

**Gordon Institute
of Business Science**
University of Pretoria

**The funding models and performance of National
Sports Federations affiliated to the South African
Sports Confederation and Olympic Committee**

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Abstract

The 1995 Rugby World Cup and more recently the 2010 FIFA Football World Cup proved that sport can unite a previously divided nation. In order to participate in these major tournaments and events on an international level, national sports teams have to be competitive. The funding models used by national sports federations play a vital role in ensuring that national sports teams are competitive. The aim of this study was to explore the relationship between the funding models used by the South African Sports Confederation and Olympic Committee and the National Sports Federations; and the performance at international competitions and events.

The main research methodology adopted for this study was exploratory in nature. The research design utilised was a mixed-method approach with a longitudinal design and entailed the collection and analysis of data for the period 2001 to 2014.

The results from the quantitative research did not reveal any clear relationship between the variables under consideration and the performance of the national sports federations. Additional information was gathered through semi-structured interviews, which proved to be invaluable in explaining why the quantitative research did not reveal any clear relationship, between the variables under consideration and the performance of the national sports federations.

Keywords

Sports Performance, Sports Funding, Elite Sport, Mass Participation

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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9 November 2015

Date

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Abbreviations

ASA – Athletics South Africa

GDP – Gross Domestic Product

IOC – International Olympic Committee

NOCSA – National Olympic Committee of South Africa

NPO – Non Profit Organisation

NSFs – National Sports Federations

NSRA – National Sport and Recreation Act

OPEX – Operational Excellence

SASCOC - South African Sports Confederation and Olympic Committee

SPLISS – Sports Policy factors Leading to International Sporting Success

SRSA - Sport and Recreation South Africa

1. Research Problem

1.1. Research Title

The funding models and performance of National Sports Federations affiliated to the South African Sports Confederation and Olympic Committee.

1.2. Background

Luiz and Fadal (2011, p. 879) suggest that "sport is tied intimately to issues of national pride and has the potential to transcend deep divides in fragmented societies". The 1995 Rugby World Cup and more recently the 2010 FIFA Football World Cup proved that sport can unite a previously divided nation. In order to participate in these major tournaments and events on an international level, national sports teams have to be competitive.

Sport is big business and the role of money cannot be ignored (Luiz & Fadal, 2011). Revenue generated from sport in South Africa is estimated to be R17.2 billion in 2015, which is forecast to grow to R20.5 billion in 2018 (PwC, 2014). The Department of Sport and Recreation South Africa (SRSA) is set to invest R1 billion per annum for the next three years on sport development programmes (SRSA, 2015a). These numbers prove that the sports industry is a major contributor and role player in the South African economy.

According to Mitchell, Spong, and Stewart (2012) governments around the world have numerous factors that motivates them to provide extensive funding to national sports teams. One such factor is the "potential to exploit elevation in nationalistic pride that attends international sporting success" (Mitchell et al., 2012, p. 7). Pomfret and Wilson (2011, p. 87) refer to this pride as the "warm-glow effect" and further argues that "it is clear that sport may generate both positive and negative externalities. The key is to design funding mechanisms which encourage the former rather than the latter".

The availability of financial resources does not necessarily guarantee success at international competitions (Frisby, 1986). It is the manner in which countries utilise the available funding through different elite sports and development programmes that increases the possibility of success on the international stage.

The following section provides a brief description of the sport structures within South Africa. This is followed by a section providing a background to the Summer Olympics and Commonwealth Games with a specific focus on South Africa's participation at these games.

1.3. South African Sport Structures

South African sport and recreation is governed by the National Sport and Recreation Act, no.110 of 1998 as amended (NSRA). The act provides the basis for determining the relationship between the department of SRSA, the Sports Confederation, national federations and other agencies (National Sport and Recreation Act, no 110 of 1998 as amended).

1.3.1 Sport and Recreation South Africa

The mandate of SRSA is to act as a facilitator and regulator to ensure that sport and recreation is administered and regulated in the best interests of all stakeholders and participants in South African sport and recreation. The NSRA provides SRSA with the authority to enter into service level agreements with sport and recreation bodies to be able to regulate and monitor the administration of policies implemented by the sport and recreation bodies. SRSA supports these bodies responsible for the delivery of sport and recreation with its available resources (SRSA, 2015b). According to section 2.1 of the act, the Minister of SRSA should “recognise in writing a Sport Confederation which will be the national co-ordinating macro body for the promotion and development of high performance sport in the Republic”. The current national co-ordinating body recognised by SRSA is the South African Sports Confederation and Olympic Committee (SASCOC).

1.3.2 South African Sports Confederation and Olympic Committee

SASCOC was formed on 27 November 2004 following the formation of a Ministerial Task Team established by former Minister of Sport Ncgonde Balfour. SASCOC is responsible for the coordinating, promoting and monitoring of high performance sport in South Africa, which was, before the formation of SASCOC, the responsibility of the following organisations (SASCOC, 2006):

- Disability Sport South Africa
- National Olympic Committee of South Africa (NOCSA)
- South African Commonwealth Games Association
- South African Sports Commission
- South African Student Sport Union
- Sport and recreations South Africa
- United School Sports Association of South Africa.

SASCOC is also responsible for assisting the National Sports Federations (NSFs) in delivering South African teams able to participate at international competitions (SRSA, 2015b).

During 2009 SASCOC introduced its Operational Excellence (OPEX) programme with the aim of preparing athletes for participation at Olympic events. The initial qualifying criteria required the athlete to be ranked in the top 16 in the world. Qualifying athletes are supported by the funding of their living costs, training and competition fees and equipment expenses. Any athletes supported by the OPEX programme may not receive further funding from their NSFs. The NSFs are urged to channel the funding to other athletes to ensure that more athletes are financially supported, thus providing the opportunity to more athletes to qualify for the OPEX programme (SASCOC, 2010).

1.4. South Africa's Participation at the Games

The following sections provides a brief history of South Africa's participation at the Summer Olympics and the Commonwealth Games.

1.4.1 Summer Olympics

South Africa first competed in the 1908 London Olympics and continued competing at each of the games, until the International Olympic Committee (IOC) imposed a ban on the country in 1964 due to the apartheid policies implemented by the South African government during that time. The ban on South Africa was lifted with the abolishment of apartheid which saw South Africa readmitted to the Olympic movement for the 1992 Olympic Games held in Barcelona, Spain (Rosner & Low, 2009).

Table 1 illustrates the current National Sports Federations associated to SASCOG with Summer Olympic status.

Table 1 National Sports Federations (Olympic status)

1	2	3	4	5	6	7
Archery	Athletics	Badminton	Basketball	Boxing	Canoeing	Cycling
8	9	10	11	12	13	14
Equestrian	Fencing	Football	Golf	Gymnastics	Handball	Hockey
15	16	17	18	19	20	21
Judo	Pentathlon	Rowing	Rugby	Sailing	Shooting	Swimming
22	23	24	25	26	27	28
Table tennis	Taekwondo	Tennis	Triathlon	Volleyball	Weightlifting	Wrestling

Rugby sevens is being introduced for the first time at the 2016 Summer Olympics in Rio de Janeiro, Brazil. The 15-a-side version was last played at the 1924 Summer Olympics in Paris, France, where it was won by the United States of America. The 2016 Summer Olympics will also be the first time that golf will form part of the summer showpiece since it was last played at the 1904 Olympic Games held in St Louis, USA (IOC, n.d.). Table 2 represents South Africa's performance at the last three Summer Olympic Games, on which this study is focused.

Table 2 Performance at the Summer Olympics

	Athens 2004			Beijing 2008			London 2012			Total
	Bronze	Silver	Gold	Bronze	Silver	Gold	Bronze	Silver	Gold	
Athletics		2			1			1		4
Canoeing							1			1
Rowing	1								1	2
Swimming	1	1	1					1	2	6
	2	3	1	0	1	0	1	2	3	13

* Retrieved from www.olympic.org

1.4.2 Commonwealth Games

South Africa first competed at the Games held in Canada in 1930 and then competed in all the following Games up until 1958, at which time the ban was imposed on the country. South Africa returned to the Games in 1994 and have competed successfully at all six Games since their readmission (CGF, n.d.). Table 3 represents South Africa's performance at the last three Commonwealth Games, on which this study is focused.

Table 3 Performance at the Commonwealth Games

	Melbourne 2006			Delhi 2010			Glasgow 2014			Total
	Bronze	Silver	Gold	Bronze	Silver	Gold	Bronze	Silver	Gold	
Archery				2						2
Athletics	2	7	5	1	2	2	2	4	3	28
Bowls	2					3	2		5	12
Boxing		1	1				1			3
Cycling		1					1			2
Gymnastics	1				1					2
Judo							2	1	1	4
Rugby - Sevens				1					1	2
Shooting	2	2	1					1		6
Swimming	5	2	5	5	4	7	6	3	3	40
Triathlon							1	1		2
Table Tennis										0
Wrestling	1			1	4		2			8
	13	13	12	10	11	12	17	10	13	111
* Retrieved from www.thecgf.com										

1.5. Relevance and Motivation

SASCOC recently announced that the governing body would require more than R100m to prepare athletes for the 2016 Olympic Games in Rio de Janeiro in order to achieve its target of winning ten medals (Sport 24, 2015). According to Luiz and Fadal (2011, p. 870) “South Africa with its economic hegemony on the African continent, underperforms relative to its economic endowment”. This suggests that even though SASCOC is investing significant amounts of money into sport, the possibility exists that not all the members of SASCOC are optimally applying these funds to ensure performance at the highest level.

An analysis of the last three Summer Olympic Games, indicates that athletics and swimming produced ten out of the total of thirteen medals won by South Africa at these games. A realistic view should be adopted when assessing past performance against countries such as China, Great Britain and the USA, all of which enjoys much larger budgets. Until such time as South African sport receives a significant increase in funds, a substantial improvement on the medal table cannot be expected (Cardinelli, 2012). The British government recently warned that the cost of funding their elite sports programme is not in-line with current economic conditions and outlined that the programme would require a review of how it is financed (SBD, 2015). This is an indication that countries with historically bigger budgets have, identified the need to review their current sports financing policies. One can therefore argue that it is of even greater importance for

countries with smaller budgets, such as South Africa, to ensure that effective policies are in place.

During 2014 SASCOC revised their initial target of 16 medals at the 2016 Olympics to a minimum of ten, which was followed by a decrease in the number of athletes funded by SASCOC's OPEX programme (Isaacson, 2014). According to Isaacson (2015) athletics, rowing and swimming, which he refers to as "Cinderella sports", are most likely to produce the majority of South Africa's medals at the 2016 Olympic Games in Rio de Janeiro, with other possible medals expected from rugby sevens, canoeing, triathlon and judo. Isaacson (2015) attributes the success of the "Cinderella sports" to the fact that they own their TV rights and are funded by the SASCOC OPEX programme.

SASCOC recently released the latest figures for the OPEX programme, which includes 11 rowers, two swimmers and eight track and field athletes out, of the total of 38 athletes supported by the programme. It was also during the release of these numbers, that SASCOC raised its concern about the amount of NSFs that are struggling financially and who have become entirely dependent on the SASCOC OPEX programme for funding their high performance programmes (de Villiers, 2015).

De Villiers (2015) reported that Athletics South Africa (ASA) could soon benefit from a sponsorship of US\$500 000 from a Kuwaiti benefactor. The President of ASA explained that these kinds of sponsorships are required to ensure that athletes are in a position to participate at international competitions and thus enable them to prepare for the Olympic Games. He further argued that ASA finds itself in the favourable position of being able to attract lucrative sponsorships due to their athletes performing exceptionally well on the global stage.

Numerous studies have found that a country's gross domestic product (GDP), economic development and population size are the best predictors of performance at international competitions (Mitchell et al., 2012; Shibli, Gratton, & Bingham, 2012; Luiz & Fadal, 2011). Luiz and Fadal (2011, p. 880) argue that "the bang for buck in South Africa in terms of its production function is poor and this reveals internal problems and inconsistencies" and that "future research should focus on longitudinal studies of countries and their sport performance over time". A study performed by Binns (2009) argued that there are many sports organisations and sports managers that need to learn and understand how to correctly apply and spend the financial resources available to them. This suggests that there is a need for research into why certain sporting codes, with different financial resources and within the South African context, do achieve international success and others do not.

1.6. Research Aim

The primary aim of this research is to obtain a better understanding of how the different funding models used by the NSFs, affect the performance of national sports teams, at major international competitions. The study focused on the SASCOC members, who have won medals at either the Summer Olympics or Commonwealth Games.

1.7. Research Purpose

The research findings are expected to benefit the South African government, SASCOC, the NSFs and academia.

Firstly, this research can potentially assist the South African government, or more specifically, SRSA in identifying and redirecting funding within its annual performance plan, to the areas where they will receive the biggest return on investment. Currently the bulk of SRSA's annual budget is spent on mass participation and access to all.

Secondly, this research can potentially assist SASCOC and the NSFs with identifying which of the different programmes to fund within each of the different sporting codes. Applying the correct funding strategy, can potentially lead to an increase in performance and ultimately achieving more medals at major competitions and events.

Lastly, this research is expected to provide academia with a better understanding of the relationship between funding types, programmes and the performance of national sports teams, at major events within a South African context. The majority of existing research focusses on the comparison of performance at major events, between different countries and not between the different sports codes within a specific country.

2. Literature review

2.1. Introduction

Winand, Zintz, Bayle, and Robinson (2010) described strategic objectives and operational goals, (set out in figure 1) as the two main drivers of organisational performance of sport governing bodies. Each of these objectives or goals contain five different dimensions, of which sport and finance form the theoretical base of this study and the foundation of the literature review.

Figure 1 Model of the Organisational Performance of Sport Governing Bodies (Winand et al., 2010)

	Dimensions	Sub dimensions	Objectives
STRATEGIC OBJECTIVES	Sport	Elite sport	1.1. To obtain international sport results 1.2. To increase athletes' participation in international competitions 1.3. To improve sport services to athletes 1.4. To increase sport activities for members
		Sport for all	2.1. To sustain sport values in society 2.2. To improve non sport services provided to members 2.3. To attract members 2.4. To develop members' loyalty
	Customer	Sport values and services to society	3.1. To spread a positive image of their sport in the media to the audience 3.2. To spread a positive image of their sport to members 3.3. To improve the spread of the internal communication to members and clubs 3.4. To improve the follow-up of internal communication to members
		Development of members	4.1. To obtain financial resources 4.2. To manage financial expenditure 4.3. To manage self-financing capacity 4.4. To manage financial independence from public authorities
OPERATIONAL GOALS	Communication and image	Image	5.1. To improve administrative and sport paid staff skills 5.2. To improve volunteer skills 5.3. To improve headquarter internal functioning 5.4. To improve headquarter organizational atmosphere
		Communication	
	Finance	Financial resources management	
		Financial survival	
Organization	Skills of the staff		
	Internal functioning		

Sport as a dimension of the model, is further divided into two sub dimensions; “elite sport” and “sport for all” (also referred to as mass participation or grassroots sport). Finance is further divided into “financial resource management” and “financial survival”. The main objectives of these being the effective management of financial resources with the aim of decreasing reliance on public funds.

The literature review includes research on sports financing, followed by a section detailing the different programmes available to sport administrators, in the form of elite sport and mass participation.

2.2. Sports Financing

According to Škorić, Bartoluci, and Čustonja (2012, p. 180) “sport is a complex social activity that encompasses various areas. This, of course, complicates the matter of its financing since it is financed by private and public sources”. There are various ways that countries can fund their individual programmes and each country needs to decide on the importance that international events, such as the Olympic Games and Commonwealth Games, play within its society and economy. The importance placed on these events could determine the level of funds made available to the participating athletes (Binns, 2009).

A study performed by Frisby (1986) on Canadian sports federations found that even though several factors have an effect on NSF's ability to perform at international competitions, the NSF's with larger operating budgets, tend to perform better in terms of world rankings. Frisby (1986) further cautioned that the development of high performance sports teams cannot be guaranteed by a larger budget, but requires resources to be allocated effectively. The allocation of financial resources between different funding programmes have been documented and discussed under section 2.3 of this chapter.

The financing of sport can generally be divided into two basic sources, being 1) budget or public sources and 2) non-budget or specific means. Non-budget funds include sponsorships, donations, gifts and other income (Škorić et al., 2012). For the purpose of this study non-budget funds have been referred to as “private funding”.

András (2004, as cited in Vaczi & Berkes, 2010) distinguished between two operating models in sport as presented in table 4. The key difference between the two models is the source of the funding. The state model is funded by the government, which is the case with most of the South African NSF's, and the market model is funded by private sources.

Table 4 The Sport Industry's Two Operating Models (András, 2004, as cited in Vaczi & Berkes, 2010)

	State model	Market model
Source of funding	Government subsidies	Business revenues
Budgetary constraints	Soft	Hard
Owner	No real owner exists	Real owner exists
Operating framework	Non-profit: public association	For profit: business entity
Role of sports	Reinforcing political regime, improving public morale	Providing services as part of the entertainment industry

The majority of the NSFs are registered as non-profit organisations (NPO) which is another key difference between the two models. The main purpose of the NSFs is the maximisation of benefits to the athletes, with financial aspects being secondary (Vaczi & Berkes, 2010). Frisby (1986) argued that NSFs who met their performance goals, are not only likely to receive more funding from government, but are also more attractive to potential corporate sponsors.

2.2.1 Public Funding

Pomfret and Wilson (2011, p. 85) argued that “the ‘peculiar’ nature of sporting activities makes them distinct from other types of industry and have led to extensive government intervention, either in providing subsidies or exempting sports businesses from labour, competition or other legislation”. Governments around the world are committed to funding national sports driven by the fear of poor performance at international events and “an acceptance by politicians that poor athletic performance is unacceptable to the general public.” (Mitchell et al., 2012, p. 12).

It is widely accepted that sport participation leads to economic and social benefits in the form of lower healthcare costs and an increase in productivity due to a reduction in absenteeism (Pomfret & Wilson, 2011). It is these benefits to the overall society that further motivates governments around the world to fund sporting activities.

