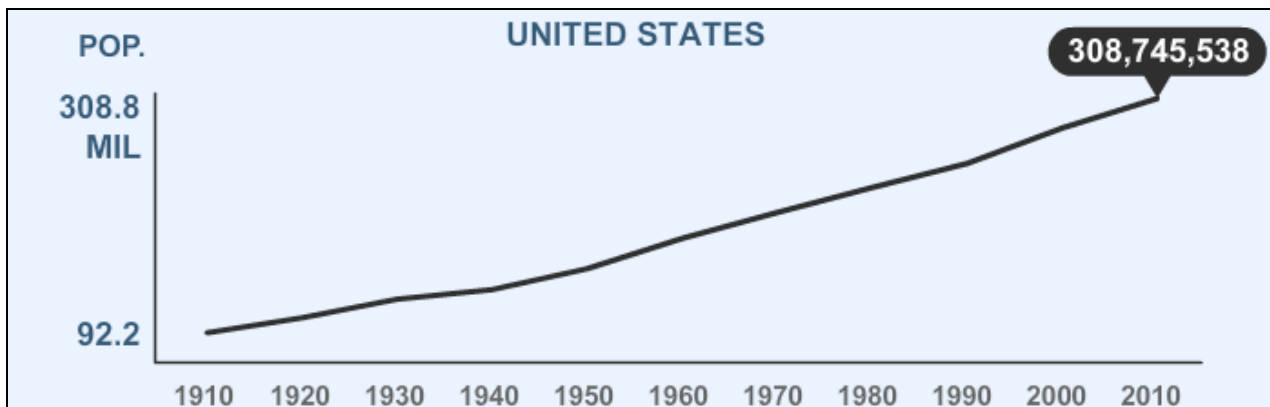


Source: Adapted from Inside Virtual Goods (2010).

The expected growth depicted in Figure 4 above estimates growth in the United States virtual goods market, for 2010, to be around 60 per cent.

In 2010, Frank N. Magid Associates Incorporated, a leading research-based strategic American based consulting firm, conducted an American nationally representative survey to gain insight into the trends in virtual good purchases. Based on this survey, the firm released a report indicating that 13 percent of all Americans surveyed, bought virtual goods in 2010. In addition, each person spent 99 United States Dollars, on average, in 2010 to purchase various virtual goods (Frank N. Magid Associates, 2010).

Figure 5: United States population 1910-2010



Source: Adapted from United States Census (2010).

As can be seen in

Figure 5 above, according to the 2010 census of the United States of America, the total population as at 1 April 2010 was just under 309 million people (United States Census, 2010).

Using the reported population figure together with the research conducted by Frank N. Magid Associates Incorporated (2010), there are an estimated 40 million Americans who in total spent nearly four billion United States Dollars in 2010 in the virtual worlds.

The estimated spending, based on Frank N. Magid Associates Incorporated research (2010), shows that virtual goods sales are far exceeding expectations. Frank N. Magid Associates Incorporated research (2010), provided information on the various types of platforms whence virtual goods were purchased.

Social network sites, like Facebook, were most popular amongst users responsible for approximately 60 percent of all virtual users spending their money on virtual goods. The second most popular platform was free web based games accounting for 37 per cent of all users spending their money to buy virtual goods.

#### **2.4.6 Conclusion**

The multi-billion United States Dollar value of the virtual world global industry, as suggested by the research discussed above, alludes to large amounts of profits being available to companies willing and able to harness the support and growth that virtual worlds are experiencing and are expected to continue experiencing.

It is this profitability of virtual worlds that is arguably the most powerful incentive for companies and individuals to trade in the virtual world and thus stimulate virtual world commerce.

The research next looks at how cellular phone manufacturers are responding to the demand for people to engage virtually.

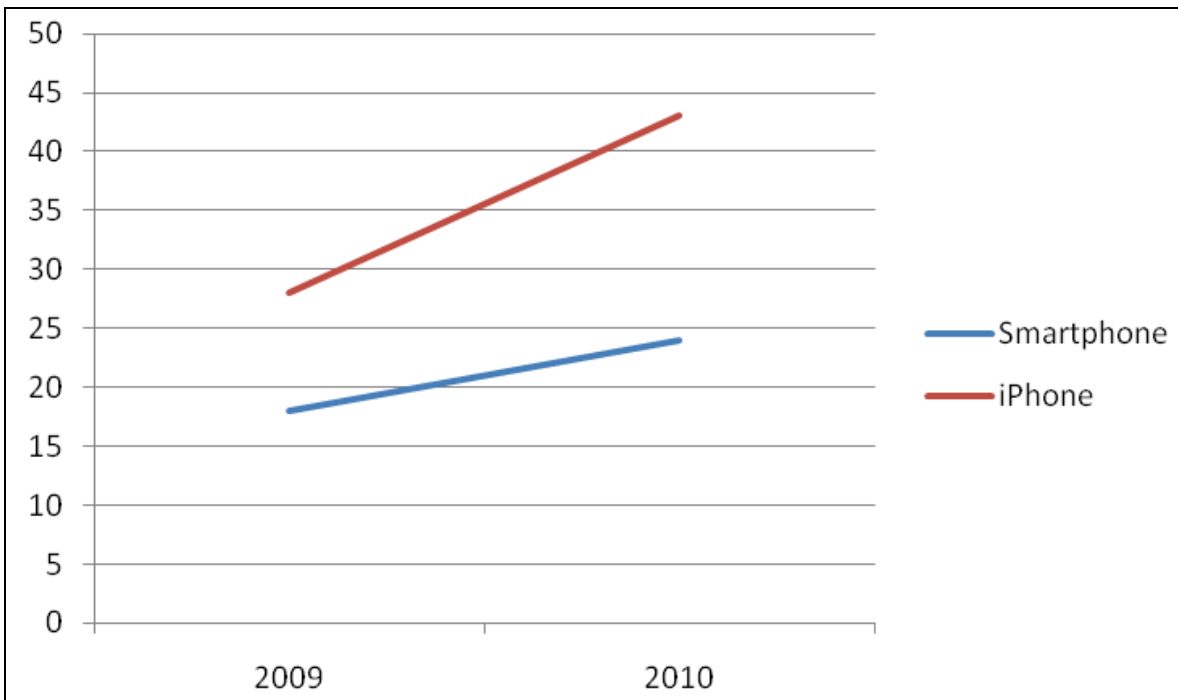
### **2.5 THE SMARTPHONE AS A MEDIUM FOR VIRTUAL COMMERCE**

Through a survey conducted by Frank N. Magid Associates Incorporated (2010), it was discovered that 24 per cent of smartphone users purchased virtual content in 2010 compared to eighteen per cent of users in 2009.

Forty-three per cent of Apple iPhone, a brand of smartphone, users claimed to purchase virtual items in 2010 compared to 28 per cent of users in 2009.

This is shown graphically in Figure 6 below, and indicates that there is an increasing trend in smartphone users to spend money on virtual items.