South Africa is no exception when it comes to public funding directed towards sport. A high level review of the SRSA 2015/16 annual performance plan (SRSA, 2015a) revealed that R988.5 million has been allocated to fund its six strategic goals in 2015/16 which increases to R1093.6 million in 2017/18. A brief description and objective of the six strategic goals follows:

- 1) Citizens access sport and recreation activities: This goal is driven by the departments’ Active Nation programme, with its main goal, of mass participation and access to all. 64% of the departmental budget is allocated to this goal.

Luiz and Fadal (2011, p. 880) argued that “the promotion in South Africa of mass access and efforts to eradicate the inequalities of the past contrast with the single-minded focus in other countries on pushing medals”. According to Škorić et al. (2012) access to all and mass participation can only be achieved by strong public involvement, driven by government intervention through financial support.

- 2) Sport and recreation sector adequately transformed: To encourage transformation in sport with R107.6 million allocated to the Sport Support programme for the 2015/16 year.
- 3) Athletes achieve international success: The budget allocation of R41.6 million to the Winning Nation programme is minute compared to the 64% allocated to strategic goal number one. Identified athletes and coaches are initially supported financially and non-financially through this programme, after which selected athletes progress to the high performance programme, Operation Excellence, administered by SASCO.
- 4) Enabling mechanisms to support sport and recreation: An integrated system of enablers (i.e.: facilities; sports confederations; an academy system; a sports house; a sports information centre; beneficial international relations and supportive sports broadcasting and sponsorships) to be established and fully operational by 2020.
- 5) Sport used as a tool to support South African government and global priorities: this is mainly to enforce anti-doping by athletes participating in local and international competitions.
- 6) An efficient and effective organisation: implementation of internal processes to ensure that SRSA annually receives an unqualified audit report and an MPAT rating of four within five years.

It is clearly evident from SRSA 2015/16 annual plan that the South African government is targeting mass participation and transformation in sport. Roughly 75% of its 2015/16 budget has been allocated between strategic goal one and two.

South Africa is set to host the 2022 Commonwealth Games at an estimated cost of R10 billion (Mkhize & Savides, 2015) and the majority of the R10 billion investment will have to be funded by public sources. Although the hosting of mega events did not form part of this study, it could be argued that hosting mega events may increase the performance of local athletes due to their home ground advantage. Hosting nations would wish to perform well in terms of medals when hosting the games and would generally increase its budget allocation to elite sports from the time the right of hosting the games has been awarded until the actual games takes place (Forrest, Sanz, & Tena, 2010).

Shibli et al. (2012, p. 288) referred to this home ground advantage as the “positive host nation effect” and found that the host nation can expect an increase of 3.17% to their medal haul, relative to the total gold medals contested for. Shibli et al. (2012) calculated the host nation effect to be worth 10 additional gold medals to Great Britain during the 2012 Olympic Games held in London, United Kingdom. The study predicted Great Britain to win 27 gold medals and 56 medals in total. The model used by Shibli et al. (2012) proved to be accurate with Great Britain winning 29 gold medals and 65 medals in total.

Mitchell et al. (2012) suggested that a positive relationship exists between government spending on sports and performance as measured by the number of Olympic medals won. The findings were based on a comparison between the spending on sport of the Australian, British and Canadian governments during the Sydney, Athens and Beijing summer Olympic Games. Table 5 represents the expected and actual medals won by the three countries as calculated by Mitchell et al. (2012).

Mitchell et al. (2012) argued that the reason Australia consistently won more medals than expected was in part due to the substantial increase of government funding towards sport. The Australian government increased expenditure on elite sport from \$A10 million in 1986 to \$A250 million in 2008.

The UK increased its public expenditure on elite sport from \$A125 million per year in 2002 to \$A250 million per year in 2008, peaking at \$A300 million in 2004, which coincides with the dramatic increase in medals from 2004 to 2008. Canada’s public expenditure on elite sport increased from \$A75 million in 2005 to \$A110 million in 2009.

Table 5 Number of Expected and Actual Olympic Medals (Mitchell et al., 2012)

Year	United Kingdom		Australia		Canada	
	\hat{MEDALS}_i Expected	MEDALS _i Actual	\hat{MEDALS}_i Expected	MEDALS _i Actual	\hat{MEDALS}_i Expected	MEDALS _i Actual
2000	39.5	28	13.1	58	21.3	14
2004	43.6	30	14.7	49	23.7	12
2008	46.8	47	15.7	46	25.6	18

Similar research performed by Škorić et al. (2012) found that public funding is an integral part of sport financing and that “the amount of funds coming from local budgets is correlated with sporting performance (medals won at domestic competitions)” (p. 180). Oliveira and Bortoleto (2012) argued that the improvement in the Brazilian men’s artistic gymnastics performance at the World Championships from 1991 to 2011 was partly due

to an improvement in economic conditions, mainly provided for by an increase in financial support from the Brazilian government.

Mitchell et al. (2012, p. 14) cautioned that “while it is clear that increased funding is likely to improve sporting performance, it is equally important to note that, in a single contest, funds do not guarantee success”. Mitchell et al. (2012) further argued that governments investing in sport for political purposes faces a prisoners’ dilemma, due to the uncertain outcome of the game. If the nation performs well, the investment pays off, which leads to a political payoff. However, if the nation is unsuccessful the political payoff is negative.

The literature reviewed here illustrated the need for national governments to fund sporting activities and also provided some evidence that public funding has a positive effect on sports performance. The following section focussed on the role which private financing plays in the funding of sport.

2.2.2 Private Funding

In recent times NSFs have seen a decrease in public funding, which has forced the NSFs and other non-profit sports organisations to seek and consider alternative sources of revenue to grow and maintain programmes and services (Doherty & Murray, 2007). Munteanu (2015) argued that there are two factors which influences sports financing and the degree of private involvement in supporting sport; 1) economic development and cultural background and, 2) social awareness of the role of sport. Private funding could be classified as all other funding generated by sports organisations, outside the government allocation. Private funding includes, but is not limited to, sponsorships, broadcasting rights, gate revenue, naming rights, affiliations fees and merchandising income.

The author of this study found that limited literature exists on the relationship between private funding and sports performance. This is supported by Škorić et al. (2012, p. 180) who found that “official statistics on sports financing is very poor. This is especially true when talking about private sources of financing and it becomes virtually impossible to conduct a detailed and accurate economic analysis”. The majority of the literature found on private funding relates to sport sponsorships.

Sponsorships, together with gate revenue, are the two largest revenue streams in the South African sports market (PwC, 2014). During 2012, Telkom withdrew its sponsorship to Swimming SA, which led to swimmers representing South Africa at the short-course championship in Qatar having to pay R15 000 each in order to cover their own travel

costs (Isaacson, 2015). It could be argued that incidents such as Telkom withdrawing its sponsorship can have a negative impact on the athletes' morale, which could ultimately lead to a decline in performance at international events.

Sport sponsorships have become one of the largest marketing expenses for many companies around the world. The globalisation of sport has meant that sports organisations are competing in a saturated market, which has thus increased the need for sports organisation to seek and develop alternative sources of revenue (Ratten, 2011).

A need exists for sports organisations to supplement its income with additional revenue streams so as to ensure that the organisation's operations are adequately funded. Sports organisations have to be managed effectively and efficiently to be seen as an attractive investment for corporations looking to enter into sponsorship agreements. The cooperation between sports organisations and sponsors leads to a competitive advantage and also ensures that the goals of both parties are achieved more effectively and efficiently (Dilys & Gargasas, 2014). This was supported by Ergul (2010) who found that the sports performance of Turkish sport clubs did not have a direct impact on the financial performance of the company, but the financial performance of the company was instead related to the overall management of the company.

Berret (1993, as cited in Doherty & Murray, 2007) noted that NSFs run the risk of viewing sponsorships as a substitute for public funding. The associated risk with this view is that the NSFs may not recognise the difference between the objectives of private corporations and that of national governments. Governments are concerned with achieving "greater policy objectives, such as national pride and international relations, while corporations are involved to obtain more commercial benefits" (Doherty & Murray, 2007, p. 51). Due to the South African government's focus on mass participation, it could be argued that for NSFs to be successful at international events, both forms of funding are required. Private financing is required to fill the gap in elite sports funding, which has already been highlighted, is not presently the priority of the South African government.

Coates, Wicker, Feiler, and Breuer (2014) distinguished between two sources of club revenue, being internal and external. Internal revenues include all forms of revenue generated by the members of the club, and external revenues include sponsorships as well as government grants and subsidies. Coates et al. (2014, p. 234) argued that relying on "external revenues increases the probability of financial problems because immediate changes are less foreseeable than internal revenues and out of the clubs' control". Coates et al. (2014, p. 242) found that reliance on sponsorships as an external source of revenue lead "to both greater financial problems and volunteer problems", which could

be attributable to the fact that sponsorships are more “sensitive to changes in the economy” when compared to government subsidies. The author of this study would therefore like to suggest that the financial problems which some of the NSFs are experiencing, will have a direct impact on the ability of those NSFs to perform at international events.

The literature reviewed illustrated the need for sports organisations to seek funding from private sources so as to ensure that it is in a position to adequately fund new and existing programmes. The literature also revealed that sponsorships could potentially lead to a competitive advantage for both parties, but that it could also lead to greater financial problems for the sports organisation involved.

This study investigated the different types of private funding available to the NSFs. Relevant analyses, as described in chapter four, were applied to the data to explore the relationship between private funding and sports performance. The following section focussed on the different programmes funded by NSFs.

2.3. Funding Programmes

For the purpose of this study the funding programmes available to the NSFs have been divided into two main categories, being 1) elite sports and 2) mass participation or grassroots development. A study performed by Christiansen, Kahlmeier and Racioppi (2014) on sport policies in the European Union found that 89% of all the strategies reviewed included equal emphasis on both elite sport and mass participation programmes. Christiansen et al. (2014) further found that in the majority of the strategies, performing well at major international events was considered an effective way of promoting and developing sport at a grassroots level. Green (2007) referred to this strategy as the “top-down” approach, where governments invest in elite sports with the hope that world class performances will increase national pride, interest in sport and ultimately sports participation.

As mentioned previously the priority of the South African government is the promotion of mass participation. “School sport is the foundation of mass participation in sport and recreation initiatives, which are intended to mobilise communities into sport and to provide opportunities to find sports talent” (SRSA, 2015a, p. 15).

Even though high performance programmes such as the Winning Nation and OPEX programmes do exist in South African sport structures, the majority of the annual public budget is allocated towards mass participation programmes. The main objective of the

OPEX programme is to invest in sports with the highest possibility of producing medals for the country.

It is evident from the above that a review of the differences between investing in elite sports programmes and investing in grassroots or mass participation programmes was required in order to determine how it would impact and affect this study.

2.3.1 Elite Sports

The globalisation of sport brought about an increase in international sport competitions which, has over time, resulted in countries implementing policies and allocating increased budgets to develop world class athletes. (De Bosscher, Shibli, van Bottenburg, De Knop, & Truyens, 2010). Van Hilvoorde, Elling and Stokvis (2010) found that the increase in global investment in elite sport could be explained by the fact that sport has the ability to unite nations and increase national pride. It is, however, the stories related to outstanding performances that has a larger effect on national pride and not the actual medals won.

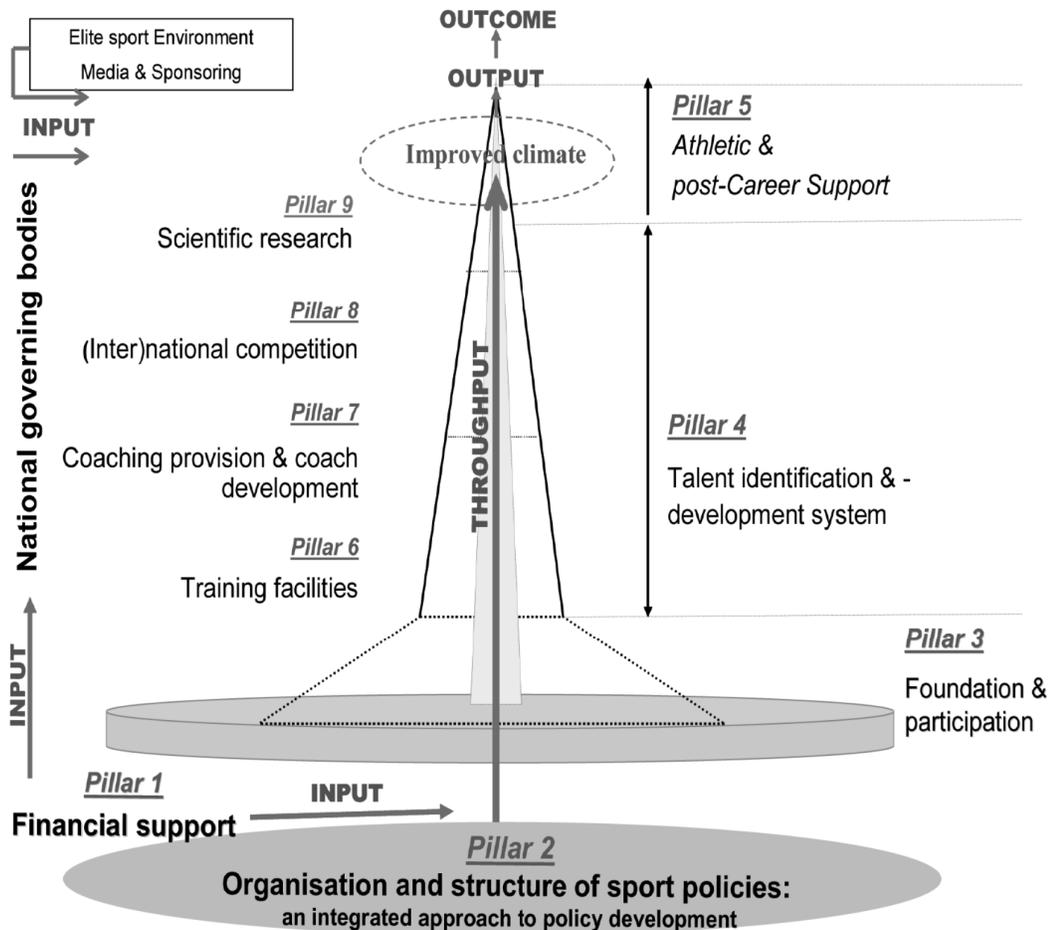
De Bosscher et al. (2010) described the nine pillar “Sports Policy factors Leading to International Sporting Success” (SPLISS) model, presented in Figure 2, and discussed its impact on the development of elite sports policies. Pillar one describes the financial inputs into the model with pillar two to nine representing the throughputs and processes involved in delivering elite sports policies. De Bosscher et al. (2010) further cautioned that, while implementing the model may increase chances of international success, it does not guarantee success. For the purpose of this study, pillars two to nine were ignored, with the main focus being on pillar one, the financial input.

Shibli et al. (2012, p. 278) argued that “one possible explanation for nations achieving more Olympic success than might be expected on the basis of macro-economic variables, is that they have effective elite sport development systems in place, which outweigh macro-economic factors such as population and wealth”. Shibli et al. (2012) further explained that Australia’s success at the 2004 and 2008 Olympic Games could be attributable to the country’s investment in elite sports development systems.

Luiz and Fadal (2011, p. 871) found that because more medals can be won in individual sports than in team sports at multi-sport competitions, “some countries have been able to increase their chances of medal success by strategically allocating their resources to individual sports”. Sam (2012) however cautioned that policies targeting elite sport investments may ultimately lead to diminishing returns and even a step backwards. De

Bosscher, Shilbury, Theeboom, Van Hoecke and De Knop (2011) argued that the evaluation of elite sport policies based solely on achievement or non-achievement of predefined goals does not always provide insight into whether it is the result of a good or bad elite sport policy.

Figure 2 SPLISS model: A conceptual model of 9 pillars of Sport Policy factors Leading to International Sporting Success (De Bosscher et al., 2006, as cited in De Bosscher et al., 2010)



The literature reviewed provided some evidence that there is a positive association between the targeted funding of elite sports and the performance at international competitions, but Shibli et al. (2012, p. 228) cautioned that “elite sports performance is a managed phenomenon, rather than simply being reliant on a country’s demographic and economic dimensions”. The following section provides a review of the literature pertaining to grassroots development and mass participation.

2.3.2 Grassroots Development and Mass Participation

Sports policies are increasingly being used by governments to realise an array of policy objectives and social goals. Some of these objectives and goals include “social inclusion, crime reduction, urban regeneration, raising school standards, reducing obesity and international prestige” (Green, 2007, p. 921). Green (2007) further argued that governments have the responsibility of balancing policies between support for elite sports and support to mass participation programmes, so as to ensure the biggest possible benefit to the wider population.

According to SRSA (2015, p. 15) “the focus of SRSA spending is the development of sport and recreation in the country. The key projects are active recreation, community sport and school sport”. The Active Nation programme is the anchor and driver of SRSA’s mass participation goal with an annual budget allocation of R628.6 million for 2015/16 which represents 64% of the departmental budget.

South Africa is a classic case of a country which has the necessary economic resources, but which has not been able to translate it into a comparative advantage. It is mostly attributable to the fact that the country’s main focus is on mass participation and eradication of past inequalities (Luiz & Fadal, 2011).

Studies performed by Hallmann, Breuer and Wicker (2011) and Humphreys and Ruseski (2015) found that income effects the ability of individuals to participate in sport. Burnett (2010) noted that it is against South Africa’s background of inequality and poverty, that SRSA has implemented and currently funds the mass participation programme. Andreff (2008, p. 2) found that “the ratio of sport participation in the Third World is in the range of 0.01% to 1% of the population (to be compared with 20-25% of the population that is affiliated to sports federations in European countries)”. It could therefore be argued that the literature justifies the decision of SRSA to invest in mass participation and grassroots development.

The author was not able to find any literature on the effect that mass participation policies have on sports organisations to perform at international competitions. Relevant data analyses, as described in chapter four, were applied to the data to explore the relationship between mass participation programmes and sports performance.

2.4. Conclusion

The literature reviewed illustrated the need for, and possible benefits of governments funding sports programmes. The literature also provided some evidence indicating that an increase in public funding could lead to an increase in sports performance. In terms of private funding, sports sponsorships were identified as the most researched private funding topic, but no evidence was found indicating that an increase in sponsorships could lead to an increase in sports performance. The literature did however indicate that NSFs with larger operating budgets, which includes both public and private funding, do tend to perform better at international competitions.

The literature further revealed that in recent times, governments have been focusing on elite sports policies which have been found to be positively associated with sports performances at international events. Governments do, however still have the responsibility of balancing sports policies and therefore budget allocations between elite sports and grassroots development. Carney, Smolianov and Zakus (2012) suggested that USA Rugby emulate the English sports model, having both a professional level, as well as an amateur club structure for mass participation. The study therefore suggested that there is a need for a dual model which includes the funding of elite sports with the best possibility of winning medals, and having a programme in place to cater for the masses.

Chapter three provides the research questions the author investigated and the justification thereof.

3. Research Questions

The relationship between the funding models used by SASCOC, the different NSFs, and performance at international competitions and events was explored using the following research questions.

3.1. Research Question 1

The literature review suggests that the total operating budget of a NSF could have an effect on the NSF's performance. NSFs with larger operating budgets have the capacity to provide athletes with better training, equipment and financial support which provide the platform for better performance.

Question:

Does the level of a NSF's total revenue have an effect on the performance at international competitions?

3.2. Research Question 2

The literature review suggests that the level of public funding could affect the performance of NSFs at international competitions. Public funding, in the form of government grants are less sensitive to change, which makes it easier for the NSFs to budget for, ultimately leading to better performance. (Coates et al., 2014)

Question:

Does the level of a NSF's public income relative to overall income, have an effect on performance at international competitions?

3.3. Research Question 3

The literature review suggests that national sport teams with a focus on elite sport investments and high performance programmes perform better at international competitions, compared to those who invests in grassroots development and mass participation.

Question:

Does the level of a NSF's elite sports and high performance programmes' funding have an effect on the performance at international competitions?

The research methodology used in this study is set out in chapter four. Chapter four sets out the following:

- Research design
- Population
- Unit of analysis
- Sampling method and size
- Data gathering process
- Data preparation and analysis
- Research assumptions
- Research limitations

4. Research Methodology

This chapter provides the details of the research methodology, the data gathering process and the data analysis that was followed, before concluding with the associated research limitations.

Saunders and Lewis (2012) described two different research approaches, deduction and induction, which could be used when conducting research. Deduction is described as “a research approach which involves the testing of a theoretical proposition by using a research strategy designed to perform this test” (Saunders & Lewis, 2012, p. 108). Induction is described by Saunders and Lewis (2012, p. 109) as “a research approach which involves the development of theory as a result of analysing data already collected”.

The literature reviewed indicated that some relationship does exist between the funding models of sports organisations and their ability to perform at international competitions. The aim of this study was to explore the relationship between the funding models used by SASCOC and NSFs; and performance at international competitions and events. A deductive approach was deemed to be the best approach for this study. According to Saunders and Lewis (2012, p. 108), deductive research entails the following five sequential steps:

- 1) “defining research questions from the general theory that exists;
- 2) operationalising these questions (i.e. specifying the way in which the questions may be answered);
- 3) seeking answers to the questions defined in stage 1;
- 4) analysing the results of the inquiry to determine whether it supports the theory or suggests the need for its modification;
- 5) confirming the initial theory or modifying it in the light of findings”.

Research can be performed using either an exploratory, descriptive or explanatory study (Saunders & Lewis, 2012). While explorative studies deal with research topics of which not much is known, descriptive studies seek to clarify the defining characteristics of people, events or problems and explanatory studies seek to explain variable relationships in which one variable has an effect on the other (Saunders & Lewis, 2012).

An exploratory study was adopted as the main research methodology for this research topic, because it “is about discovering general information about a topic that is not understood clearly by the researcher” (Saunders & Lewis, 2012, p. 110). The methodology was deemed to be appropriate because the relationship between certain variables under consideration, as indicated by the literature review, was not clearly understood in a South African context.

4.1. Research Design

The research design utilised was a mixed-method approach with a longitudinal design, defined by Saunders and Lewis (2012, p. 124) as “the study of a particular topic over an extended period of time.” The study entailed the collection and analysis of data for the period 2001 to 2014. This specific period was chosen to ensure that the study included a sufficient number of Summer Olympic Games and Commonwealth Games to analyse the funding structures of SASCOC and the NSFs affiliated to SASCOC.

The methodology was considered to be appropriate because the objective of the study was to explore the relationship between funding models and the performance of national sports teams and not to explain a causal relationship. The population used in the study was very small and consisted of a total number of 15 NSFs and SASCOC, which made the data inadequate for detailed statistical analysis.

The author identified the need for the inclusion of further qualitative methods in the form of interviews to explain and confirm the trends identified in the quantitative data. The population and data analysis that were used in the study are further explained, in detail, under the population and data analysis section of this chapter.

According to Creswell (2014) the following three basic mixed-method designs could be used during the research process:

- 1) Convergent parallel mixed-method design, which entails the collection of both quantitative and qualitative data, analysing these data separately and then comparing the results.

- 2) Explanatory sequential mixed-method design, which entails the collection and analysis of quantitative data followed by the collection of qualitative data to explain the quantitative findings. This method was considered to be appropriate for this study, because the trends identified during the quantitative data analysis was not

clearly understood by the author. It was therefore deemed necessary to interview experts in the sports industry.

- 3) Exploratory sequential mixed-method design, which entails the collection and analysis of qualitative data followed by the collection of quantitative data to develop better measurements and to test whether the initial qualitative data can be generalised to a sample of a large population.

Saunders and Lewis (2012, p122) list the following four advantages of a mixed-method approach:

- 1) “Some data collection methods are more suited to particular tasks;
- 2) Focusing on different aspects of the study;
- 3) Corroborating your research findings within a study using two or more independent sources of data or data collection methods and;
- 4) Using qualitative methods to explain relationships between quantitative variables”.

4.2. Population

Saunders & Lewis (2012, p. 132) define the population as “the complete set of group members”. As this research was exploratory in nature it was decided to focus on all of the NSFs affiliated to SASCOC who have won at least one medal at either the Summer Olympic Games or Commonwealth Games during the period 2004 to 2014.

The number of medals won by each of the NSFs served as a dependent variable and it therefore did not make sense to include any of the other NSFs who have not won any medals at either the Summer Olympic Games or Commonwealth Games. SASCOC was added to the population to ensure the research included an analysis, not only at an individual NSF level, but also on a macro level. Table 6 represents the NSFs that were included in the population based on the criteria discussed above.

Table 6 NSFs Population

1	2	3	4	5
Archery	Athletics	Bowls	Boxing	Canoeing
6	7	8	9	10
Cycling	Gymnastics	Judo	Rowing	Rugby - Sevens
11	12	13	14	15
Shooting	Swimming	Table Tennis	Triathlon	Wrestling

4.3. Unit of Analysis

The unit of analysis in this study was the individual NSFs and SASCOC as this is where the variables of this study occurred.

4.4. Sampling Methods and Size

Saunders & Lewis (2012, p. 133) defines the sampling frame as “the complete list of all members of the total population”. As the performance data of the NSFs at the Summer Olympic Games and Commonwealth Games were readily available, it was possible to obtain the sampling frame. Probability sampling techniques were not considered to be appropriate due to the size of the population which consisted of only 15 NSFs and SASCOC.

The entire population was included for examination, referred to as total population sampling. Total population sampling is a type of purposive sampling technique used to examine the whole population (“Total population sampling”, n.d.).

Total population sampling is determined to be appropriate when the population size is relatively small or the population shares an uncommon characteristic (“Total population sampling”, n.d.). The creation of a total population sample requires the following three stages (“Total population sampling”, n.d.):

- 1) Defining the characteristics of the population. In the case of this study all medal winning NSFs at the Summer Olympic Games or Commonwealth Games were included in the population.
- 2) Compile a list of the entire population. The 15 NSFs were listed under the population section of this chapter.
- 3) Contact all of the members on the list. All 15 NSF presidents were contacted with the assistance of the SASCOC president, Mr. Gideon Sam. The data gathering processes that were used are further discussed in the data gathering section of this chapter.

4.5. Data Gathering

The study entailed the analysis of secondary quantitative data in the form of annual financial statements and Summer Olympic and Commonwealth Games medal tables. The study also included the analysis of primary qualitative data, in the form of semi-structured interviews.

Secondary data is described by Saunders and Lewis (2012, p. 84) as “data used for a research project that were originally collected for some other purpose”. This was deemed to be appropriate since the objective of the study was to explore the relationship between funding models and the performance of national sports teams. The data gathered were predominantly continuous numerical data which is “data whose values are measured numerically as quantities and can theoretically take any value” (Saunders & Lewis, 2012, p.166).

Semi-structured interviews are described as “a method of data collection in which the interviewer ask about a set of themes using some predetermined questions...” according to Saunders and Lewis (2012, p. 151). The questions asked during the interviews were based on the trends and themes identified during the analysis of the financial data.

The data were gathered in three phases, where the first phase focused on compiling a list of all the Summer Olympic and Commonwealth medal winning NSFs, which formed the population of this study. The second phase focused on the gathering of the financial data and the third phase on the collection of data through the semi-structured interviews.

4.5.1 Medal Tables

The medals won by each of the NSFs, between 2004 and 2014, were retrieved from the official websites of the Summer Olympic Games and Commonwealth Games. The medals won by each of the NSFs, at either the Summer Olympic Games or Commonwealth Games, are presented in table 7 and 8 respectively.

Table 7 Medal Table Summer Olympic Games

	Athens 2004			Beijing 2008			London 2012			Total
	Bronze	Silver	Gold	Bronze	Silver	Gold	Bronze	Silver	Gold	
Athletics		2			1			1		4
Canoeing							1			1
Rowing	1								1	2
Swimming	1	1	1					1	2	6
	2	3	1	0	1	0	1	2	3	13
* Retrieved from www.olympic.org										

Table 8 Medal Table Commonwealth Games

	Melbourne 2006			Delhi 2010			Glasgow 2014			Total
	Bronze	Silver	Gold	Bronze	Silver	Gold	Bronze	Silver	Gold	
Archery				2						2
Athletics	2	7	5	1	2	2	2	4	3	28
Bowls	2					3	2		5	12
Boxing		1	1				1			3
Cycling		1					1			2
Gymnastics	1				1					2
Judo							2	1	1	4
Rugby - Sevens				1					1	2
Shooting	2	2	1					1		6
Swimming	5	2	5	5	4	7	6	3	3	40
Triathlon							1	1		2
Table Tennis										0
Wrestling	1			1	4		2			8
	13	13	12	10	11	12	17	10	13	111
* Retrieved from www.thecgf.com										

4.5.2 Financial Data

The financial data were initially requested from the Presidents of each of the NSFs included in the population, with assistance provided by Mr. Gideon Sam, SASCO's President. The annual financial statements for the period 2001 to 2014 were requested from each of the NSFs. The initial response rate was very poor, which led to the author having to contact the NSFs for a second time, requesting the required financial information.

After the second round of requests, only five of the 15 NSFs listed as the population, provided the required information. There were however data gaps in the information received as illustrated in table 9 below.

The author, subsequently approached the Department of Sport and Recreation South Africa for further assistance in obtaining the required data from the NSFs, but unfortunately it did not lead to any further successes. The missing data and the treatment thereof was discussed in detail under the data analysis section of this chapter.

Table 9 Financial Data Received

Federation	Financial statements received
NSF1	2001 to 2014
NSF2	2001 to 2014
NSF3	2001 to 2014
NSF4	2003 to 2014
NSF5	2004 to 2014
NOCSA/SASCOC	2001 to 2014

4.5.3 Semi-structured Interviews

It is common practice in research to combine semi- and unstructured interviews with other data collecting techniques, especially when the analysis of the quantitative data is not clearly understood by the researcher (Saunders & Lewis, 2012). Due to the small population and sample size, the initial data analysis in the form of a trend analysis was not deemed to be sufficient to provide quality insights into the relationship between the funding models used by the NSFs and their performance at international competitions and events.

The NSFs who initially provided the financial data, as presented in table 9, were subsequently approached to partake in a semi-structured interview process to provide further insights into the trends identified during the financial data analysis process. In total, three out of the six federations agreed to be interviewed, of which the results are discussed in detail under chapter five.

4.6. Data Preparation and Analysis

The data preparation and analyses were broken down into three phases. Phase one involved the assigning of values to the different medals won at each of the games; phase two involved the financial data and the calculation of the different variables; phase three involved the analyses of data gathered during the semi-structured interview process.

4.6.1 Medal Tables

For the purpose of this study the medals won at either the Summer Olympic Games or Commonwealth Games were assigned different values. The Summer Olympic Games is a much larger event in terms of countries participating and therefore each medal was valued twice as much as a medal won at the Commonwealth Games. Table 10 represents each of the values assigned to the different medals.

Table 10 Medal Values

Medal	Summer Olympic Games	Commonwealth Games
Bronze	10,000,000	5,000,000
Silver	20,000,000	10,000,000
Gold	30,000,000	15,000,000

The medal values were used as the dependent variables during the trend analysis that were performed on each of the different NSF's.

4.6.2 Financial Data

4.6.2.1 Categories

The financial data were divided into two categories, 1) Summer Olympic Games and 2) Commonwealth Games. The reason being that not all NSF's compete at both events. Table 11 provides an overview of how the data received from the sample were categorised.

NSF1 is not a Summer Olympic sport, but NSF3 and NSF5 are. NSF2 and NSF4 do participate at both events, but they have not won any medals at the Summer Olympic Games for the period under review. Their performances at the Summer Olympic Games were therefore excluded for this study. SASCOC, as the national governing body of elite sport in South Africa, were analysed on the same basis as the NSF's for both the Summer Olympic Games and Commonwealth Games.

Table 11 NSF's Participation

Federation	Summer Olympic Games	Commonwealth Games
NSF1	No	Yes
NSF2	No*	Yes*
NSF3	Yes	No
NSF4	No*	Yes*
NSF5	Yes	No
NOCSA/SASCOC	Yes	Yes

4.6.2.2 Variable Calculation

The raw data, gathered in the form of annual financial statements, conveyed limited information for meaningful comparison between the different funding models used by the NSFs and their performance at international competitions. Different independent variables were therefore created and calculated to obtain a better understanding of how the funding models of the different NSFs affected their performance at the Summer Olympic Games and Commonwealth Games. Table 12 provides an overview of the different financial variables used in this study.

Table 12 Financial Variables

Variable	Description
1	Public Income
2	Private Income
3	Total Income
4	Elite Sport Expenditure
5	Mass Participation Expenditure
6	Administration Expenditure

The variables were calculated for each of the NSFs and SASCOC, and were then grouped into four year cycles aligning to the Summer Olympic Games and Commonwealth Games. The first Summer Olympic Games cycle commenced in 2001 and ended in 2004, which was the year the Summer Olympic Games were hosted in Athens, Greece. The first Commonwealth Games cycle commenced in 2003 and ended in 2006 when the Commonwealth Games were hosted in Melbourne, Australia. Table 13 represents the different cycles that were used in the analysis.

Table 13 Financial Cycles

Cycle	Period	Summer Olympic Games	Period	Commonwealth Games
1	2001 - 2004	Athens	2003 – 2006	Melbourne
2	2005 – 2008	Beijing	2007 – 2010	Delhi
3	2009 - 2012	London	2011 – 2014	Glasgow

The annual financial statements for each of the NSFs and SASCOC were analysed and the following key words were identified and used to group the different line items into the six independent variables:

- **Public Income:** Government, lotto and SRSA grant.
- **Private Income:** Sponsorships, affiliation fees, merchandise income and interest.
- **Total Income:** Sum of the two income variables above.
- **Elite Sport Expenditure:** World champs, more medals, high performance and elite.
- **Mass Participation Expenditure:** Amateur, development and transformation.
- **Administration Expenditure:** Balance of the rest of the expenses.

4.6.2.3 Missing Data

Two of the NSFs as discussed under section 4.5.2 of this chapter, did not provide the full data set. NSF4 was not affected by the missing data as they were only included in the Commonwealth Games analysis. NSF5 did however require the use of data imputation. The term imputation as described by Newman (2003, p. 331) is “a set of techniques that fill in values for the missing data”. The average increases over all three cycles were calculated and were then used and applied to the missing data to fill the data gaps.

4.6.3 Semi-Structured Interviews

The following six sequential steps, as described by Creswell (2014), were followed in order to analyse the qualitative data:

- 1) The data in the form of interviews were organised and prepared, a process which included transcribing the interviews. The interviews were recorded and transcribed by a professional transcription company.
- 2) The transcripts were read to obtain a general sense of the information.
- 3) The data was coded by assigning categories to groups of data. According to Creswell (2014) researchers could 1) develop codes based on information emerging from the interviews, 2) develop predetermined codes based on the literature and theory being researched, or 3) develop codes by combining both predetermined and emerging codes. The categories were aligned to the categories and variables documented

under section 4.6.2 of this chapter. Additional themes relating to the categories and variables were created from the information emerging from the interviews. A predetermined method was therefore followed during this study.

- 4) A description of the setting, people and themes were created through the coding process for analysis.
- 5) The themes and descriptions were documented under chapter five, the results chapter of this study.
- 6) The interpretation of the qualitative findings were documented under chapter six where the results of the analysis were discussed.

4.7. Research Assumptions

Several assumptions were made about the gathered financial data. The first assumption was around the timing of the individual NSFs year ends and when the games took place. The three cycles documented in section 4.6.2.2, assumed that all of the NSFs year ends were the same and took place around about the same time that the games took place.

The second assumption was that any financial line items that were not assigned to either the “elite sport” or “mass participation” variables were administrative in nature.