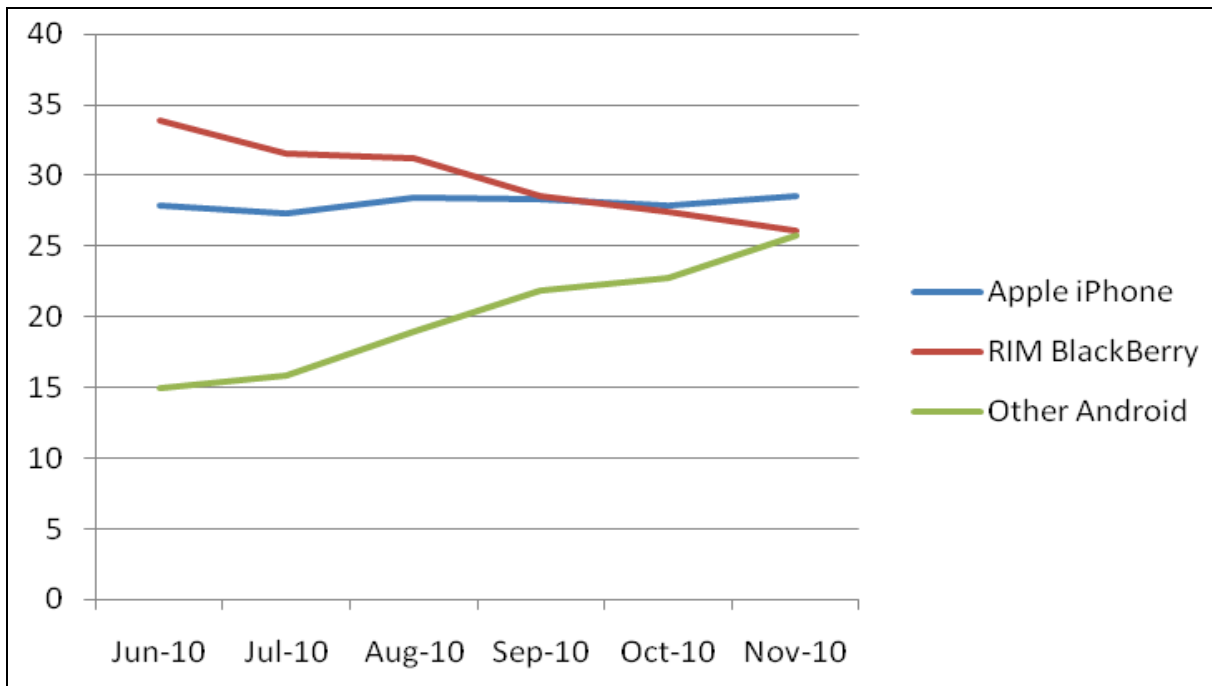
**Figure 6: United States smartphone spending on virtual goods 2009-2010**



Source: Adapted from Frank N. Magid Associates Incorporated (2010).

In Figure 7 below, Apple's iPhone was the leading smartphone in United States of America (USA) at the end of 2010 with BlackBerry and Android smartphones coming in at a close second and third place (The Nielsen Company, 2011). It is evident in Figure 7 that other suppliers of Android smartphones are increasing their market share of the total smartphone market.

Figure 7: USA smartphone market 2010



Source: Adapted from The Nielsen Company (2011).

As a result of these increasing trends it is necessary to briefly understand the role of the smartphone in the generation of virtual world commerce.

The smartphone allows for the purchase of applications that provide the users of smartphones with extra functionality. These additional functions may be receiving live news feeds, stock reports or may allow the user to play a game interactively with other users remotely through the Internet.

These all-in-one devices are therefore capable of being regular cellular phones and offer additional functionality, and still fit in one's pocket making them easily accessible to users at all times.

Smartphones therefore make it easier for users to access social networking sites, such as Facebook, and play interactive games with other users around the world.

### **2.5.1 Profits from smartphones**

According to Neil Young, chief executive of Ngmoco, an application development company, developers of applications for smartphones have realised that they could achieve greater profits from selling virtual items within these applications as opposed to selling the applications only. (Graft, 2010).

Mr Young makes use of the free-to-play business model where monetisation, the process of earning revenues, occurs through usage and participation within the game and not through downloading of the game only (Graft, 2010).

What this means is that developers earn revenues by selling virtual items within the games and offer the games free of charge to users. This is known as in-game or in-app commerce as users are enticed to purchase virtual items to be used within the game or application.

Ngmoco has used this business model with success as the company was sold for 400 million United States Dollars in 2010 (Graft, 2010).

To understand how developers are taking advantage of the increasing trends, the research explores how they are selling virtual items.

## **2.6 SELLING VIRTUAL ITEMS**

In order to fast track one's progress within a virtual world, a player may purchase items within that virtual world which would allow him or her to move through the levels of the realms at an above normal pace (Camp, 2007:11).

An example of this is the sale of tractors, fuel and other farming implements sold on FarmVille's market place.

These items offer the player an advantage of higher yields, faster growing and harvesting times and possibly better quality of crop. This in turn allows the players to obtain more Farm Coins for the crop and thus advance their level within the game.

The amount of revenue earned by Facebook from sale of virtual goods as shown in Figure 2 depicts the willingness of users to buy virtual items like jewellery, food, drinks and pets to send to their friends. This is another example of users choosing to enhance their credibility and status in the virtual world by spending real world money.

Previous research indicates that income earned from sale of virtual items may be subject to tax in an SA context (Pienaar, 2008:45).

The exception to this is if the taxpayer can prove that he or she had taken part in the trade for entertainment purposes only or he or she was merely taking part in a game when the transaction resulted in income (Pienaar, 2008:45).

Thus, if a taxpayer does not take part in a game for entertainment purposes only and he or she generates income, that income will be taxable as he or she is considered as partaking in income generating activities (Pienaar, 2008:45).

A taxpayer is only able to obtain the benefit of deductions allowable in terms of the Act if taxable income is generated in terms of the Act.

If a taxpayer partakes in a game for entertainment purposes only, then no taxable activity is taken part in and therefore no taxable income may be earned (Pienaar, 2008:45).

An example of this would be when FarmVille players sell their crops at the market. This is a challenge in the game and the sale would be seen as part of the game. Any income earned in this way would therefore not be considered income.

By the same logic, however, any expenses incurred in generating those monies, would not be eligible for deduction as there would be no income to deduct those expenses against.

This is as a result of the Act only providing for deductions from income, that is clearly defined in section 1 of the Act and only includes taxable income of the taxpayer.

## **2.7 CONCLUSION**

This chapter first looked at the different users of virtual worlds and how the Act accommodates them. The chapter secondly discussed how virtual worlds work. Thirdly, the chapter discussed the financial motivations for trade in the virtual world. Fourthly the chapter highlighted the smartphone as a new medium of conducting virtual commerce and the impact this has had on the virtual goods market. Finally the chapter looked at how virtual worlds generate profits.

A taxpayer's ability to reduce his or her taxable income earned virtually is therefore important and is discussed in the next section.



## **CHAPTER 3 THE DETERMINATION OF DEDUCTIONS IN RESPECT OF EXPENSES INCURRED TO PRODUCE INCOME FROM VIRTUAL WORLDS**

### **3.1 INTRODUCTION**

The previous chapter discussed the users of virtual world, how virtual worlds work, the financial motivations for virtual world commerce, the smartphone as a medium for conducting virtual world commerce and finally how virtual worlds generate profits.

This chapter of the review provides a discussion of previous research performed. The discussion specifically looks at whether expenses incurred in production of virtual world income are allowed as a deduction against taxable income in SA.

In addition, a critical analysis of previous research is performed in terms of SA income tax legislation and case law. This analysis is used as a basis to determine whether expenses incurred in the production of income earned from virtual worlds are tax deductible in SA.

The research looks at whether there can be a basis for a deduction against income earned from virtual world activities.

### **3.2 DEDUCTIBILITY OF EXPENSES**

The OECD's report (2003:13), maintained that taxes applied to e-commerce should seek to be neutral between electronic and conventional forms of commercial transactions.