The third and final assumption made was regarding the treatment of the SASCOC financial data. SASCOC prepared annual financial statements for the first time in 2006, covering a period of 17 months. The data used before 2006 was related to that of NOCSA, which the author assumed was replaced by SASCOC when they were formed in 2004.

4.8. Research Limitations

The data consisted of 12 years of financial information for six federations, which equates to a total of 72 years of summarised financial information. Due to the nature of the study and the fact that the information was grouped into four year cycles insufficient data and observations were gathered to perform detailed statistical analyses. The database was discussed with two credible statisticians, who both agreed that detailed statistical analysis was not an option, which included the use of non-parametric inferential statistics. The author was therefore not in a position to determine the statistical significance of the relationships between the different variables and the trends identified during the data analysis process. The limitation was mitigated, to an extent, by gathering additional data in the form of interviews with the various NSFs.

The data preparation phase included the assignment of different financial line items, per the annual financial statements, to the variables as documented under section 4.6.2.2 of this chapter. The author acknowledged the fact that some of the line items might have been misinterpreted and assigned to the incorrect variable categories.

The study required the imputation of data, which could result in researcher bias. The missing data only affected two of the NSFs from which the data gaps were not considered significant enough to affect the outcome of this study.

The quality of the data gathered from the annual financial statements were considered to be a limitation. The annual financial statements were not standardised due to the fact that different auditors were used by the different NSFs. Some of the NSFs changed auditors during the period under review which left some of the line-items open for interpretation during the process of assigning values to the different variables.

The values placed on the different Olympic Games and Commonwealth Games medals were noted as a limitation. The Olympic Games medals were weighed twice as much as the Commonwealth Games, which had a direct impact on the data analysis and trend analysis performed.

The fact that the author was only able to interview three of the federations was noted as a limitation. The insights obtained from the interviews were of great value, but more interviews would have been beneficial.

The results of the analysis conducted is set out in chapter five and the discussion of the results are set out in chapter six of this document.

5. Results

Chapter five provides an overview of the results obtained from the data analysis as discussed in chapter four. Chapter five has been divided, discussed and arranged in terms of the following order:

1) Financial Data Analysis

- Income
- Programmes and Expenditure

In each of the sections the results for SASCOC are presented first, followed by the results for each of the individual NSFs, before concluding with the combined results. The combined results represent the combination of both the Summer Olympic Games and Commonwealth Games, plotted on a single graph.

2) Semi Structured Interviews Analysis

The results obtained from the interviews were discussed under the following categories:

- Income
- Programmes and Expenditure

The results for each of the individual interviews are presented first, followed by a summary of the findings.

5.1 Financial Data - Income

Figure 3 represents the comparison of income received by SASCOC and the medal ratings for the Olympic Games for the period 2004 to 2012.

During the first cycle ending 2004 SASCOC received in total R10.4 million in public funds, which increased to R87 million in 2008. The revenue from public funds more than tripled from cycle two to cycle three with, an amount of R256 million being received in 2012. During the same period the medal rating decreased to nil in 2008, only to increase again in 2012 to a level similar to that achieved in 2004. This is an indication that no relationship exists between the public income and SASCOC's performance at the Olympic Games.

The graph indicates that the level of private income has a positive effect on the performance of SASCOC at the Olympic Games, unlike public income. The decrease in the medal rating from cycle one to cycle two corresponded with the decrease in private income from R77.9 million in 2004 to R44.8 million in 2008.

This was also the case with the increase in private income from R44.8 million in 2008 to R86 million in 2012 corresponding with the increased medal rating.

Total income increased from R88.3 million in 2004 to R132 million and also increased during the third cycle to end the 2012 period with R342 million received from all sources of revenue. The relationship between the total revenue of SASCOG and the performance at the Olympic Games is similar to the effect public income had on its performance, which is to say that there is no identifiable relationship between these variables.

Figure 3 Income Received – SASCOG (Olympic Games)

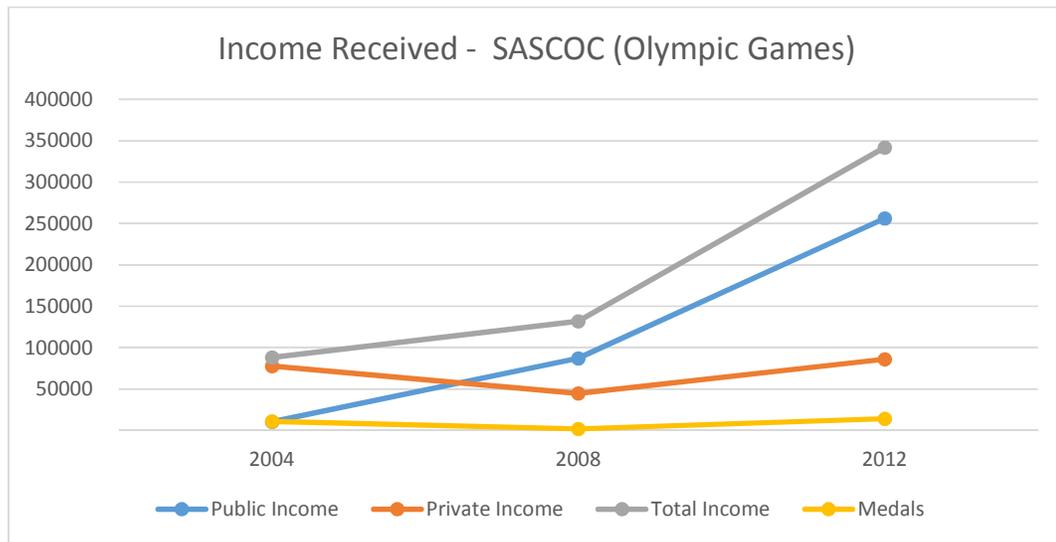
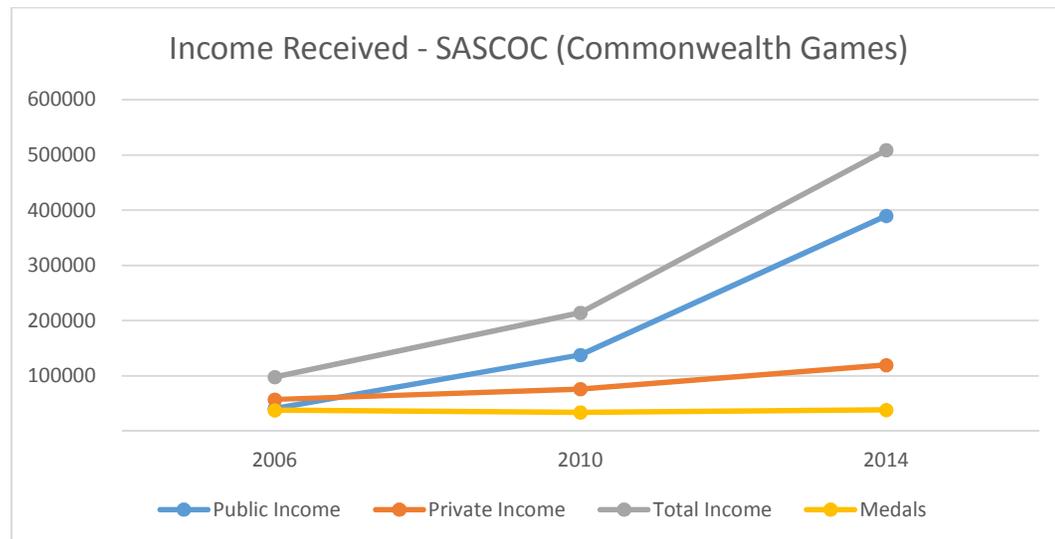


Figure 4 below represents the income received by SASCOG and the respective movement in the medal ratings for the Commonwealth Games for the period 2006 to 2014. SASCOG received R40.5 million in revenue from public sources for the first cycle ending in 2006, which increased to R389.8 million for the third cycle ending in 2014. The medal rating remained more or less at the same level for the full period from 2006 to 2014.

Cycle one to cycle two saw an increase in income from private sources from R57.2 million to R76.3 million, but the medal rating decreased over the same period. The medal rating increased slightly during the third cycle, ending more or less in-line with the 2006 rating, even though private income increased significantly to R119.5 million in cycle three. The graph is an indication that no relationship exists between the level of private income and the performance at the Commonwealth Games.

Total income increased from R97.8 million in 2006 up to R214.2 million in 2010 and further increased to R509.3 million for the third cycle ending 2014. The relationship between the total revenue of SASCOC and the performance at the Commonwealth Games is similar to the affect which total income had on its performance at the Summer Olympic Games, which does not indicate any relationship.

Figure 4 Income Received – SASCOC (Commonwealth Games)



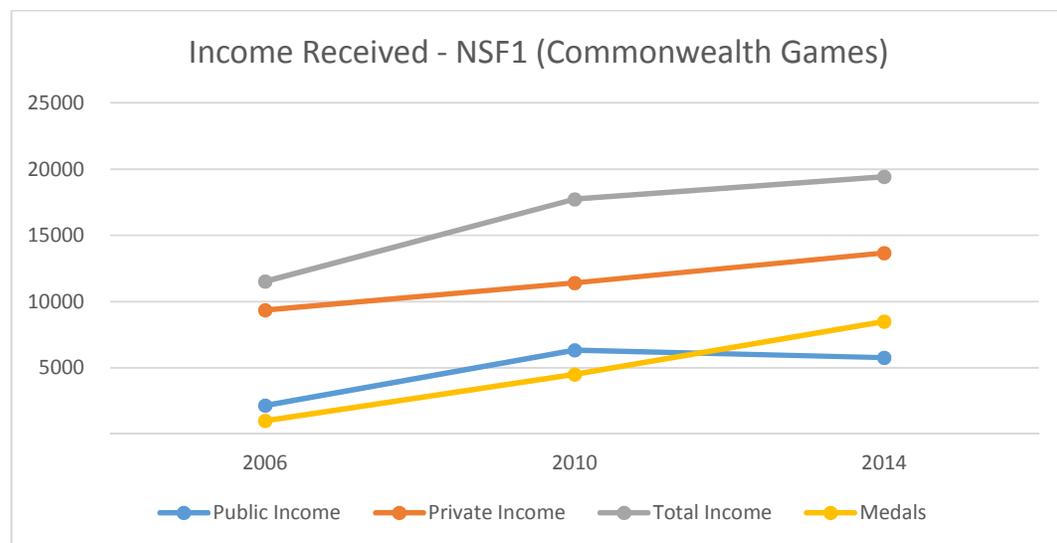
As indicated in figure 3 and figure 4 the increase in public income and total income did not have an impact on the performance of the South African sport teams at either the Olympic Games or Commonwealth Games. Cycle one to cycle two has seen a significant increase in the public income of SASCOC, but the medal rating decreased over the same two cycles for both the Olympic Games and Commonwealth Games. The level of private income had a positive effect on the performance of SASCOC at the Olympic Games, but not at the Commonwealth Games, which is an indication that no clear relationship exist between the private income of SASCOC and its performance.

Figure 5 to 9 represents the results for the five individual NSFs. NSF1 received R2.2 million in public income for the cycle ending 2006 which increased to R6.3 million in 2010. The public income for the third cycle ending 2014 decreased to R5.7 million. During the same time the medal rating increased steadily over the three cycles, moving in-line with the increase in public revenue from 2006 to 2010, which could be an indication of a possible relationship between public income and international performance. This was however not the fact for cycle three, which saw the medal rating still increasing while public income decreased.

NSF1 received R9.4 million in private income for the cycle ending 2006 which increased to R11.4 million and R13.7 million in 2010 and 2014 respectively. During the same time the medal rating increased steadily over the three cycles, moving in-line with the increase in private income, which could be an indication of a possible relationship between the private income and the performance of NSF1.

Total income increased steadily over the three cycles, increasing from cycle one at R11.5 million to cycle three at R19.4 million. The medal rating increased over the same period which is an indication that a positive relationship exists between the total income and performance of NSF1 at the Commonwealth Games.

Figure 5 Income Received – NSF1 (Commonwealth Games)

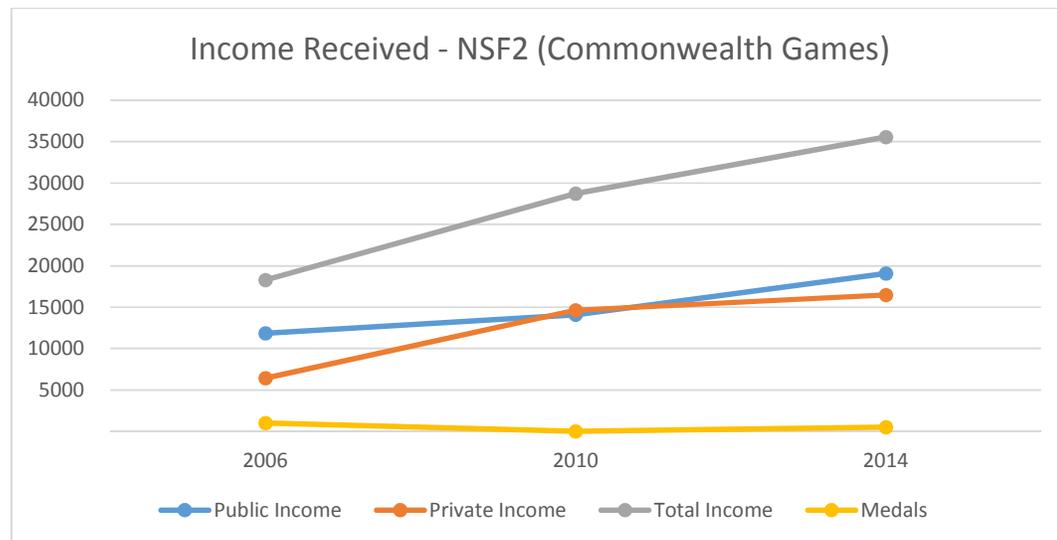


NSF2 received R11.8 million from public sources for the first cycle ending 2006. Public income increased to R14 million for the second cycle ending 2010 and further increased to R19 million for the third cycle ending 2014. The medal rating declined from cycle one to cycle two, with no medals won at the 2010 Commonwealth Games. The medal rating increased in 2014 to reach half the level it was at 2006. There is no clear indication that a relationship exists between the public income and the performance of NSF2.

NSF2 received R6.4 million from private sources for the first cycle ending 2006. Private income increased to R14.6 million and R16.4 million in 2010 and 2014 respectively. The medal rating declined from cycle one to cycle two, with zero medals won at the 2010 Commonwealth Games. The medal rating increased in 2014, but still only reaching half the level it was at in 2006. The graph is an indication that no relationship exists between the private income and the performance of NSF2.

The total income of NSF2 increased from R18.2 million in 2006 to R28.6 million in 2010 and further increased to R35.5 million in cycle three. Similar to public income and private income, no clear relationship exists between the total income and performance of NSF2.

Figure 6 Income Received – NSF2 (Commonwealth Games)

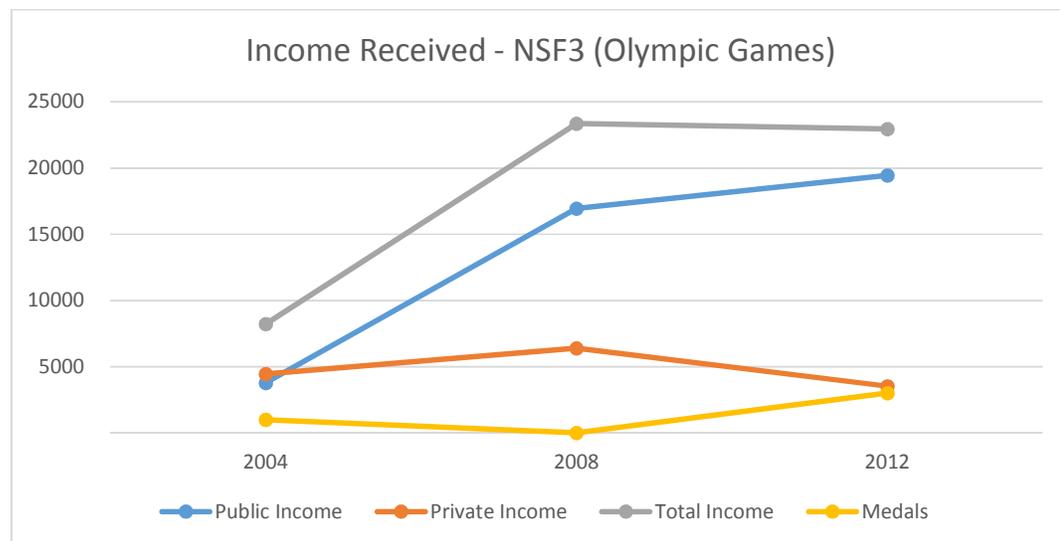


NSF3 generated R3.8 million in public income for the cycle ending 2004, which increased significantly to R16.9 million for the cycle ending 2008. Cycle three saw a further increase to R19.4 million. The medal rating decreased to nil during cycle two, but increased to 3 million, three times higher than the level achieved during the 2004 Olympic Games. The graph is an indication that no clear relationship exists between the public income and performance of NSF3.

NSF3 generated R4.4 million in private income for the cycle ending 2004, which increased significantly to R6.4 million for the cycle ending 2008. Cycle three saw a decrease to R3.5 million. The medal rating decreased to nil during cycle two, but increased to 3 million, three times higher than the level achieved during the 2004 Olympic Games. The graph is an indication of a possible negative relationship between private income and the performance of NSF3. An increase in private income led to a decrease in performance during cycle two, which is the opposite of what occurred during cycle three.

NSF3 generated R8.2 million in total income in cycle one, which increased to R23.3 million in cycle two. Total income decreased during cycle three to end on R22.9 million, during which time the medal rating increased from nil in cycle two to 3 million in cycle three. A similar negative relationship to that of the private income and performance of NSF3 exists between the total income and performance of NSF3.