This would allow for the different types of tax to be consistently applied between the various forms of e-commercial and conventional business transactions.

The implication of this is that the principles of normal taxation legislation, should, as far as possible, be applied to e-commerce transactions in the same way as they would be applied to conventional transactions.

Further expansion of the guidance from the OECD (2003:13) would support the view that in the same way e-commerce transactions, including virtual world commerce activities, should enjoy conventional tax treatment.

Therefore the research findings and reports previously discussed, suggest that where income is derived from virtual worlds and found to be taxable, there is a strong expectation created of a deduction of expenses or losses incurred in the creation of that income, being made available to the taxpayer.

Although extensive research has not been performed on the deductibility of expenses incurred in producing taxable virtual world income, the basic principles of the Act may be applied to scenarios and are discussed in this study.

### **3.3 GENERAL DEDUCTION FORMULA – SECTION 11(A) AND SECTION 23(G)**

The general deduction formula provides for the deductions allowed in terms of section 11(a) and section 23(g) of the Act.

In *Port Elizabeth Electric Tramway Co Ltd v CIR* (1936 CPD 241)(8 SATC 13), it was found that both section 11(a) and section 23(g) must be read together when determining if an amount may be deducted or not.

Jordaan et al (2007:86), explain that these two sections are the “positive” and “negative” test, applied respectively in determining whether an amount expended may be deducted against taxable income or not.

These sections are discussed below to understand their implications and their applicability to this study.

### **3.3.1 Section 11(a) – positive test**

The “positive” test is governed by section 11(a) of the Act that provides for the deduction of expenditure and losses, actually incurred, in the production of the income provided that such expenditure or loss is not of a capital nature.

The components of the general deduction formula are discussed individually.

#### **3.3.1.1 *Expenditure and losses***

The first part of section 11(a) of the Act speaks of expenditure and losses.

The terms ‘expenditure’ and ‘losses’ have been discussed in court to derive their meaning and implications in terms of the Act.

‘Expenditure’ was found to mean a voluntary payment. ‘Losses’ was found to mean a deprivation suffered by the loser, usually involuntarily (Joffe & Co (Pty) Ltd, 1946:360).

In another case, ‘losses’ was found to mean floating capital employed in trade to produce income (Port Elizabeth Tramway Co Ltd, 1936).

The next part of the Act speaks of ‘actually incurred’. This is discussed next.

#### **3.3.1.2 *Actually incurred***

To determine the meaning of ‘actually incurred’ in terms of the Act: relevant court cases are discussed.

In Port Elizabeth Electric Tramway Co Ltd (1936) it was found that an expense need not be necessary for it to qualify as ‘actually incurred’.

This means that a taxpayer may incur expenses that another taxpayer would not incur, and the expense would still qualify for deduction in terms of the Act, provided it meets all other necessary requirements.

The courts have decided that deductible expenses can only be deducted in the year of assessment in which they occur (Concentra (Pty) Ltd, 1942).

In addition, an expense does not have to be paid for in the year of assessment, in order for the expense to be actually incurred in the year of assessment (Caltex Oil (SA) Ltd, 1975:11).

There must, however, be an unconditional legal obligation during the year of assessment for the expense to be regarded as 'actually incurred' (Edgars Stores Ltd, 1988:90).

The above means that an obligation to pay the debt, as a result of the expense, must be incurred in the year of assessment, for it to be 'actually incurred'.

There cannot therefore be an undetermined dispute regarding the obligation at the end of the year of assessment if the expense is to be 'actually incurred' (CIR Golden Dumps (Pty) Ltd, 1993:206).

The Act next mentions that the expenses are to be incurred in the 'production of income'. This is discussed in the next part of this section.

### **3.3.1.3 Production of income**

To determine the meaning of 'incurred in the production of income', relevant court cases have been discussed.

In Port Elizabeth Electric Tramway Co Ltd (1936), the court found that an expense should be "closely linked" to the operations of the business to be considered incurred in the production of income.

It is not, however, necessary for the effect on income to be shown in that year, so long as the expense has been incurred to produce that income, it will be found to be incurred in the production of income (Sub-Nigel Ltd, 1948).

This means that a taxpayer may incur an expense to improve his or her operations and suffer a loss, but still be allowed to deduct the expense provided he or she intends to generate income as a result of that expense.

The last part of section 11(a) of the Act dictates that the expense cannot be of a capital nature. This is discussed next.

### **3.3.1.4 Not of a capital nature**

The distinction between expenditure of a capital nature and those of a revenue nature has been debated in many court cases in SA. As a result of these cases, there are many guidelines that may be used in distinguishing a capital expense from a revenue expense.

The following tests may be applied when gauging whether a receipt is capital or income in nature:

- determining the intention of the taxpayer when he or she purchased the asset, which, is subsequently sold (Elandsheuwel Farming (Edms) Bpk, 1978:101). There are subjective and objective factors to determine the intention of a taxpayer. There are also tests to be applied where the taxpayer has mixed, alternative or a change of intention. These tests are not elaborated on in this study, as they are not relevant to the research topic.
- determining whether an expense creates a fixed or floating asset at the time of purchase which, asset is subsequently sold (Elandsheuwel Farming (Edms) Bpk, 1978:101)
- determining whether a transaction is an isolated or a frequent transaction (Elandsheuwel Farming (Edms) Bpk, 1978:101)
- determining whether a transaction falls within a set of specific transactions composed through several court cases which, are listed below:

- advance payments and deposits (Brookes Lemos Ltd, 1947)
- closure of a business (Jordaan, 2007:25)
- copyrights, inventions, patents, trade marks, formulae and secret processes (Jordaan, 2007:26)
- damages and compensation (Burmah Steamship Co Ltd, 1931)
- debts and loans (Jordaan, 2007:26)
- gambling (Morrison ,1950)
- gifts, donations and inheritances (Jordaan, 2007:27)
- goodwill (Jordaan, 2007:28)
- horse-racing (ITC 641, 1947)
- interest (Jordaan, 2007:28)
- Krugerrands (ITC 1355, 1981)
- land and property transactions (Jordaan, 2007:29)
- restraint of trade (Taeuber and Corssen (Pty) Ltd, 1975)
- share transactions (CIR v Pick 'n Pay Employee Share Purchase Trust, 1992:280)
- subsidies (Jordaan, 2007:30)

The above tests are applied to determine whether the sale of an asset results in a receipt of an income or capital nature. As we are determining whether an expense is capital in nature or not, the above tests are not discussed further.

There are several case-derived tests that assist in determining whether or not an expense is capital in nature. These tests are listed below:

- Determining whether an expense is a fixed or floating capital expense (New State Areas Ltd, 1946:163)
- Determining the true nature of the transaction in spite of the legal form encapsulating the transaction (New State Areas Ltd, 1946:170)
- Determining whether or not a sufficient link exists between an expenditure and the taxpayers income-earning operations (SIR v Cadac Engineering Works (Pty) Ltd, 1965)

- Determining whether an expense was incurred to create an enduring benefit for the trade (CIR v African Oxygen Ltd, 1963)
- Determining whether a transaction falls within a set of specific transactions composed through several court cases which, are listed below:
  - o acquisition of a business license (Jordaan, 2007:90)
  - o acquisition of goodwill (Jordaan, 2007:91)
  - o acquisition of share capital (Jordaan, 2007:91)
  - o transfer fees on transfer of a liquor license (Jordaan, 2007:91)
  - o cost of erection of a model house on a hired site for the exhibition of the goods of a furniture dealer (Jordaan, 2007:91)
  - o expansion of goodwill (Jordaan, 2007:91)
  - o losses incurred by a freelance journalist (Jordaan, 2007:91)
  - o loss as a result of involuntary deprivation (Stone, 1974)

Not all the above listed tests are applicable to this research document as they do not fall within the scope of the topic.

The tests applicable to the research topic are:

- Determining whether an expense is a fixed or floating capital expense (New State Areas Ltd, 1946:163)
- Determining the true nature of the transaction in spite of the legal form encapsulating the transaction (New State Areas Ltd, 1946:170)
- Determining whether or not a sufficient link exists between an expenditure and the taxpayers income-earning operations (SIR v Cadac Engineering Works (Pty) Ltd, 1965)
- Determining whether an expense was incurred to create an enduring benefit for the trade (CIR v African Oxygen Ltd, 1963)

Examples of these cases and their derived guidelines are discussed below.

#### **3.3.1.4.1 Fixed and floating capital**

The test of “fixed” and “floating” capital was founded in the New State Areas court case (1946:163), and is used as an important test to distinguish capital and non-capital expenses.

Expenditure to purchase assets that frequently change in form from goods to money is seen as “floating” capital and must therefore be seen as a deductible cost incurred in generating the income from sale of such goods. This is because it is not seen to be of a capital nature as envisioned by the Act in section 11(a) (New States Areas Ltd, 1946:163-4).

The purchase of a specific virtual item, such as a virtual tractor in FarmVille, by a reseller of such items, will be seen as an expense of floating capital. This is due to the trader converting the item back to real world money once the item is sold.

Expenditure to purchase assets that do not change in form often are regarded as “fixed” and cannot be deducted against income for tax purposes. This is because these are seen as expenses of a capital nature as envisioned by the Act in section 11(a) (New States Areas Ltd, 1946:163-4).

The purchase of a virtual item, such as a virtual tractor in FarmVille, by a player who intends to apply that item to their virtual farm, would be seen as an expense of fixed capital. The user would only generate any possible revenue once his entire virtual farm is sold.

The next guideline is the person’s intention when incurring expenses, and this is next discussed in the study. .

#### **3.3.1.4.2 True nature of transaction**

The true nature of the transaction should be considered when determining the nature of the expense (New State Areas Ltd, 1946:170).



Should a person incur an expense to acquire an asset for his or her business, there is a strong indication that the cost of such purchase is of a capital nature and may therefore, not be deducted in terms of section 11(a) of the Act (New State Areas Ltd, 1946:170).

An example of this type of capital purchase would be the cost of commissioning a developer to develop a virtual item, such as a virtual watch in Facebook, by a person, with the intention of duplicating the virtual item electronically and selling it to numerous users of that person's virtual world.

If, however, the purchase of such asset is incurred incidentally in the production of income and there is no intention to use the asset as a capital asset of the business, there is an expectation that such cost should be deductible under section 11(a) of the Act (New State Areas Ltd, 1946:170).

An illustration of such incidental spending would be the cost of having a virtual world hosted on the Internet for users from around the world to access remotely.

The next guideline is whether a sufficient link exists between an expense and the income-earning operations of a taxpayer. This guideline is discussed next in the study.

#### ***3.3.1.4.3 Sufficient link between expenditure and income-earning operations***

The link between an expense and the result thereof on the income-earning operations is an important consideration in determining whether it creates a capital or non-capital expense.

An expense should have a sufficient link to the performing of the taxpayers' income-earning operation and not to the expansion of the income-earning structure, for the expense to be considered to be not of a capital nature (SIR v Cadac Engineering Work (Pty) Ltd, 1965).

An expense is considered capital in nature if there is a sufficient link between the expense and the income-earning structure of the taxpayer.

As an example of this: the purchase of equipment to run the virtual world would be sufficiently linked to the income-earning structure of the taxpayer and would therefore be capital in nature.

In contrast, the payment of salaries to staff that monitor and administer the virtual world, would be sufficiently linked to the income-earning operations of the taxpayer, and would therefore not be of a capital nature.

The next guideline is whether an enduring benefit is created when incurring expenses, and this is discussed next in the study.

#### **3.3.1.4.4 *Enduring benefit***

The length of service the expense is likely to have is a further important consideration when determining whether or not an expense is capital in nature.

A cost expended to create an enduring benefit of trade is a cost which is of a capital nature (CIR v African Oxygen Ltd, 1963).

An enduring benefit was seen by the court in Nchanga Consolidated Copper Mines Ltd (1962, as a benefit that is intended to last for a period longer than twelve months.

An example of an enduring benefit would be purchasing the exclusive right to sell a certain virtual item, such as a limited edition virtual diamond ring on Facebook, for a period of more than twelve months. As the benefit of the right endures for longer than twelve months, the expense to acquire the benefit is of a capital nature.

If the right to sell the ring was offered for less than twelve months then the benefit of the right would not be seen as enduring and thus the cost of purchasing the right would be seen as a non-capital expense.

#### **3.3.1.4.5 Summation of capital tests**

The above four guidelines are useful tests to apply in determining whether an expense incurred is of a capital nature or not.

These tests are applied, together with the “positive” test, when the research discusses the deductibility of expenses incurred relating to income generated in virtual worlds.

#### **3.3.1.5 Summation of section 11(a)**

The four components of section 11(a) of the Act have been discussed above to identify their meanings.

As discussed earlier, the “negative” test should still be considered together with the “positive” test. The research therefore discusses the “negative” test next.

#### **3.3.2 Section 23(g) – negative test**

The “negative” test is governed by section 23(g) of the Act which provides that no deductions are allowed for any moneys, claimed as a deduction from income derived from trade, to the extent to which such moneys were not laid out or expended for the purposes of trade.

It is therefore important to understand which activities are considered trade and which are not considered thus.

Section 1 of the Act defines trade very broadly. The definition includes every business or venture that a person undertakes to perform.

Of importance though, is that it is not necessary for the person to make a profit through conducting a business in order for the business to be seen as conducting a trade (Umtali Finance (Pty) Ltd, 1962:685-6).

A person who therefore sells his virtual item, such as a virtual plant in FarmVille, for less than the cost he incurred to purchase and grow it, is therefore still be seen as conducting trade even though he incurred a loss.

However, in Burgess (1993), it is argued that a person should be seen as risking something with the intention of making a profit to be seen as engaged in a venture and therefore, to be seen as conducting a trade.

For example: a person purchases a virtual crop and intends to grow and sell the crop for a profit. That person later realises that the market price for such virtual crop is less than the cost he or she incurred in acquiring it. The person is still seen as conducting a trade as it was that person's initial intention to make a profit.

Thus, a person engaged in a business or venture where profits are not being made, but where it is the person's intention to make profit, that person is seen as carrying on a trade.

In summation the "negative" test thus provides that if the money was expended on non-trade activities, the amount may not be deducted from the income of the taxpayer to arrive at his or her taxable income in SA.

The research looks at how this applies to virtual world transactions.

### **3.4 CONCLUSION**

Both the "negative" and "positive" tests need to be applied when assessing expense deductibility from income in terms of the Act.

Several tests have been derived from court cases over the years, and lend guidance to application of the sections 11(a) and 23(g) of the Act.

In the next chapter the study identifies certain expenses that are typical of a business conducting virtual commerce, and assesses these expenses in terms of the Act, by utilising the “negative” and “positive” tests discussed above.