Figure 7 Income Received – NSF3 (Olympic Games)

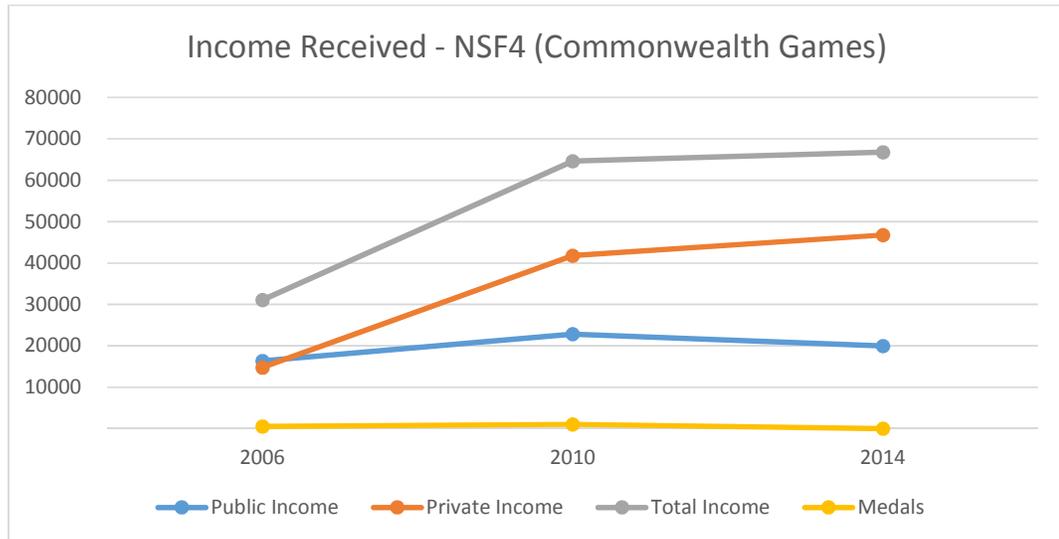


NSF4 received R16.4 million in public income for the first cycle ending 2006, which increased significantly to R22.8 million in cycle two. Cycle three, ending 2014, saw a decrease in public income as the cycle ended with income of R20 million from public sources. The medal rating reached a peak in 2010 which was also the level at which public income was highest. The medal rating decreased to nil in 2014, in-line with the decrease in public income, which could be an indication of a relationship between public income and the performance at international events.

NSF4 received R14.7 million in private income for the cycle one ending 2006, which increased significantly to R41.8 million in cycle two. Income from private sources increased further to R46.8 million during cycle three, ending 2014. The medal rating increased from cycle one to cycle two, but then decreased from cycle two to three, which was not in-line with the increase in private income for cycle three. This is an indication that no relationship exists between private income and the performance of NSF4.

NSF4 generated R31.1 million in total income in cycle one, which increased to R64.6 million and R66.8 million in cycle two and cycle three respectively. The graph is an indication that no relationship exists between total income and the performance of NSF4.

Figure 8 Income Received – NSF4 (Commonwealth Games)



NSF5 ended cycle one with only R2.2 million generated from public income, which increased drastically to R7.7 million for the period ending 2008. The medal rating remained at nil for both cycle one and two. Cycle three then saw a significant increase as public income increased to R25.4 million. The medal rating increased from cycle two to three for the period ending 2012, but not nearly as drastically as the increase in public income, which might be an indication that no relationship exists between the public income and performance of NSF5.

Private income for NSF5 increased from R2.8 million in 2004 to R4 million in 2008 and further increased to R4.9 million in 2012. The medal rating remained at nil for cycle one and two, only increasing during cycle three, for the period ending 2012. No clear relationship therefore seems to exist between private income and the performance of NSF5.

Total income increased in-line with public income for NSF5 and increased from R5 million in 2004 to R11.6 million and R30.3 million in 2008 and 2012 respectively. The medal rating were nil for both cycle one and two; only increasing during cycle three - which might be an indication that no relationship between the total income and performance of NSF5 exists.

Figure 9 Income Received – NSF5 (Olympic Games)

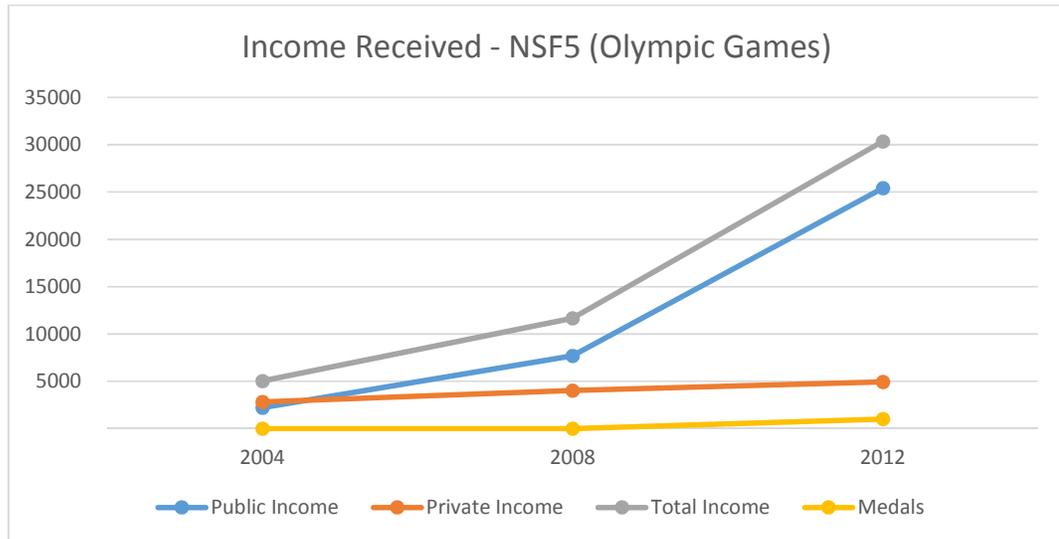
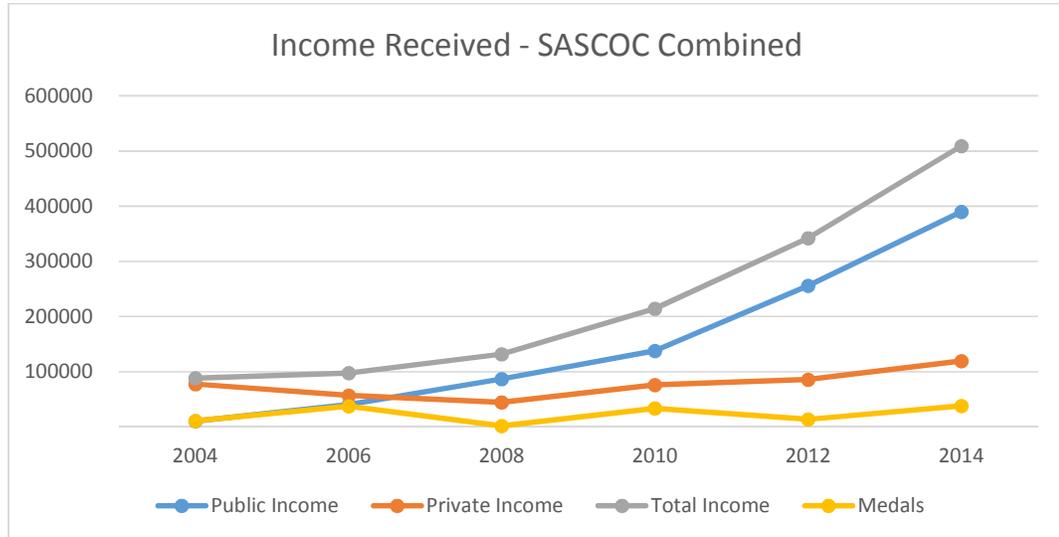


Figure 10 represents the combined performance and income for SASCOC at both the Olympic Games and Commonwealth Games.

Figure 10 Income Received – SASCOC (Combined)



The graph does not clearly indicate any relationship between public-, private and total income and performance as measured in medal ratings. The medal rating decreased during the Olympic Games cycles, as represented by the 2004, 2008 and 2012 points. It might be an indication that the values assigned to the medals are not correct, which has been noted under the limitations section in chapter four.

Figure 11 represents the combined performance for all five NSFs compared to the total income received from public sources for the period under review. It is expected that the NSFs with higher income from public sources should be in a position to perform better, but according to the data, this is not the case. NSF1 received only R14.2 million from public income and outperformed all the other NSFs, which all had much higher income from public sources.

Figure 11 Total Public Income – NSF (Comparison)

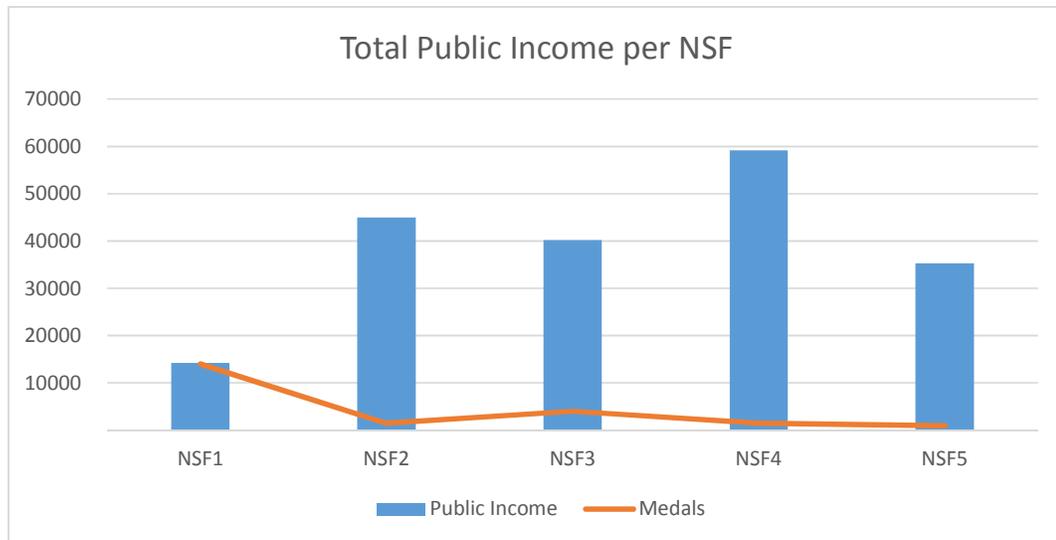


Figure 12 represents the combined performance for all five NSFs compared to the total income received from private sources for the period under review. It is expected that the NSFs with higher income from private sources should be in a position to perform better, but again, this is not the case.

NSF1 received only R34.4 million from private income and outperformed both NSF2 and NSF4 which both had much higher income from private sources. NSF1, NSF2 and NSF4 all compete at the Commonwealth Games, which mitigates the risk of different values having been placed on the Olympic Games and Commonwealth Games medals, which was noted as a limitation in chapter four.

Figure 12 Total Private Income – NSF (Comparison)

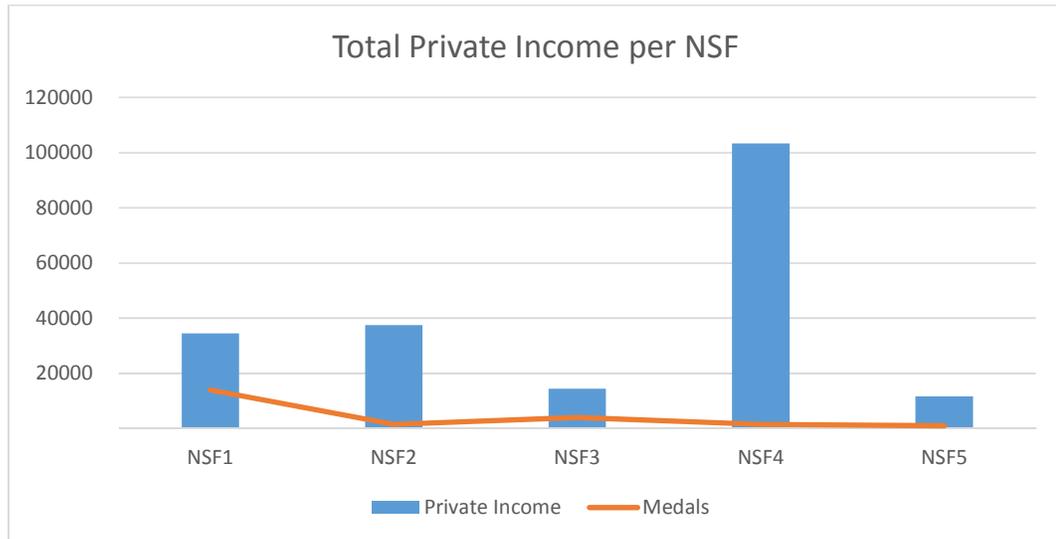
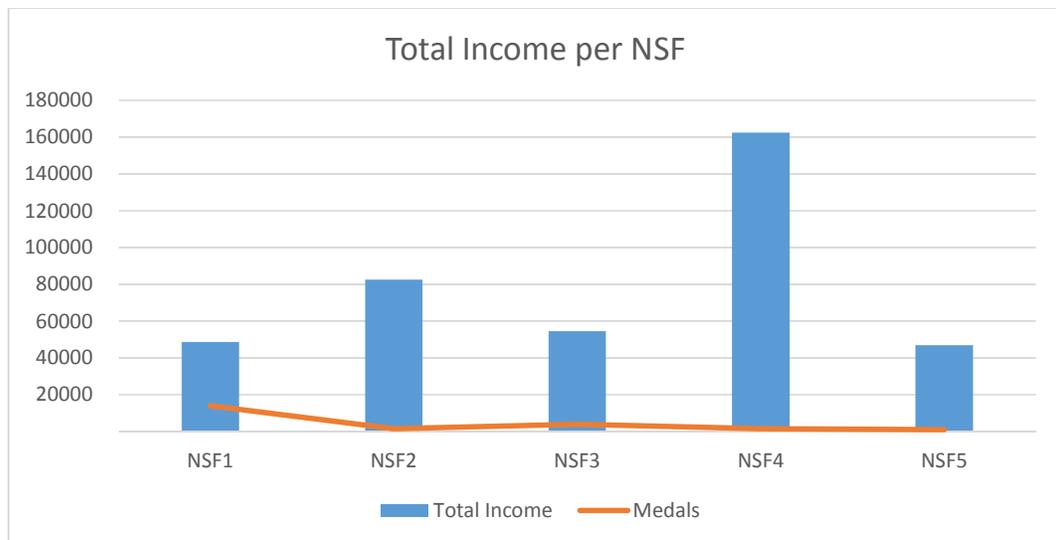


Figure 13 represents the combined performance for all five NSFs compared to the total income received from all sources for the period under review. It is expected that the NSFs with higher total income should be in a position to perform better, but it is not the case. NSF1 outperformed all of the NSFs with a total income of R48.7 million over the three cycles - which is the second lowest, after NSF5 with a total income of R47 million over the three cycles.

Figure 13 Total Income – NSF (Comparison)



The financial data findings for section 5.1, which relates to the relationship between income received and the performance of the different NSFs and SASCOC, are summarised in table 14 below.

Table 14 Financial Data Findings - Income

Federation	Public Income	Private Income	Total Income
SASCOC - Olympics	No	Positive	No
SASCOC - Commonwealth	No	No	No
NSF1	No	Positive	Positive
NSF2	No	No	No
NSF3	No	Negative	Negative
NSF4	Positive	No	No
NSF5	No	No	No
Combined	No	No	No

Even though detailed statistical analyses were not performed on the financial data, it is evident from the table above that not enough evidence exists to conclude that a relationship, either positive or negative, exists between public-, private-, total income and the performance at the Olympic Games and Commonwealth Games.

5.2 Financial Data – Programmes and Expenditure

Figure 14 represents the comparison of expenditure incurred by SASCOC and the medal ratings for the Olympic Games during the period of 2004 to 2012. SASCOC's mandate is to promote elite and high performance sport in South Africa, therefore no expenses were allocated during the data preparation phase to mass participation expenditure.

During the first cycle, ending 2004, SASCOC spent a total of R62.2 million on elite sport, which then increased to R86 million and R264.5 million in 2008 and 2012 respectively. The significant increase in elite sport expenditure in the third cycle was due to the OPEX programme SASCOC launched in 2009. During the same period, the medal rating decreased from 2004 to 2008, only to increase during the last cycle to more or less the same level as in 2004. The graph does not provide any indication that a relationship exists between elite sport expenditure and SASCOC's performance at the Olympic Games.

Figure 14 Expenditure – SASCOC (Olympic Games)

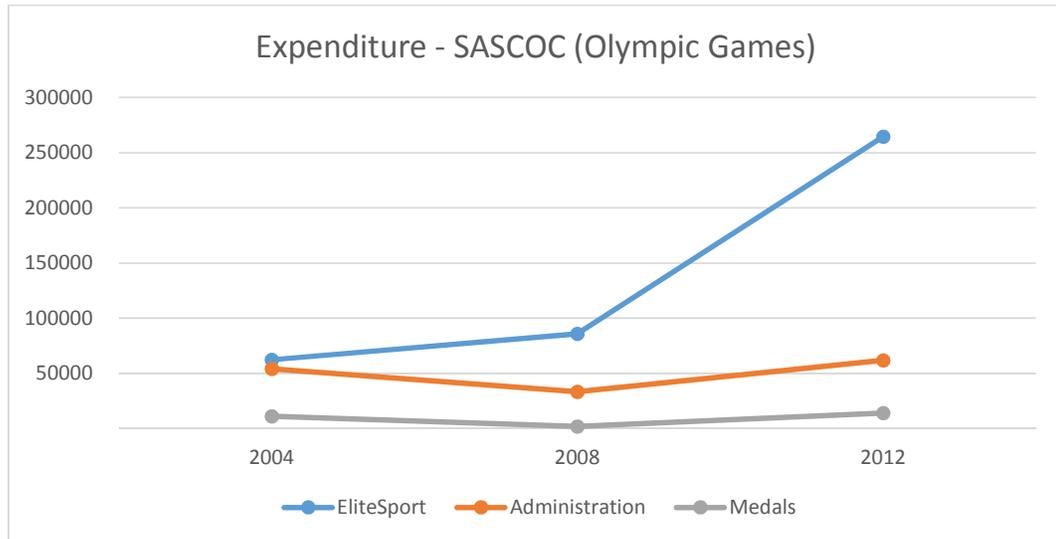


Figure 15 represents the comparison of expenditure incurred by SASCOC and the medal ratings for the Commonwealth Games during the period of 2006 to 2014. The graph is more or less in-line with figure 13 described above. Elite sport expenditure increased from R59.6 million in 2006 to R146.2 million and R412.1 million in 2010 and 2014 respectively. For the same period, the medal rating remained relatively constant, with a decrease in cycle two, followed by an increase in cycle three, rising back to the same level it was at the end of cycle one. The graph does not provide any indication that a relationship between the elite sport expenditure and SASCOC’s performance at the Commonwealth Games exists.