## **CHAPTER 4 ASSESSMENT OF EXPENSES**

### **4.1 INTRODUCTION**

The previous chapter discusses the Act and the applicable sections that make up the general deduction formula. The chapter also looks at some of the guidelines in distinguishing capital and revenue expenses.

This chapter looks at how the Act applies to virtual world commerce and some of the main classes of transactions.

### **4.2 TAXABLE INCOME**

Camp (2007:2) suggests that income becomes taxable once the trade becomes more business-like and less play-like.

When a user engages in virtual world commerce as a mere coincidence of playing or enjoying the game, the user is not seen as generating taxable income in terms of the Act (Pienaar, 2008:45). Once a person generates taxable income it becomes necessary to apply deductions to reduce that taxable income in terms of the Act.

### **4.3 COSTS INCURRED**

When trade becomes business-like a player may find him or herself entering the taxation net of SARS. Likewise though, the player should be able to deduct the costs he or she has incurred in generation of that income.

The costs of producing taxable income may exceed any real revenues earned. This may result in a net loss situation. The netting off of losses from virtual world trading against real world trading would fall within the ring fencing rules of the Act. This situation however, is not discussed as it is beyond the scope of the study.

The likely costs to be incurred by a person, when conducting virtual world trade, are discussed below to determine their deductibility for SA income tax purposes in terms of section 11(a) and section 23(g) of the Act.

#### **4.3.1 New development costs**

These are the costs incurred in setting up a business.

In a virtual world business new development costs are likely to be the costs of developing a virtual world and developing virtual world goods within the virtual world.

To assess these expenses' deductibility in terms of the Act, they are first gauged in terms of the "positive" test found in section 11(a) of the Act.

##### **4.3.1.1 *Section 11(a) capital tests***

Costs incurred to develop a virtual world meet the meaning of expense in terms of section 11(a) as discussed above as it involves a voluntary payment of money.

They are also 'actually incurred' as they give rise to an obligation to pay a supplier once the task of developing has been performed.

The intention of the taxpayer to earn income is determined whether the expense meets the third requirement of section 11(a) of the Act. It is assumed that this is the case as mentioned in the delimitations of this study.

The last provision of section 11(a) should therefore be discussed to determine whether the expense meets the requirements of the positive test.

Section 11(a) prohibits the deduction of costs incurred that are of a capital nature. And therefore the following discussion is held around whether an expense is seen as capital in nature or not.

If a person develops a virtual world and intends to use the virtual world as a market place to create a demand for his or her virtual items, by applying the guidance from *New State Areas Ltd (1946:170)* there is a strong indication that the person is incurring the expenditure to purchase a capital asset.

The virtual world thus does not change form often if it is developed by the person as a market place for his or her developed virtual items. Therefore in application of (*New States Areas Ltd, 1946:163-4*), this would be seen as fixed capital and therefore any expense incurred in developing the virtual world of the virtual items would be of a capital nature.

If, however, a person develops a virtual world or a virtual item and that person intends to sell the world or item and all rights attached thereto, to another party, there is a strong indication that the person has incurred an expense which is not of a capital nature (*New State Areas Ltd, 1946:170*).

In addition, the virtual world or virtual items, are likely to change form from asset to cash quickly, and therefore would be seen as floating capital in terms of (*New States Areas Ltd, 1946:163-4*). As such the expense incurred in developing the virtual world is of a non-capital nature.

In contrast to the above, the situation would change if a person were to develop a virtual world item that had a limited life span.

Consider if the person were to incur costs to develop a “South Africa 2010” virtual gift during the year 2010 and this gift could only be sold during 2010. The person has thus created an asset without an enduring benefit for tax purposes as it only lasts for a period less than 12 months. The expense to develop the asset would therefore be seen as a non-capital expense (*CIR v African Oxygen Ltd, 1963*).

Where a scenario discussed above indicates a capital expense has been incurred, a deduction for the cost in developing that asset is not allowed in terms of section 11(a) of the Act.



Where, however a scenario shows a non-capital expense has been made, one would need to apply the “negative” test and test the transaction for trade in terms of section 23(g) of the Act.

#### **4.3.1.2 Section 23(g) trade tests**

Section 23(g) restricts deductions of expenses not incurred for trade purposes. Therefore this study will apply the trade test to virtual world development costs.

Burgess (1993) requires that the person must have the intention of making a profit in order to be seen as trading.

Where a person develops a virtual item purely as a hobby, recreation or any other purpose without any aspirations of using the virtual world to generate commercial benefits, that person will likely not be seen as trading.

As a result of not being seen as trading, the costs incurred to generate the virtual world or virtual item is not for the purposes of trade and therefore section 23(g) would apply and the costs so incurred are not deductible in terms of the Act.

The opposite would therefore also stand true in application of section 23(g) of the Act.

#### **4.3.2 Research costs**

A business may also invest in research to determine the viability of new ventures. These would be costs incurred upfront by the business before the development of a marketable asset.

For a virtual world business these costs are likely to be the costs incurred in conducting market research, development of proto-type virtual goods for testing purposes and costs incurred in testing of integration with existing virtual worlds and other existing virtual items within the virtual world.

These costs could be assessed for deduction in terms of section 11D of the Act, as this section provides for the deduction of qualifying research and development costs at an accelerated rate.

This study does not address the deduction of research and development costs in terms of section 11D of the Act, as it does not fall within the scope of this research. As discussed in the final section of this study, the application of section 11D of the Act may be considered further in future studies.

To assess these expenses' deductibility within the scope of this research and in terms of the Act, they are first gauged in terms of the "positive" test found in section 11(a) of the Act.

#### **4.3.2.1 Section 11(a) capital tests**

Costs incurred to conduct research into developing of a virtual world comply with the meaning of expense in terms of section 11(a) as discussed above as they relate to a voluntary payment of money.

They are also 'actually incurred' as it they give rise to an obligation to pay a supplier once the research has been conducted.

The intention of the taxpayer to earn income through development of the virtual world, provided the research supports the development, determines whether the expense meets the third requirement of section 11(a) of the Act. It is assumed that the intention of the taxpayer is to generate income as mentioned in the delimitations of this study.

The last provision of section 11(a) should therefore be discussed to determine whether the expense meets the requirements of the positive test.

Section 11(a) prohibits the deduction of costs incurred that are of a capital nature. And therefore the following discussion is held around whether an expense is seen as capital in nature or not.

If a person invests in market research to determine the viability and potential market available for a new or existing virtual asset, and the person's intention is to sell that research to other developers or marketers of those virtual items, it may be argued that the person has created a demand for his or her research. Therefore by applying the guidance from *New State Areas Ltd* (1946:170), there is a strong indication that the person is incurring the expenditure to purchase a capital asset.

The research also does not change form often if it is conducted or commissioned by a person as a product to be sold to third party developers or marketers. Therefore in application of *New States Areas Ltd* (1946:163-4), this would be seen as fixed capital and therefore any expense incurred in developing the virtual world of the virtual items would be of a capital nature.

If, however, a person conducts or commissions the research with the intention of using the outcomes of such research, in the development of a new virtual world or improvement of an existing virtual world item, the person has not generated a demand for his or her virtual items through this act alone.

If the research leads to the development of a new product or enhancement of an existing product, there is an arguable indication that this act is directly related to the creation of the product itself. The costs of such research would therefore be linked to the costs of creating the product and be linked directly to the nature of that product. The costs are therefore seen as capital in nature if the virtual item is considered capital and not capital in nature if the virtual item is considered not capital as well.