The administration expenditure variable was used as a balancing figure and did not form part of the research questions under investigation. However, it is interesting to note that, for both the Olympic Games and Commonwealth Games, there seems to be a positive relationship between the administration expenditure and the performance of SASCOC. Administration expenditure decreased in cycle two and increased in cycle three, in-line with the movements in the medal ratings for both the Olympic Games and Commonwealth Games.

Figure 15 Expenditure – SASCOC (Commonwealth Games)

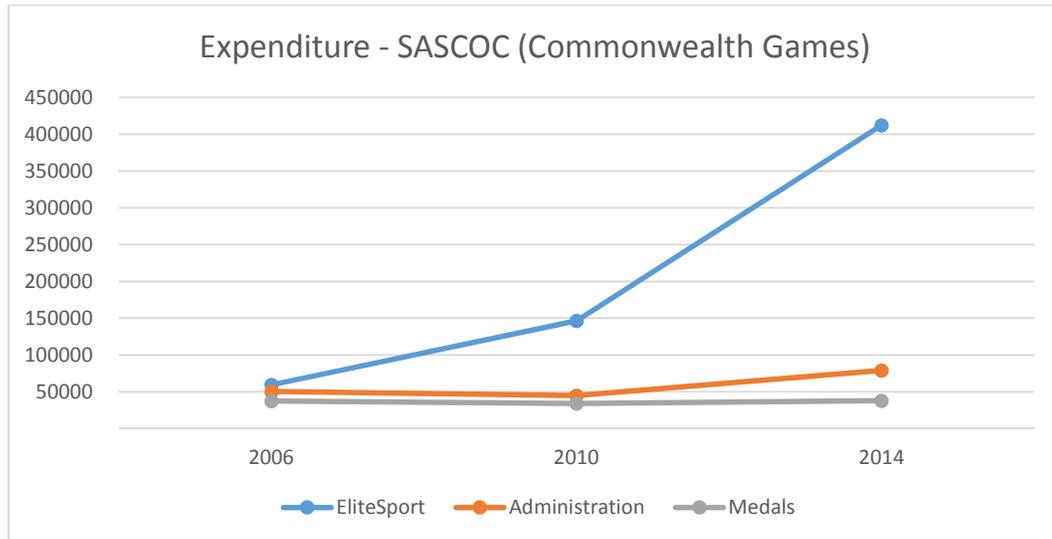
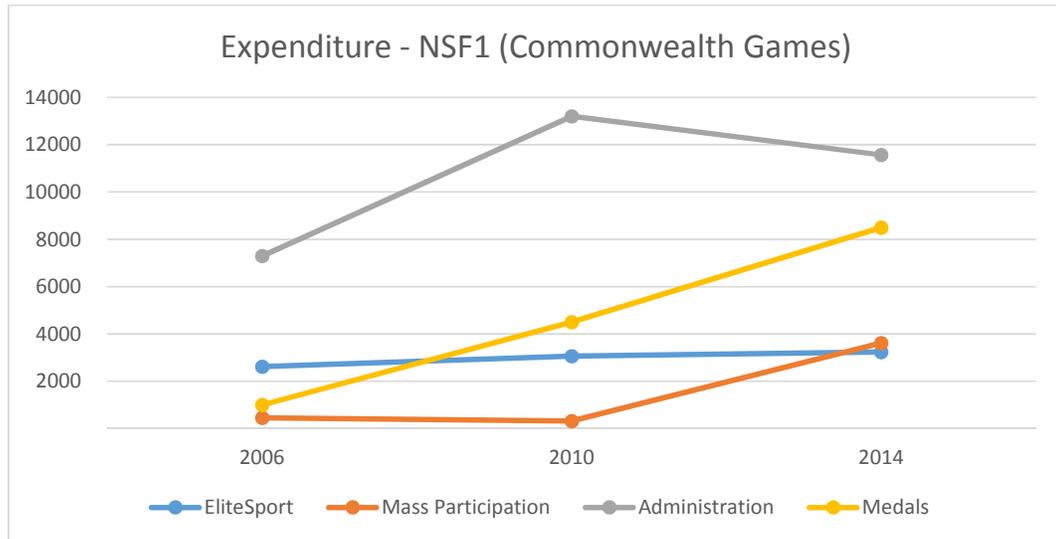


Figure 16 to 20 represents the results for the five individual NSF1s. NSF1 spent R2.6 million on elite sport in 2006, which increased to R3 million and R3.2 million in 2010 and 2014 respectively. The medal rating increased significantly over the three cycles, which might be an indication of a possible positive relationship between the elite sport expenditure and performance of NSF1.

During cycle one NSF1 spent R0.5 million on mass participation, which decreased to R0.3 million in cycle two, and then increased to R3.6 million in cycle three. The medal rating increased over the same period which is indicative that no relationship exists between the mass participation spend and the performance of NSF1.

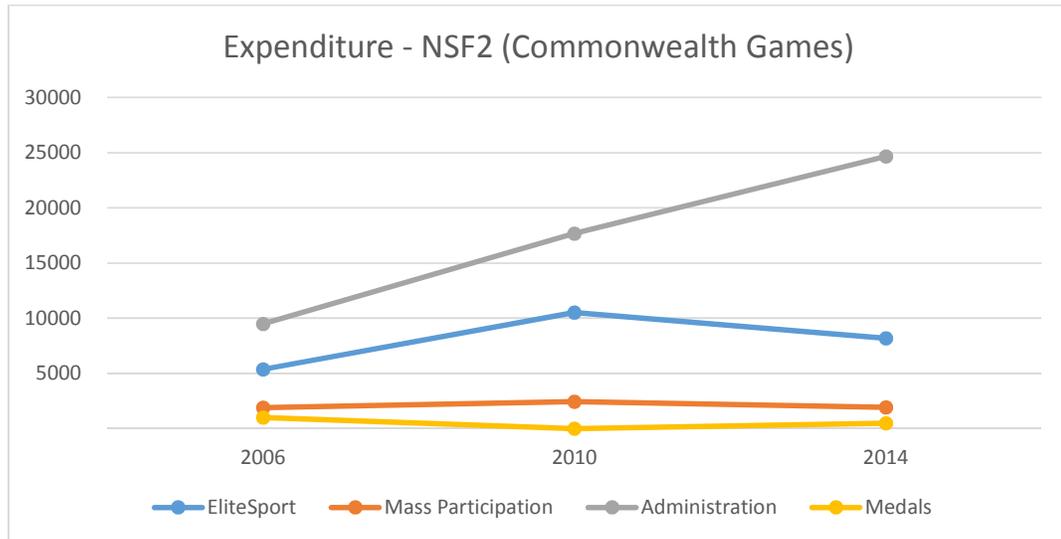
Figure 16 Expenditure – NSF1 (Commonwealth Games)



NSF2 spent R5.4 million in 2006 on elite sport, which increased to R10.5 million during 2010 and decreased to R8.2 million in 2014. The medal rating moved in the opposite direction over the three cycles which might indicate that a possible negative relationship exists between the elite sport expenditure and the performance of NSF2 at the Commonwealth Games.

Mass participation spending increased from R1.9 million in 2006 to R2.4 million in 2010, during which time the medal rating decreased. The mass participation expenditure then decreased to R1.9 million at the end of cycle three, a level similar to that of 2006. The medal rating conversely increased over the third cycle to also reach a similar level to what it was in 2006. The graph is an indication that a possible negative relationship exists between the mass participation expenditure and the performance of NSF2 at the Commonwealth Games.

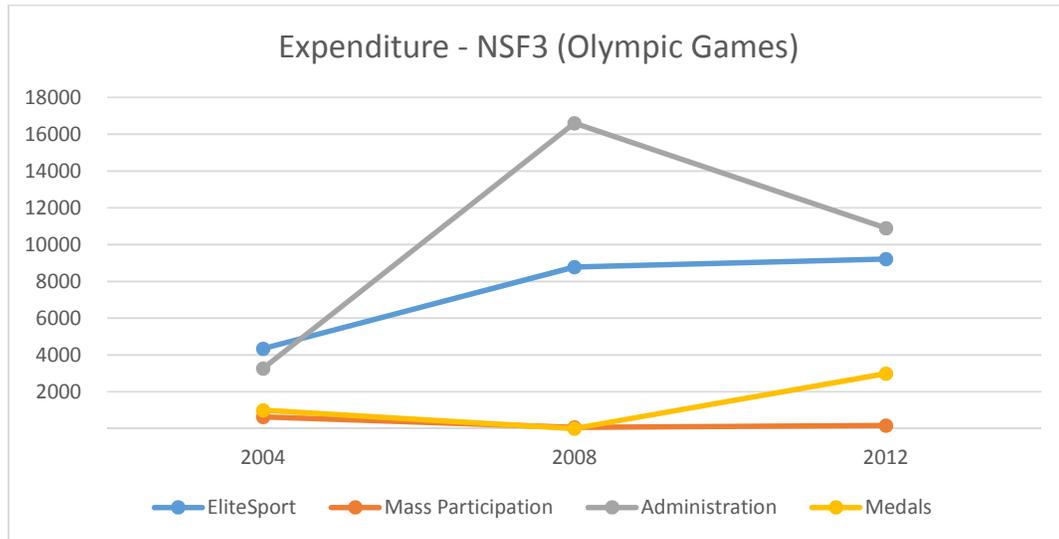
Figure 17 Expenditure – NSF2 (Commonwealth Games)



R4.3 million was spent by NSF3 on elite sport during the first cycle, ending 2006. Spending increased to R8.8 million during cycle two and further increased to R9.2 million in the third cycle, for the period ending 2012. The medal rating decreased to nil during cycle two, but then increased significantly during cycle three. The graph is indicative of no clear relationship between the elite sport spend and the performance of NSF3.

The mass participation expenditure of NSF3 was minimal over the three cycles, peaking at R0.6 million during cycle one for the period ending 2004. The mass participation expenditure remained fairly constant over cycle two to three, at which time the medal rating increased, which is an indication that no relationship between the mass participation expenditure and the performance of NSF3 exists.

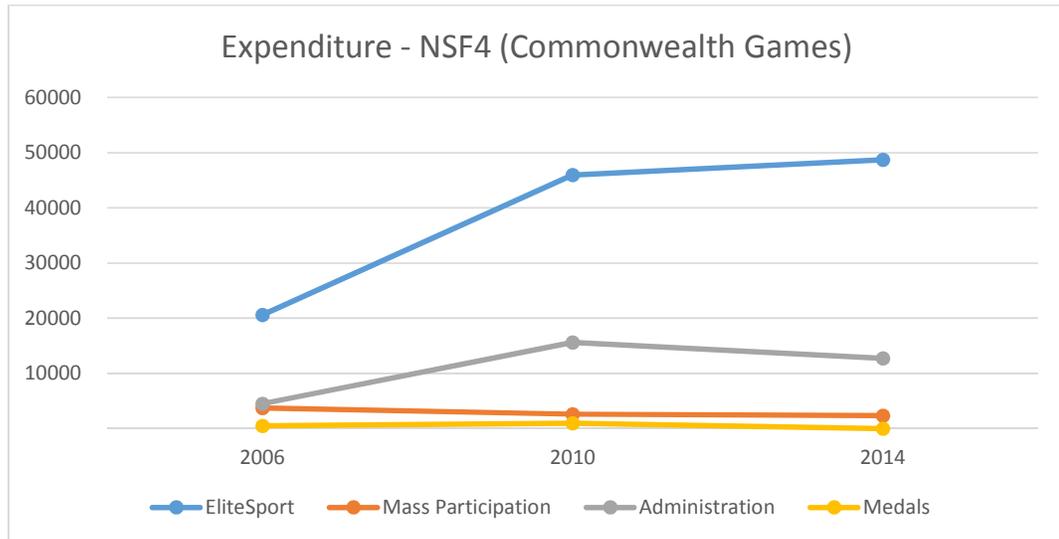
Figure 18 Expenditure – NSF3 (Olympic Games)



NSF4 spent R20.6 million on elite sport during the first cycle, ending 2006. Elite sport expenditure increased to R46 million in cycle two, with R48.7 million being spent on elite sport during cycle three. The medal rating doubled from cycle one to cycle two, which might be an indication that a relationship exists between the elite sport spend of NSF4 and its performance at the Commonwealth Games. However, the rating decreased to nil in cycle three while elite sport expenditure increased, which contradicts the possible relationship identified during cycle one and two.

The mass participation expenditure of NSF4 decreased from R4.5 million in 2006 to R2.6 million in cycle two, for the period ending 2010. Cycle three then showed a further decrease to R2.3 million. During the same period, the medal rating increased from 0.5 million in cycle one to 1 million in cycle two – but then decreased to nil in cycle three. This is an indication that no relationship exists between the mass participation spend of NSF4 and its performance at the Commonwealth Games.

Figure 19 Expenditure – NSF4 (Commonwealth Games)



NSF5 spent R2.3 million on elite sport during cycle one, which increased to R8 million in cycle two. Spending then further increased to R21.5 million in cycle three, for the period ending 2012. The medal rating remained at nil for cycle one and two, only increasing during cycle three. This is an indication that no relationship exists between the elite sport spending of NSF5 and its performance at the Olympic Games.

The mass participation expenses of NSF5 increased steadily from almost nil in cycle one to R2.4 million in cycle two, and then to R2.8 million in cycle three. The medal rating, however, remained at nil during cycle two, which is an indication that no relationship exists between the mass participation expenditure of NSF5 and its performance at the Olympic Games.

Figure 20 Expenditure – NSF5 (Olympic Games)

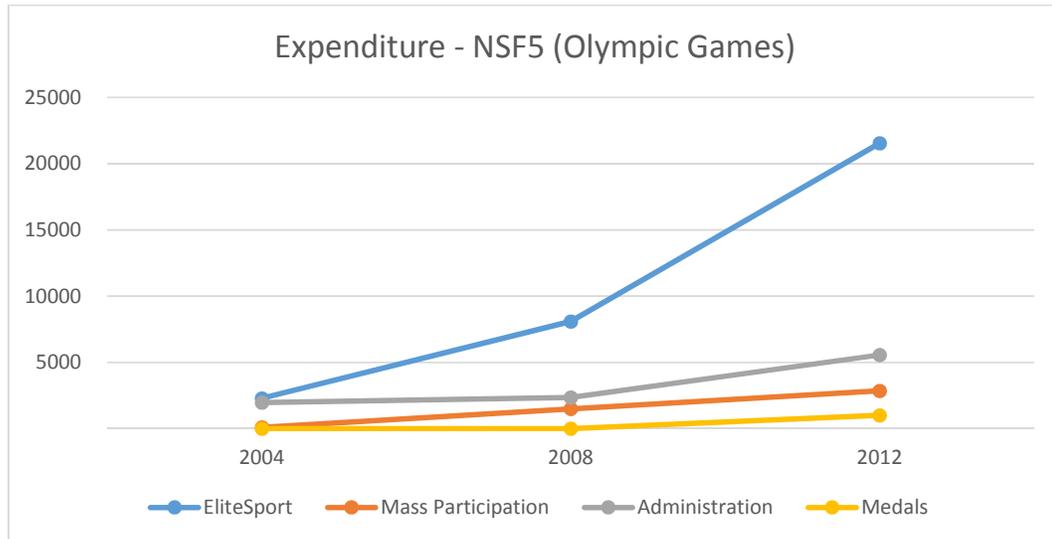
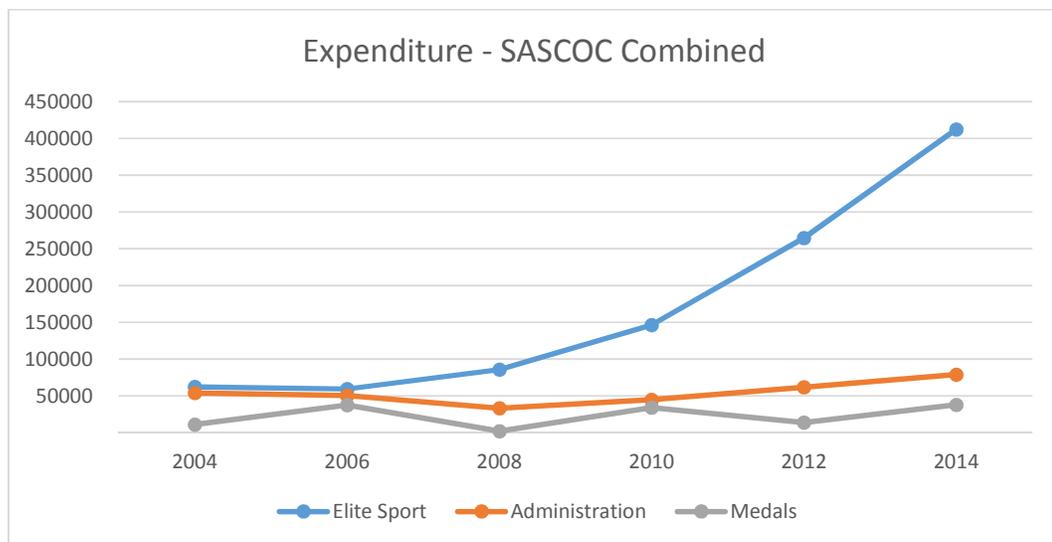


Figure 21 represents the combined performance of SACCOC at both the Olympic Games and Commonwealth Games.

Figure 21 Expenditure – SASCOC (Combined)



The graph does not clearly indicate any relationship between elite sport expenditure and the performance of SASCOC as measured in medal ratings. The medal rating decreased during the Olympic Games cycles, as represented by the 2004, 2008 and 2012 points. It might be an indication that the values assigned to the medals are not correct, which has been noted under the limitations section of chapter four.

Figure 22 represents the combined performance for all five NSFs compared to the total spend on elite sport for the period under review. It is expected that for a positive relationship to exist between elite sport expenditure and the medal rating, NSFs with higher elite sport expenditure should have a correspondingly higher medal rating.

NSF1's spend of R8.9 million on elite sport during the three cycles was by far the lowest, but they outperformed all of the other NSFs in terms of medal ratings. NSF4 spent R115.3 million on elite sport over the three cycles, but only managed a total medal rating of 1.5 million - equalling the second lowest rating out of the five NSFs. The graph is an indication that no relationship exists between the elite sport spend and performance of the NSFs.

Figure 22 Total Elite Sport Expenditure – NSFs (Comparison)

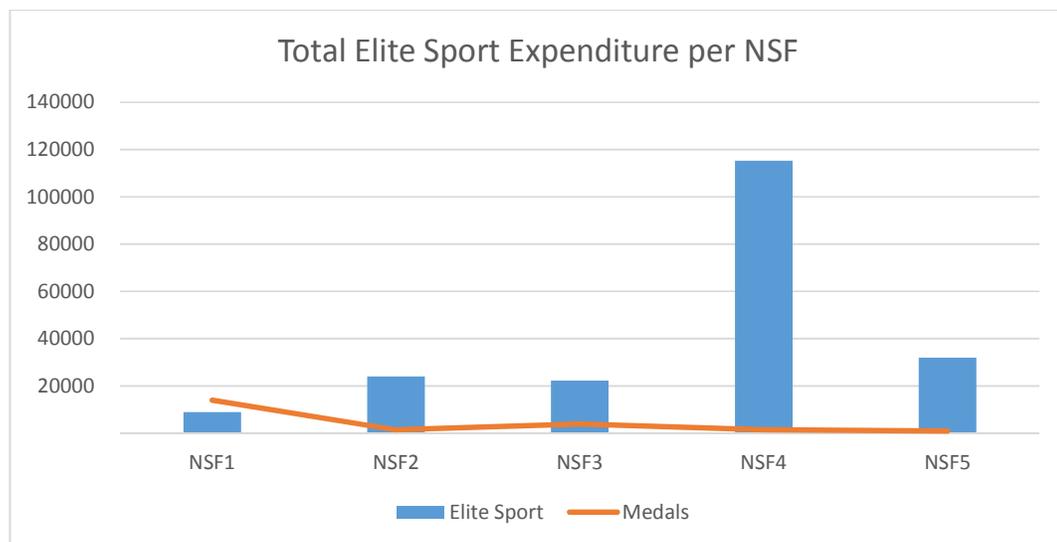
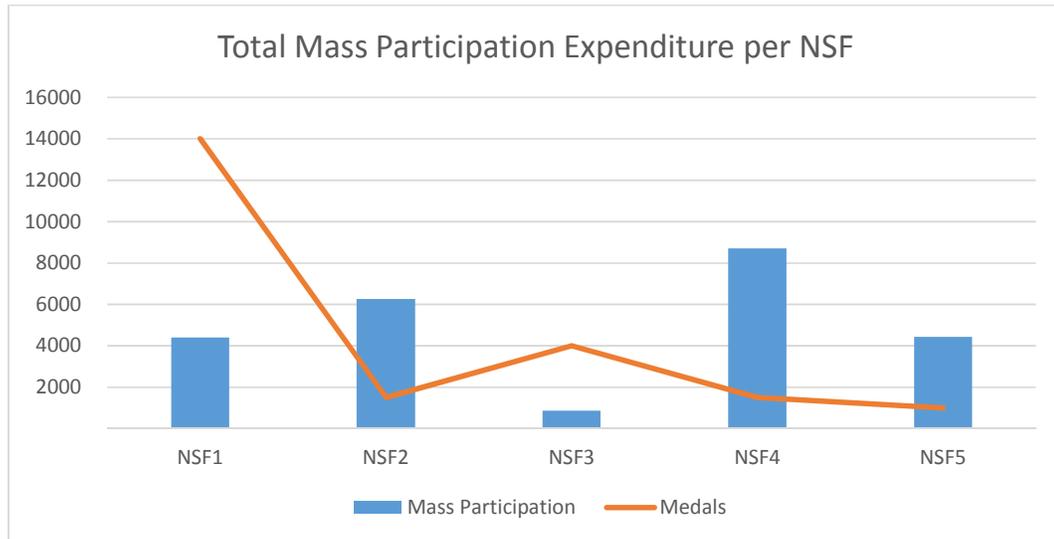


Figure 23 represents the combined performance for all five NSFs compared to the total spend on mass participation programmes for the period under review. It is expected that for a positive relationship to exist between mass participation expenditure and the medal rating, NSFs with higher mass participation expenditure should have a correspondingly higher medal rating.

NSF3 spent the least amount of funding on mass participation during the three cycles, but had the second highest medal rating. NSF1 spent R4.4 million on mass participation, which was the second lowest expenditure, but performed the best in terms of the medal rating. The graph is an indication that no relationship exists between the mass participation spend and performance of the NSFs

Figure 23 Total Mass Participation Expenditure – NSF (Comparison)



The financial data findings for section 5.2, which relate to the relationship between the different programmes and the performance of the NSFs and SASCOC are summarised in table 15 below.

Table 15 Financial Data Findings - Expenditure

Federation	Elite Sport	Mass Participation
SASCOC - Olympics	No	N/A
SASCOC - Commonwealth	No	N/A
NSF1	Positive	No
NSF2	Negative	Negative
NSF3	No	No
NSF4	No	No
NSF5	No	No
Combined	No	No

Even though detailed statistical analyses were not performed on the financial data, it is evident from the table above that insufficient evidence exists to conclude that a relationship, either positive or negative, exists between elite sport- and mass participation expenditure, and the performance at the Olympic Games and Commonwealth Games.

5.3 Semi Structured Interviews - Income

The data obtained from the interview transcripts, relating to the funding or income of the NSFs were coded using the categories and themes as presented in table 16 below. The categories used were predefined and based on the categories and variables as discussed under section 4.6.2.2 of chapter four. The themes were created from the information emerging from the interviews and were tied back to the overarching categories and variables.

Table 16 Income – Categories and Themes

Category	Variable	Theme
Funding	Public Income	Performance
	Private Income	Consistency
		Difficulty
		Timing
		Substitute Funding
		Accountability
		Inadequate
		Host nation effect

The results for each of the interviews are discussed individually.

5.3.1 Interview One

Participant one (P1), from the onset, emphasised the importance that public income plays in the funding of NSFs. P1 noted that the specific NSF received a grant of R23 million from the National Lottery a few years ago. This grant had an initial positive effect on the performance of the NSF, as P1 referred to the grant resulting in “a little bit of a spike in performance”. For P1, the major concern was the consistency at which these funds are granted, which related not only to Lotto, but to all forms of public funding. The NSF finds it difficult to budget for public income due to the inconsistent nature of the grants.

The grants seem to fluctuate from year to year, which makes it increasingly difficult for the NSF to do long-term planning. The NSF was recently approached by Lotto to submit an application for a grant of R1.9 million for the 2016 Summer Olympic Games, but according to P1 “any sports administrator and coach would tell you that (the) R2 million should have been given to us five, six years ago for this coming Olympics”.

P1 further commented on the difficulty of obtaining public funding, explaining that he felt that he spends most of his time looking for funding and then reporting on how the funding was spent, instead of spending his time developing and growing the sport. P1 one stated that “there’s so many little holes in the ground that you have to go digging in. It takes the federations, all of their time to go digging around in those holes to try and find funding, instead of running a federation”.

P1 also raised concern about the timing of the grants. The NSF would receive a grant from a public source, but the actual funds will only be transferred to the NSF at a later stage. The NSF is then told by the public entity that if the funds are not used, it will have to be paid back, which leads to the NSF spending the funds on programmes and items which the funding was not intended for. The other alternative raised by P1 is for the NSF to use its own reserves to fund the programmes, while they wait for the grant to be paid. P1 noted that as a NSF they were happy to that, because they had the necessary reserves, but pointed out that this is not an option for other NSFs who do not have the reserves to substitute the government funding.

According to P1, “sport is an absolute mess in this country and nobody is prepared to take any accountability for it”. Government should be made aware of the fact that the current funding is inadequate to deliver the desired results. P1 further argued that the NSF has world champions in various disciplines of the sport, but due to inadequate funds, these athletes do not get the relevant international exposure. “How are we ever going to get the medals when you can’t send people to a world cup or any international event, to get exposure, because they have to pay for themselves?” P1 asked.

P1 agreed with the author’s quantitative findings, which identified no clear relationships between the level of public-, private and total income and the performance of the NSFs. P1 did however argue that the findings were based on historic data and stated that “if someone came to me tomorrow and said listen, I will give you 10 million a year instead of three, and I promise you that I’ll give it to you for the next 10 years inflated by whatever CPI is, then I can guarantee you that my results will improve”.

The key themes that emerged from interview one were;

- 1) the lack of consistency in the amounts received from public grants;
- 2) the timing of the grants;
- 3) the inadequacy of the funds;
- 4) the difficulty of accessing the grants and;
- 5) elite athletes having to fund themselves.

The sentiment shared by P1 was that the level of funding does have an effect on the ability of the NSF's to perform, but this will not be the case until the funding models are more consistent, funding is increased, made easier to access, and the timing of the grants are improved.

5.3.2 Interview Two

Participant two (P2) emphasised the fact that their specific NSF is an amateur sport and none of the athletes are paid to play the sport. South Africa is ranked third in the world in the specific sport code and according to P2, the "other four (countries) in the top five are all professional athletes funded and paid by the government of their particular country". The fact that the sport is played as a professional sport in four out of the top five countries and funded by the respective governments is an indication that the level of funding and the status of the sport has an impact on the performance of the individuals or teams involved. In 2008, the British government gave their team five million pounds to prepare for international competitions, which allowed the team to play a test match series in South Africa. The British team paid for all the expenses, because as P2 explained, "we didn't have a budget for it".

P2 clarified that each affiliated member pays an annual subscription to the NSF of R190. The NSF has close to 25,000 registered members, which means that the majority of the NSF's income is generated from private sources. R40 from the R190 per member is allocated to an "international fund", which is used to fund international competitions. P2 further explained that the NSF does receive public funds, through grants received from SASCO. These grants are intended to be used in the preparation for the Commonwealth Games, but all other international competitions are funded by the NSF.

The NSF has not had any income from the National Lottery for the last eight years, due to a dispute over the travel claims submitted by the NSF. P2 explained that the funds from Lotto were used to host national camps from where the top athletes were selected to represent South Africa. Due to the lack of Lotto funding, the NSF had to fund these camps using funds from sponsorships and subscriptions. The dispute with Lotto was however recently resolved, but only after the NSF approached SRSA for assistance in settling the dispute with Lotto.

P2 explained that the NSF has a very good relationship with SRSA, and that they have “never found it difficult to obtain the grant”. P2 further explained that the grants received from SRSA are “earmarked for transformation projects”, which means they are used for mass participation and development programmes.

P2 did not suggest that the current funding is inadequate, but outlined that additional funding could enable the NSF to invite other countries to come and play in South Africa. Bringing international teams to SA will increase the athletes’ exposure to international competition – and therefore increase their level of performance. The NSF’s participation in international events is limited to the Commonwealth Games and World Championships, which only take place every four years. P2 mentioned that, should the NSF receive more funds from public sources, such as Lotto, those funds can be used “to try and attract more people to the game and to grow our numbers”. In accordance with P1, P2 did argue that funding plays a very important role in sport and additional funding can be used to subsidise some of the costs of the elite athletes. In P2’s words, “it would probably widen the pool of elite players, and therefore it could only strengthen our performance in the long term”.

The key themes that emerged from the second interview were;

- 1) the fact that the sport is an amateur sport which requires the members to fund most of the expenses related to their participation in the sport code. P2 compared South Africa’s ranking to the rest of the top five countries in the world, who are all funded by their respective governments as professional athletes;
- 2) although not explicitly mentioned, it’s evident from P2’s responses that the current funding model is inadequate to deliver improved results and to grow the number of participants, and;
- 3) the NSF’s dispute with Lotto lasted for eight years, which relates to the inconsistency mentioned by P1.

During the time that grants from the Lotto were not available, the NSF used its own reserves to cover the deficits caused by this lack of public funding. P2 did mention that the NSF has not struggled with receiving or applying for grants, which contradicts what P1 said about the difficulty of obtaining funds from public sources. The mere fact that Lotto withheld funds for eight years from the NSF, over a travel claim dispute, is an indication that the application and reporting process is very complex - even though P2 did not see it that way. P2 mentioned the good relationship it had with SRSA, which might be why they do not experience difficulties in the process of applying for funds. P2 shared

P1's sentiment that increased funding will have a positive impact on the ability of the NSF to improve performance.

5.3.3 Interview Three

Participant three (P3) explained that the financial input required for a team sport compared to that of an individual sport is much higher, and therefore the return on investment is much lower in team sports. P3 further explained that the particular NSF only receives R2 million per year from the government, which is allocated equally between elite sport and mass participation. According to P3 the R1 million allocated to elite sport is not even enough to cover the costs of an eight day team tournament, which costs in the region R1.4 million.

P3 referred to the 2007/8 season when the NSF received R12 million from the National Lottery, of which half was allocated to the national team. The financial injection meant that the NSF was in a position to appoint an international coach, which had an immediate and positive impact on the performance of the national team. P3 explained that, in recent times, the funds from Lotto have dwindled, which impacts directly on the sustainability of the NSF and its ability to do long term planning.

P3 mentioned that NOCSA, who was replaced by SASCOC, used to attract substantial sponsorships from the private sector. The sponsorships ensured that NOCSA was in a position to adequately fund its high performance programmes. P3 stated that the private sponsorships have "dried up" due to the downturn in economic conditions and the adverse media reports that South African sport have been receiving. According to P3, funding from private sources allow for sustainable high performance programmes, while public funding is earmarked for mass participation and development. P3 disagreed with current literature which states that public income is a more consistent basis for budgeting and long-term planning. P3 was of the opinion that private income is easier to budget for, and suggested that government should enter into multi-year agreements (of at least four years), which will improve the long term planning and budgeting of the NSFs.

Durban will be hosting the 2022 Commonwealth Games and according to P3, there are a number of benefits for governments to fund these major competitions and events. Firstly, it improves the on-field performance of the host nations – a proposition which is also supported by the current literature. Secondly, because the host nation is not effected by qualifying criteria, they are allowed to include more of their own athletes in the competition. This ensures that more athletes are exposed to international competitions, which might not be the case if they had to qualify for the event. P3 argued that with seven

years to prepare, the time is right for government to invest in young talent to ensure that South Africa performs well at the 2022 Commonwealth Games.

P3 also argued that no sustainable financial model exists for mass participation programmes. The NSF receives R2 million per year from government for development programmes, which the NSF spends within the first three months of the year. This is a further indication of inadequate funding – a common concern that emerged from all three interviews.

The key themes that emerged from the third interview were;

- 1) the fact that much greater investment is required by team sports than what is required by individual sports. It is one of the factors that were not considered by the author during the research process. The NSFs that participated in the study were all individual sports, which therefore mitigates the risk of comparing team sports to individual sports;
- 2) the theme of inadequate funding, in terms of both elite sport and mass participation, was also raised by P3;
- 3) the inconsistency at which public funding is granted, especially by Lotto, and the effect it has on performance was also raised by P3 and;
- 4) the positive effect that the hosting of international events have on the performance of the host nation and the international exposure it provides to the host nation's athletes.

5.4 Semi Structured Interviews – Programmes and Expenditure

The data obtained from the interview transcripts, relating to the programmes and expenditure of the NSFs were coded using the categories and themes as presented in table 17 below. The categories used were predefined and based on the categories and variables discussed under section 4.6.2.2 of chapter four. The themes were created from the information emerging from the interviews and were tied back to the overarching categories and variable.

Table 17 Programmes and Expenditure – Categories and Themes

Category	Variable	Theme
Programmes	Elite Sport Expenditure	Government Priority
	Mass Participation Expenditure	Balanced Programmes
		Human Capital
		Full Time Employees
		Incentive Schemes
		Science and Technology
		Access to Facilities

The results for each of the interviews are discussed individually.

5.4.1 Interview One

P1, commenting on the inadequate funding received from government, mentioned that the department of Sport and Recreation South Africa (SRSA) is “not interested in high performance, they’re only interested in development”. The funding of development and mass participation programmes are currently the priority of SRSA, with roughly 75% of its annual budget allocated to mass participation and the transformation of sport and recreation.

P1 agreed that a balance should exist between elite sport and mass participation. P1 stated that “from a transformation process, you need to right the wrong and assist the previously disadvantaged”, but government want to see both transformation and performance results, without providing adequate funding for these expectations to be met.

According to P1, the most important factor effecting the performance of sport is human capital. P1 argued that “your human capital factor is far more important than your balance sheet. The success or failure of anything are the people running it”.

The key themes that emerged from interview one, with regards to the different programmes to fund, were that;

- 1) there should be a balance between the funding of mass participation and the funding of elite sport. The history of South Africa requires the government to put measures in place to ensure sport is accessible to all, but to accomplish success on the international stage, government should also invest in elite sport; and;
- 2) human capital is seen as the factor that affects performance of the NSF more than any other factor. Professional sport in South Africa is still in its infancy, which might explain why some of the NSFs are still managed and administered as amateur sports.

The author, from experience in the sports industry, would like to suggest that sport is currently managed as a hybrid; a model somewhere between a sports club and a corporate organisation.