If the costs resulted in research findings that lead to the conclusion that no virtual item would be developed, then the research expenses would have to be gauged in terms of the various capital tests, discussed previously in this study, to determine the nature of the expenses.

As an example, if the research determined that there was no market for a certain virtual item, and as a result no development took place, it could be argued that no capital asset

had been created through the research. The costs would therefore be seen as not capital in nature.

If that same research could, however, be sold to a third party for further research purposes, or to be applied by that party for any reason, then a demand for the research exists.

Through application of the findings of *New State Areas Ltd* (1946:170), there is a strong indication that an asset is purchased through expenditure of such research costs.

Where a scenario discussed above indicates a capital expense has been incurred a deduction for the cost in developing that asset will not be allowed in terms of section 11(a) of the Act.

Where, however a scenario shows a non-capital expense has been made, one would need to apply the “negative” test and assess the transaction for trade in terms of section 23(g) of the Act.

#### **4.3.2.2 Section 23(g) trade tests**

Section 23(g) restricts deductions of expenses not incurred for trade purposes. Therefore this study applies the trade test to virtual world development costs.

Burgess (1993) requires that the person must have the intention of making a profit in order to be seen as trading.

Where a person conducts research with the intention of developing a virtual item purely for hobby, recreation or any other purpose without any aspirations of using the virtual world to generate commercial benefits, that person will likely not be seen as trading.

As a result of not being seen as trading, the costs incurred to generate the virtual world or virtual item are not for the purposes of trade and therefore section 23(g) would apply and the costs so incurred are not deductible in terms of the Act.

The opposite would therefore also stand true in application of section 23(g).

### **4.3.3 Maintenance costs**

As with most businesses certain costs are necessarily incurred in order to maintain the business.

In the case of virtual world business, these costs would likely be the costs of maintaining the assets of the business, the advertising of the business, the rental to host the virtual world on servers accessible on the Internet and other related costs.

To assess these expenses deductibility in terms of the Act, they will first be gauged in terms of the “positive” test found in section 11(a) of the Act.

#### **4.3.3.1 *Section 11(a) capital tests***

Costs incurred to maintain the virtual world meet the meaning of expense in terms of section 11(a) as discussed above, as it is a voluntary payment of money.

It is also ‘actually incurred’ as it gives rise to an obligation to pay a supplier once the maintenance has been performed by the supplier.

The intention of the taxpayer to earn income through the virtual world determines whether the expense meets the third requirement of section 11(a) of the Act. It is assumed that the intention of the taxpayer is to generate income as mentioned in the delimitations of this study.

Section 11(a) prohibits the deduction of costs incurred that are of a capital nature. And therefore the following discussion is held around whether these maintenance expenses are seen as capital in nature or not.

Expenses incurred by a virtual world owner to fix technical bugs in the virtual world, keep his or her virtual world hosted on the Internet or advertise his or her virtual world, are seen as maintenance of the business and its assets.

The person's intentions when maintaining his or her assets are not likely to be to create or purchase an asset for the business. This is due to the expenses being incurred in the production of income for the business. This type of an expense is therefore not seen as a capital expense (New State Areas Ltd, 1946:170).

Fixed capital is also not generated as the expense incurred through maintenance is not converted to money directly. The expenses simply enhance the already existing assets of the business. Therefore the expense cannot be seen as an expense of a capital nature in terms of New States Areas Ltd (1946:163-4).

In addition, the expenditure for maintenance is not likely to yield an enduring benefit, as the services will likely need to be repeated with consistent frequency. Hosting rental needs to be paid monthly, weekly or annually. Bugs need to be repaired as often as they appear. In addition, advertising has to be repeated for a consistent outcome over a period of time. Therefore as there is no enduring benefit, these expenses are not of a capital nature (CIR v African Oxygen Ltd, 1963).

From the above discussion it appears that day-to-day maintenance costs are likely not be of a capital nature. Therefore amounts incurred on these expenses are deductible in terms of section 11(a) of the Act.

However, for the general formula to be applied one would need to look at the "negative" test in section 23(g) as well.

#### **4.3.3.2 Section 23(g) trade tests**

As discussed above section 23(g) restricts deductions of expenses not incurred for trade purposes.

To determine if the day-to-day maintenance costs are incurred for trade purposes or not, one should look at the business for which the expenses are incurred. .

In assessing if the business is trading or not one considers the person's intention for the business.

There should be an intention for the business to make a profit through the sale of virtual items to reveal an indication of trade (Burgess, 1993).

If the business does have the intention of making a profit and can thus be seen as trading, it follows that the costs incurred to maintain that business are also be for trade purposes.

As a result of being seen as trading, the costs incurred to maintain the virtual world business would be for the purposes of trade and therefore section 23(g) would not apply and the costs so incurred are deductible in terms of the Act.

The opposite would therefore also stand true in application of section 23(g).

#### **4.3.4 Incidental Costs**

A business should incur costs associated with receiving of payments and disbursing of funds. In addition, amounts related to supporting the functions of the business, such as maintaining of financial results, maintaining of staff and other general costs, should be incurred. These costs are incidental business costs.

For a virtual world business these costs are likely to be merchant fees, bank charges, staff salaries, accounting fees, office rental, telephone, postage and other similar charges.

To assess these expenses' deductibility in terms of the Act, they will first be gauged in terms of the "positive" test found in section 11(a) of the Act.

##### **4.3.4.1 *Section 11(a) capital tests***

Costs incurred incidental to the business of the virtual world meet the meaning of expense in terms of section 11(a) as discussed above as it is a voluntary payment of money.

It is also 'actually incurred' as it gives rise to an obligation to pay a supplier once the service or goods are received.

The intention of the taxpayer to earn income through the virtual world, determines whether the incidental expenses meet the third requirement of section 11(a) of the Act. It is assumed that the intention of the taxpayer is to generate income as mentioned in the delimitations of this study.

Section 11(a) prohibits the deduction of costs incurred that are of a capital nature. And therefore the following discussion is held around whether an expense is seen as capital in nature or not.

Expenses incurred by a virtual world owner to receive and make payments related to a business transaction would be seen as costs incidental to conducting of business operations.

Salaries paid to staff to support the functions of the business, such as technical telephonic or online support for customers and other general functions of the business services are also seen as costs incidental to conducting of normal business operations.

Similarly accounting fees, office rental costs, telephone and postage costs would be incidental to conducting normal business operations.



The person's intentions when incurring these expenses to conduct normal business operations are not likely to be to create or purchase an asset for the business. This is due to the expenses being incurred incidentally in the production of income for the business. This type of an expense is therefore not seen as a capital expense (New State Areas Ltd, 1946:170).

Fixed capital is also not generated, as the fees, salaries and charges incurred through conducting of normal business operations are not converted directly to money. These expenses serve to support the performance of the business. Therefore the expense cannot be seen as an expense of a capital nature in terms of New States Areas Ltd (1946:163-4).

In addition, the incidental expenditure discussed above to conduct normal business operations is not likely to yield an enduring benefit as the services will likely need to be repeated with consistent frequency. Salaries, bank and merchant fees, rental costs, telephone costs, postage fees and accounting charges need to be paid monthly. Therefore as there is no enduring benefit, these expenses are not of a capital nature (CIR v African Oxygen Ltd, 1963).

From the above discussion it appears that expenses incurred incidentally in conducting of normal business operations are not of a capital nature. Therefore amounts incurred on these expenses will be deductible in terms of section 11(a) of the Act.

However, for the general formula to be applied one would need to look at the "negative" test in section 23(g) as well.

#### **4.3.4.2 Section 23(g) trade tests**

As discussed above section 23(g) restricts deductions of expenses not incurred for trade purposes.

To determine if the incidental costs incurred in conducting of normal business operations are incurred for trade purposes or not, one should look at the business for which the expenses are incurred. .

In assessing if the business is trading or not one considers the person's intention for the business.

There should be an intention for the business to make a profit through sale of virtual items for there to be an indication of trade (Burgess (1993)).

If the business does have the intention of making a profit and can thus be seen as trading, it follows that the costs incurred to maintain that business are also for trade purposes.

As a result of being seen as trading, the costs incurred to maintain the virtual world business would be for the purposes of trade and therefore section 23(g) would not apply and the costs so incurred are deductible in terms of the Act.

#### **4.3.5 Enhancing existing assets**

From time to time, a business enhances its assets to maintain or increase current performance.

From a virtual world perspective, these enhancements would be the development of new features, characters or tasks within the realm of the virtual world.

If the enhancement relates to the development of a new virtual item, it would be seen as the creation of a new asset and the costs incurred in development would have to be considered in terms of the discussion above for new developments.

If an enhancement relates to the upkeep of a virtual world, and not a new development, this would be seen as maintenance costs incurred by the business and would have to be considered in terms of the discussion above for maintenance costs.

A distinction would therefore have to be made between what is considered a new development and what is considered to still be part of the normal maintenance of the virtual world.

A development that would create a completely new virtual item would certainly be seen as a new development. If, however, an existing virtual world item were to be modified in a slight way to enhance its appeal for example, then this enhancement could arguable be seen as maintenance.

In illustration, if an existing virtual world were to have the colours of virtual trees changed for aesthetic appeal, the costs incurred to enact such changes, could arguably be for maintenance of the virtual world.

Therefore with regard to enhancements to existing assets, the extent and nature of the enhancement needs to be examined on an individual case basis to determine whether the costs incurred for such enhancements is of a capital or non-capital nature.

By doing so one would be able to determine the costs deductibility from income for tax purposes in terms of the general deduction formula.

#### **4.4 CONCLUSION**

Based on the discussions above, it can be concluded that persons engaged in virtual world business can obtain a deduction for certain expenses incurred in generation of virtual world income in terms of section 11(a) and section 23(g) of the Act.

Types of expenses were discussed and the conclusion reached is that each expense needs to be looked at in terms of the capital and trade tests founded from case law, to determine if they can be deducted in terms of the general deduction formula in the Act.

## **CHAPTER 5 CONCLUSION**

### **5.1 INTRODUCTION**

The purpose of this study is to analyse the tax deductions that are available to SA residents incurring expenses to earn income from virtual worlds. This would provide a guideline for investors in these businesses, as well as provide the SARS a basis on which to perform further research. By providing a platform on which further research would be initiated, this study further aimed to extend the available knowledge base on the expanding virtual commerce industry.

This chapter summarises the findings presented in the previous chapters and offers comments where necessary.

### **5.2 SUMMARY OF OBJECTIVES**

The study is guided by the following specific research objectives:

- To critically analyse the concept of “virtual world” to provide a background for the study. This was done in this study.
- To critically analyse the deductibility of expenses incurred by SA residents in producing income virtually, specifically in terms of section 11(a) and section 23(g) of the Act. This was done in Chapters 3 and 4 of this study.

### **5.3 SUMMARY OF FINDINGS**

In conducting this study, it was found that limited research was available, which analysed the available tax deductions for expenses incurred in production of virtual world income in a SA context.

The study firstly found that the OECD enforces a premise, that taxation principles applied to conventional business, should as far as possible be applied to e-commerce as well.

Through extension it appears reasonable that taxation principles available to conventional business should also be applied to virtual world commerce.

By analysing previous research, it was secondly found that income earned from virtual worlds, would be subject to tax in terms of the Act provided that the person earned the income through more than just partaking in a hobby or recreation.

The study thirdly found that a person would be allowed the opportunity to reduce his or her taxable income through the various deductions allowed in the Act.

Through analyses of the general deduction formula, which is made up of section 11(a) and section 23(g) of the Act, the study analysed various typical groups of expenses that would be incurred by a business trading in virtual world products, through virtual worlds.

These typical groups of expenses were categorised as follows:

- New development costs;
- Research costs;
- Maintenance costs;
- Incidental costs; and
- Enhancing existing assets.

It was found, that each expense, had to be considered in terms of the “positive” and “negative” tests derived from the general deduction formula.

Of particular importance when applying the “positive” test to expenses incurred was:

- Whether the expense resulted in creation of fixed or floating capital;
- The true nature of the expense;
- Whether a sufficient link between expenditure and income-earning operations exists; and
- Whether an enduring benefit was created by incurring the expense.

The above guidelines were founded on case law applied to conventional business transactions.

Of particular importance when applying the “negative” test was to determine whether the expense was incurred in conducting trade.

Finally, by applying both the “negative” and “positive” tests above it can be seen that some expenses would be allowed as a deduction in terms of the general deduction formula. Other expenses would be seen as capital in nature and would therefore have to be gauged against the capital deduction available in the Act.

Through expansion on this research, the various capital deductions available in the Act could be analysed to determine their application to expenses incurred in production of virtual world income.

#### **5.4 CONCLUSIONS**

This study revealed that deductions would be allowed against taxable income earned through conducting virtual world commerce. The general deduction formula should be applied to all expenses. Capital expenses need to be researched further, for application in terms of the Act. However, it appears that the Act can be applied to non-capital expenses incurred for trading in virtual worlds.

#### **5.5 SUGGESTIONS FOR FURTHER RESEARCH**

In this study, general deductions in terms of section 11(a) and section 23(g) of the Act, were discussed and analysed for application to expenses incurred in virtual worlds based on the relevant studies available.

Further research could be performed to evaluate the capital deductions available, in terms of the Act, for expenses incurred in virtual worlds in a SA context. Research could be

conducted on the adaptability of the Act to cover virtual world commerce in a SA context. Empirical testing could be performed to determine the impact that virtual world commerce could have on the SA fiscal through specific taxation.

## LIST OF REFERENCES

Au, W.J. 2008. What is Second Life? In: Knibbe, W., English, C. & Cunningham, P. (eds.) *Second Life the official guide*. Indianapolis: Wiley Publishing.

Bartle, R.A. 2004. Virtual worldliness: what the imaginary asks of the real. *New York Law School Law Review*, 49(1): 1944.

Brookes Lemos Ltd v CIR (1947(2) SA 976 (A))(14 SATC 295).

Burgess v CIR (1993(4) SA 161(A))(55 SATC 185).

Burmah Steamship Co Ltd V IRC (1931 SC 156)(16 TC 67).

Caltex Oil (SA) Ltd v SIR (1975(1) SA 665(A))(37 SATC 1).

Camp, B.T. 2007. The play's the thing: a theory of taxing virtual worlds. *Hastings Law Journal*, 59(1):1-66 [Online] Available from: [http://works.bepress.com/bryan\\_camp/1/](http://works.bepress.com/bryan_camp/1/) [Accessed: 2010-04-11].

CIR v African Oxygen Ltd (1963(1) SA 681(A))(25 SATC 67).

CIR v Golden Dumps (Pty) Ltd (1993(4) SA 110(A))(55 SATC 198).

CIR v Pick 'n Pay Employee Share Purchase Trust (1992(4) SA 39(A))(54 SATC 271).

Clarendon Press. 1994. *Little Oxford Dictionary*. 7th ed. Oxford. Clarendon Press.

CNBC. 2010. *Zynga CEO says no need to add ads within games*. [Online] Available from: <http://www.cnbc.com/id/36690437> [Accessed: 2010-05-24].

Concentra (Pty) Ltd V CIR (1942 CPD 509)(12 SATC 95).



eBay. 2002. *eBay annual report 2002*. [Online] Available from: <http://investor.ebay.com/common/download/download.cfm?companyid=ebay&fileid=324498&filekey=0A97DCD1-D55B-438C-8911-E511549385FD&filename=eBay2002Annual.pdf> [Accessed: 2010-04-10].

eBay. 2004. *eBay annual report 2004*. [Online] Available from: <http://investor.ebay.com/common/download/download.cfm?companyid=ebay&fileid=43789&filekey=B58F024C-11A6-409D-8194-449514084E3C&filename=AnnualReport2004.pdf> [Accessed: 2010-04-10].

eBay. 2009. *eBay annual report 2009*. [Online] Available from: [http://investor.ebay.com/common/download/download.cfm?companyid=ebay&fileid=361552&filekey=b45137ee-aa41-4c2c-94ca-d72d5b0844be&filename=eBay\\_77655\\_BANNERLESS.pdf](http://investor.ebay.com/common/download/download.cfm?companyid=ebay&fileid=361552&filekey=b45137ee-aa41-4c2c-94ca-d72d5b0844be&filename=eBay_77655_BANNERLESS.pdf) [Accessed: 2010-04-10].

Edgars Stores Ltd v CIR (1988(3) SA 876(A))(50 SATC 81).

Elandsheuwel Faring (Bdms) Bpk v SBI (1978(1) SA 101(A))(39 SATC 163).

Facebook. 2010. *FarmVille*. [Online] Available from: <http://www.facebook.com/FarmVille> [Accessed: 2010-07-29].

Frank N. Magid Associates. 2010. *Spending On Virtual Goods Continues Upturn*. [Online] Available from: <http://magid.com/node/124> [Accessed: 2011-04-02].

Galan, L.S. 2009. *Why did Facebook not give self-service ad-selling to Google or Microsoft?*. [Online] Available from: <http://www.mediasenlared.es/tag/google-adwrods/> [Accessed: 2010-07-29].

Game Coins. 2010. *About Game Coins*. [Online] Available from: <http://www.gamecoins.com/about> [Accessed: 2010-07-29].

Graft, K. 2010. *Interview: Behind The \$400m Ngmoco-DeNA Deal*. [Online] Available from: [http://www.gamasutra.com/view/news/30937/Interview\\_Behind\\_The\\_400m\\_NgmocoDeNA\\_Deal.php](http://www.gamasutra.com/view/news/30937/Interview_Behind_The_400m_NgmocoDeNA_Deal.php) [Accessed: 2011-04-02].

Inside Virtual Goods. 2010. *The future of social gaming*. [Online] Available from: <http://www.insidevirtualgoods.com/future-social-gaming/> [Accessed: 2010-07-29].

Interactive Advertising Bureau. 2010. *IAB internet advertising revenue report*. [Online] Available from: <http://www.iab.net/media/file/IAB-Ad-Revenue-Full-Year-2009.pdf> [Accessed: 2010-04-10].

ITC 641 (1947)(15 SATC 233).

ITC 1355 (1981)(44 SATC 132).

Joffe & Co (Pty) Ltd v CIR (1946 AD 157)(13 SATC 354).

Jordaan, K. Koekemoer, A. Stiglingh, M. Van Schalkwyk, L. Wasserman, M. 2007. *Silke: South African Income Tax*. Durban: LexisNexis.

Lederman, L. 2007. 'Stranger than fiction': taxing virtual worlds. *New York University Law review*, 82(6):1620-1672. [Online] Available from: <http://0-www.law.nyu.edu.innopac.up.ac.za/journals/lawreview/issues/vol82/no6/NYU602.pdf> [Accessed: 2010-04-11].

Mombert, G. 2009. *What is a Smartphone?*. [Online] Available from: <http://www.digitaltrends.com/mobile/what-is-a-smartphone/> [Accessed: 2010-04-02].

Morrison v CIR (1950(2) SA 449(A))(16 SATC 377).

Nchanga Consolidated Copper Mines Ltd v COT (1962(1) SA 381)(24 SATC 469).

New State Areas Ltd v CIR (1946 AD 610)(14 SATC 155).

NeXt Up Research. 2009. *SharesPost report: Facebook worth \$4-6 billion*. [Online] Available from: <http://techcrunch.com/2009/06/2009/sharespost-report-facebook-worth-4-billion-linkedin-15-billion/> [Accessed: 2010-07-29].

OECD. 2003. *Implementation of the Ottawa taxation framework conditions*. [Online] Available from: <http://www.oecd.org/dataoecd/45/19/20499630.pdf> [Accessed: 2010-05-24].

Pienaar, S.J. 2008. *South African income tax implications of income earned in virtual worlds*. Unpublished magisterial mini dissertation. University of Pretoria. [Online] Available from: <http://upetd.up.ac.za/thesis/available/etd-06152009-163330/> [Accessed: 2010-04-10].

Port Elizabeth Electric Tramway case Co Ltd v CIR (1936 CPD 241)(8 SATC 13).

Sharespost. 2010. *Facebook*. [Online] Available from: <http://www.sharespost.com/companies/facebook> [Accessed: 2010-07-29].

Sher, C. 2000. *Taxation of e-commerce*. [Online] Available from: <http://www.virtualworldsnews.com/2009/07/virtual-world-popularity-spikes.html> [Accessed: 2010-05-24].

SIR v Cadac Engineering Works (Pty) Ltd (1965(2) SA 511(A))(27 SATC 61).

South African Income Tax Act 58 of 1962.

South African Children's Act 38 of 2005.

Stone, B. 2007. *Microsoft to pay \$240 million for stake in Facebook*. [Online] Available from: [http://www.nytimes.com/2007/10/25/technology/24cnd-facebook.html?\\_r=2](http://www.nytimes.com/2007/10/25/technology/24cnd-facebook.html?_r=2) [Accessed: 2010-07-29].

Stone v SIR (1974(3) SA 584(A))(36 SATC 117).

Sub-Nigel Ltd v CIR (1948(4) SA 580(A))(15 SATC 381).

Taeuber and Corssen (Pty) Ltd v SIR (1975(3) SA 649(A))(37 SATC 129).

The Nielsen Company. 2011. *Apple Leads Smartphone Race, while Android Attracts Most Recent Customers.* [Online] Available from: [http://blog.nielsen.com/nielsenwire/online\\_mobile/apple-leads-smartphone-race-while-android-attracts-most-recent-customers/](http://blog.nielsen.com/nielsenwire/online_mobile/apple-leads-smartphone-race-while-android-attracts-most-recent-customers/) [Accessed: 2011-04-02].

Umtali Finance v COT (1962(3) SA 281)(24 SATC 680).

United States Census. 2010. *United States census report 2010.* [Online] Available from: <http://2010.census.gov/2010census/data/apportionment-data.php> [Accessed: 2011-03-15].

Virtual World News. 2009. *Virtual world's popularity spikes.* [Online] Available from: <http://www.virtualworldsnews.com/2009/07/virtual-world-popularity-spikes.html> [Accessed: 2010-05-24].

Zynga. 2009. *FAQ: how do I play Farmville.* [Online] Available from: <http://forums.zynga.com/showthread.php?t=182191> [Accessed: 2010-05-24].