5.4.2 Interview Two

P2 explained that, due to the amateur status of the sport, elite athletes have to mostly fund themselves. The NSF hosts various camps during the year to identify the top athletes in the country. A “gold” squad is selected from these camps, which consist of the top 12 men and women in the country. To be able to represent the country, the athlete needs to be part of the “gold” squad which gets selected every six months. The athletes are usually employed in separate professions, which means they are required to take leave in order to attend these camps.

The NSF receives annual grants from SRSA, but as explained by P2, these grants are “dedicated to transformation projects”, which relates to mass participation programmes. The response from P2 is in agreement with P1’s comments that government’s primary focus is on transformation of sport and development of mass participation. All international competitions, except the Commonwealth Games (which are funded by SASCOC), are funded by the NSF - through private funding.

P2 agreed that a balance should exist between the funding of elite sport and the funding of mass participation. P2 further explained that the NSF has a development reserve in place with the sole purpose of attracting more people to the game. The NSF offers various incentive schemes and programmes to the clubs to attract more members.

The key themes that emerged from interview two, with regards to the different programmes to fund, were;

- 1) elite athletes are full time employees and they find it difficult to devote adequate time to their sport;
- 2) there should be a balance between funding mass participation and elite sport. This is in-line with what was stated by P1 and;
- 3) the NSF offers various incentive schemes to affiliated clubs to grow the sport.

5.4.3 Interview Three

P3 echoed the arguments of P1 and P2, and stated that the NSF does not receive public funding in the form of government grants for elite sport programmes. The grants received

from government are specifically allocated to mass participation and the development of the sport. P3 noted that high performance or elite sport should be funded by the private sector; however, the reality is that private sponsors are becoming increasingly more difficult to source.

P3 mentioned that even though funds are spent on elite sport, not enough emphasis is placed on the science behind sport and the use of technology. P3 explained that, in 2012, Lotto granted the Council for Scientific and Industrial Research (CSIR) funds to manage a science and technology in sport programme for two years - which has subsequently been cancelled. According to P3, South Africa is not using science and technology to their advantage, while the rest of the world is spending huge amounts of money on scientific research, and this can be seen in their performance.

P3 agreed that there should be a balance between the promotion of elite sport and mass participation. According to P3, “you have to invest in development to make elite sport happen”. P3 explained that the elite sport programmes of Australia, Russia and China are sustained by their respective governments, but in South Africa’s case “it is a little bit skewed, because a lot of focus is being put on mass participation”.

P3 further explained that the availability of training facilities impacts on the success of mass participation programmes. P3 stated that “you can make mass participation work if you provide the access to facilities”, because most of the individuals targeted for mass participation cannot afford to pay to use the facilities.

The key themes that emerged from interview three, with regards to the different programmes to fund, were;

- 1) the lack of focus on technology and the science behind sport. The existing funding is inadequate to fund the technology and science aspects of sport.
- 2) there should be a balance between funding mass participation and elite sport. This is in-line with what was stated by both P1 and P2 and;
- 3) the importance of access to facilities to promote mass participation.

5.4.4 Summary of Findings - Interviews

It was evident from the interviews that the NSF's are very much dependent on public sources for funding. The NSF's all shared similar concerns related to public funding, which included the inconsistent manner at which the funds are granted as well as the timing of the grants. The NSF's did agree that an increase in income will have a significant

effect on the ability of the NSF to perform, but for that to happen the current inconsistent and difficult funding model of the public sector should be corrected.

Various other factors, apart from finance, have an impact on the ability of the NSFs to perform. Factors such as the quality of human capital, science and technology and the availability of sports facilities must all be considered. The majority of the NSFs are amateur sports, which means most of the athletes have to fund themselves while also maintaining a full time job.

The NSFs agreed that there should be a balance between elite sport and mass participation programmes. The current focus of the South African government is development and access to all, which the NSFs agreed should be the focus, but not without funding elite sports.

Hosting major international events has a positive effect on the performance of the host nation. The reason for this increase in performance is partly due to the additional funding made available to athletes of the host nation in preparation of the event. This funding is mostly driven by the government of the host nation.

6. Discussion of Results

This chapter discusses the results presented in the previous chapter and is organised around the three research questions. This chapter is concluded with a discussion regarding the limitations of the results.

The quantitative data, which consisted of 12 years of financial information for five NSFs and SASCOC, was analysed. The financial data were grouped into four year cycles, aligning to either the Commonwealth Games or the Olympic Games, depending on the status of the NSF. The analysis of SASCOC's data included both the Commonwealth Games and the Olympic Games. The financial data were grouped into several variables, as explained under section 4.6.2.2 of this study. The variables were compared to the movement in a medal rating over the four year cycles. The medal rating was determined by assigning different values, as explained under section 4.6.1 of this study, to each of the medals won at either the Commonwealth Games or the Olympic Games.

The qualitative data, gathered from the semi structured interview process, were analysed by identifying recurring themes. These themes were compared to the findings from the quantitative data analysis. The results were further compared to the literature as reviewed and presented in the first two chapters in order to develop a better understanding and explanation thereof.

6.1 Research Question 1

Does the level of a NSF's total revenue have an effect on the performance at international competitions?

The first research question explored whether the level of a NSF's total revenue (or, in other words, total operating budget) have an effect on the performance of the NSF at international competitions - in the case of this study, the Commonwealth Games and Summer Olympic Games. The findings from the quantitative data analysis, as presented in table 14 under section 5.1 of this study, did not provide enough evidence to conclude that the level of a NSF's total revenue has an effect of the performance of the NSF.

The results for NSF1 indicated a possible positive relationship between the total income and the performance of the NSF. The results for NSF3 indicated the existence of a possible negative relationship between the total income and the performance of the NSF.

The rest of the findings provided no clear evidence of the existence of either a positive or negative relationship between the level of the NSF's total income and performance.

Frisby (1986) found that even though several factors have an effect on NSF's ability to perform at international competitions, the NSF's with larger operating budgets tend to perform better in terms of world rankings. Mitchell et al. (2012, p. 14) cautioned that, "while it is clear that increased funding is likely to improve sporting performance, it is equally important to note that, in a single contest, funds do not guarantee success". The findings of Frisby (1986) were based on a study performed on the Canadian sports federations, while the findings of Mitchell et al. (2012) were based on a study performed on the Australian, British and Canadian sports federations. Both of these studies were based on the sports performance of developed countries, whereas the findings of this study are based on the performance of South Africa, a developing country.

Luiz and Fadal (2011, p. 880) argued that "the bang for buck in South Africa in terms of its production function is poor and this reveals internal problems and inconsistencies". The lack of consistency was one of the key themes that emerged from the interviews, but related more to public funding - which is discussed under section 6.2. Another key theme that emerged from the interviews was the importance of human capital. Participant one argued that human capital plays a bigger role than funding in determining the performance of a NSF.

The author would like to suggest that the reason no clear relationship were identified between the levels of total income and the performance of the NSF's, is due to the "internal problems and inconsistencies", referred to by Luiz and Fadal (2011, p. 880). The question that one should ask is, why NSF's with smaller budgets, such as NSF1, consistently outperform their peers. A study performed by Binns (2009) argued that there are many sports organisations and sports managers that need to learn and understand how to correctly apply and spend the financial resources available to them. Herein lies the problem, and therefore the author would like to suggest that it is the management of these funds that is the real issue. The management of the available funds relate to the human capital factor that emerged from the interviews.

Winand et al. (2010) described the staff employed by the organisation - and more specifically, the skill set of these staff - as well as the internal functioning of the organisation, as the operational goals of sport governing bodies. The main objective of these two goals are the effective management and administration of the governing body, which includes the management of financial resources. In the SPLISS model, as described by De Bosscher et al. (2010), financial input is the number one pillar of nine

pillars that are required for international sporting success. Shibli et al. (2012, p. 228) cautioned that “elite sports performance is a managed phenomenon, rather than simply being reliant on a country’s demographic and economic dimensions”.

Even though the literature review in chapter two did suggest that the size of a NSF’s budget, or its total income, does have a positive effect on the NSF’s ability to perform, the author was not able to find clear evidence that such a relationship exists between the total revenue and the performance of a NSF. Instead, the author agrees that financial input is merely one aspect of delivering a high performing team or athlete. Frisby (1986) cautioned that the development of high performance sports teams cannot be guaranteed by a larger budget, but requires resources to be allocated effectively. The availability of funding does not guarantee international success. NSFs should have policies and processes in place to ensure that funds available to them are managed effectively, ultimately leading to improved performance on the field.

6.2 Research Question 2

Does the level of a NSF’s public income relative to overall income, have an effect on performance at international competitions?

The second research question explored whether the level of a NSF’s revenue from public sources relative to its overall income, has an effect on the performance of the NSF at international competitions - in the case of this study, the Commonwealth Games and Summer Olympic Games. The findings from the quantitative data analysis, as presented in table 14 under section 5.1 of this study, did not provide enough evidence to conclude that either a positive or negative relationship exists between the performance of the NSFs and the level of its public- or private income.

The results for NSF4 indicated that a possible positive relationship exists between public income and its performance, but none of the other findings indicated any form of relationship. The findings on the level of private income, however, did indicate more of a relationship with performance. The level of private income had a positive effect on NSF4’s performance, while the performance of SASCO at the Olympic Games also indicated the possibility of a positive relationship. The results for NSF3 indicated the existence of a possible negative relationship between the level of private income and its performance, with none of the other findings indicating any kind of relationship.

Governments around the world are committed to funding national sports, driven by the fear of poor performance at international events and “an acceptance by politicians that poor athletic performance is unacceptable to the general public.” (Mitchell et al., 2012, p. 12). Mitchell et al. (2012) suggested that a positive relationship exists between government spending on sports and performance, as measured in terms of Olympic medals. Similar research performed by Škorić et al. (2012) found that public funding is an integral part of sport financing and that “the amount of funds coming from local budgets is correlated with sporting performance (medals won at domestic competitions)” (p. 180). Oliveira and Bortoleto (2012) argued that the improvement in the Brazilian men’s artistic gymnastics performance at the World Championships from 1991 to 2011 was partly due to an improvement in economic conditions, mainly provided for by an increase in financial support from the Brazilian government. These studies all found that a positive relationship exists between public funding and the performance of sports teams, which contradicts the findings of this study. The author would once again like to suggest that the availability of the funding is not the issue, but rather that the management and administration thereof - by both government and NSFs - is the critical issue.

Coates et al. (2014) argued that public funding, in the form of government grants are less sensitive to change, which makes it easier for the NSFs to budget for, ultimately leading to better performance. A theme that emerged from the interview process is the inconsistency at which funds are granted by public sources, contradicting the argument of Coates et al. (2014). The NSFs raised their concerns not only about the grants that seems to fluctuate from year to year, but also about the timing of these grants. NSFs find it increasingly more difficult to budget for public funds, which affects their ability to do long term planning, and then ultimately affects their ability to perform on the international stage.

NSFs also found that the current funding model makes it very difficult to obtain funding from public sources due to the high levels of bureaucracy and red tape involved in the funding process. One participant stated that “there’s so many little holes in the ground that you have to go digging in. It takes the federations all of their time to go digging around in those holes to try and find funding, instead of running a federation”. The difficulty of obtaining funding from public sources, and the time spent reporting on how these funds were spent by the NSFs, are highlighted as a major reason why NSFs are unable to manage, develop and grow the sport effectively.

South Africa is set to host the 2022 Commonwealth Games at an estimated cost of R10 billion (Mkhize & Savides, 2015), with the majority of that R10 billion investment expected to be funded by public sources. Host nations would wish to perform well in terms of medals when hosting the games and therefore generally increase its budget allocation to elite sports, from the time the right of hosting the games has been awarded, until the actual games takes place (Forrest, Sanz, & Tena, 2010). Shibli et al. (2012, p. 288) referred to this home ground advantage as the “positive host nation effect” and found that the host nation can expect an increase of 3.17% to their medal haul, relative to the total gold medals contested for. P3, as a member of the 2022 Commonwealth Games Organising Committee, explained that an increase in performance can be expected because of two reasons; 1) the host nation is not affected by qualifying criteria and will generally send more athletes to the games, which increases the chance of a better performance at the games and; 2) as supported by the literature, the host nation’s government will increase its budget allocation towards elite sports, from the time the right of hosting the games has been awarded until the actual games take place. P3 explained that the increase in the elite sport budget is absorbed into and included in the games budget, which would have formed part of the bidding process.

It was evident from the interviews that the NSFs are very much dependent on public sources for funding. The NSFs all shared similar concerns related to public funding, which included the inconsistent manner at which the funds are granted as well as the timing of the grants. The NSFs did agree that an increase in income will have a significant effect on the ability of the NSF to perform, but for that to happen the current inconsistent and difficult funding model of the public sector will have to be amended.

6.3 Research Question 3

Does the level of a NSF’s elite sports and high performance programmes’ funding have an effect on the performance at international competitions?

The third and final research question explored whether the level of a NSF’s elite sports and high performance programmes’ funding have an effect on the performance of the NSF at international competitions - in the case of this study, the Commonwealth Games and Summer Olympic Games. The findings from the quantitative data analysis, as presented in table 15 under section 5.2 of this study, did not provide sufficient evidence

to conclude that either a positive or negative relationship exists between the performance of the NSFs and the level of its elite sport- or mass participation expenditure.

The results for NSF1 indicated a possible positive relationship between its elite sports expenditure and its performance. The results for NSF2 indicated a possible negative relationship between its elite sports expenditure and its performance, with none of the other results indicating any clear relationship. The results for NSF2 were the only results that indicated a possible negative relationship between its mass participation expenditure and its performance. None of the other results indicated any form of relationship between mass participation expenditure and performance.

The use of sports policies are becoming increasingly popular as governments strive to realise an array of policy objectives and social goals. Some of these objectives and goals include “social inclusion, crime reduction, urban regeneration, raising school standards, reducing obesity and international prestige” (Green, 2007, p. 921). Green (2007) further argued that governments have the responsibility of balancing policies between support for elite sports and support for mass participation programmes, so as to ensure the biggest possible benefit to the wider population. The globalisation of sport brought about an increase in international sport competitions, which has over time resulted in countries implementing policies and allocating increased budgets to develop world class athletes. (De Bosscher, Shibli, van Bottenburg, De Knop, & Truyens, 2010). Van Hilvoorde, Elling and Stokvis (2010) found that the increase in global investment in elite sport could be explained by the fact that sport has the ability to unite nations and increase national pride.

A common theme that emerged from all the interviews is that there should be a balance between investment in elite sport and investment in mass participation. P3 stated that “you have to invest in development to make elite sport happen”. The sentiment of P3 is supported by the SPLISS model (presented in figure 2) described by De Bosscher et al. (2010), with participation being assigned to pillar three of the model.

What was evident from the interviews is that the NSFs’ elite sport programmes are not adequately supported by public funds. This claim is supported by the fact that, according to SRSA (2015, p. 15), “the focus of SRSA spending is the development of sport and recreation in the country. The key projects are active recreation, community sport and school sport”. The Active Nation programme is the anchor and driver of SRSA’s mass participation goal with an annual budget allocation of R628.6 million for 2015/16, which represents 64% of the departmental budget. Luiz & Fadal (2011) argued that South Africa is a classic case of a country which has the necessary economic resources, but

which has not been able to translate it into a comparative advantage. It is mostly attributable to the fact that the country's main focus is on mass participation and eradication of past inequalities.

P3 noted that high performance or elite sport should be funded by the private sector, but the reality is that private sponsors are becoming increasingly more difficult to source. P3's sentiment is supported by Ratten (2011) who argued that the globalisation of sport has meant that sports organisation are competing in a saturated market, which has thus increased the need for sports organisation to seek and develop alternative sources of revenue. P3 recommended that government introduce measures to incentivise organisations to invest in sport. Incentives could include tax breaks and the amendment of the BBBEE codes to include the recognition of investments in sports development.

P3 further argued that NSFs should invest more in the science and technology of sport to ensure improved performance – however, such an investment is impossible with the current inadequate amount of funding that is available to elite sport. Scientific research is assigned to pillar nine of the SPLISS model described by De Bosscher et al. (2010). Other themes that emerged from the interviews, and that impacted on the success of the NSFs elite sports and mass participation programmes, were the quality of human capital, the availability of facilities (pillar six of the SPLISS model) and the fact that most of the sports still have an amateur status - which requires the athletes to hold a full time job, additional to their sport participation. Athletic and post-career support is captured under pillar five of the SPLISS model.

It is evident from the information obtained from the interviews that the financial input into elite sport and mass participation programmes is only one factor that affects the overall ability of the NSFs to perform. The South African context and the country's history should be considered when sport policies are developed. Shibli et al. (2012, p. 278) argued that “one possible explanation for nations achieving more Olympic success than might be expected on the basis of macro-economic variables, is that they have effective elite sport development systems in place, which outweigh macro-economic factors such as population and wealth”. Shibli et al. (2012) further explained that Australia's success at the 2004 and 2008 Olympic Games could be attributable to the country's investment in elite sports development systems. P3 explained that the elite sport programmes of Australia, Russia and China, are sustained by their respective governments, whereas in South Africa's case, “it is a little bit skewed, because a lot of focus is being put on mass participation”.

Burnett (2010) noted that, it is against South Africa's background of inequality and poverty that SRSA has implemented and continues to fund the mass participation programme. Andreff (2008, p. 2) found that "the ratio of sport participation in the Third World is in the range of 0.01% to 1% of the population (to be compared with 20-25% of the population that is affiliated to sports federations in European countries)". It could therefore be argued that the literature justifies the decision of SRSA to invest in mass participation and grassroots development. Governments do, however, still have the responsibility of balancing sports policies, and therefore budget allocations to both elite sports and mass participation must be addressed. Carney, Smolianov and Zakus (2012) suggested that USA Rugby emulate the English sports model, having both a professional level, as well as an amateur club structure for mass participation. The author would therefore like to suggest that there is a need for a dual-model, which includes providing adequate funding to elite sports with the best possibility of winning medals, as well as having a programme in place to cater for the masses.

6.4 Limitations

A significant limitation is the fact that the results obtained from the quantitative research process were based on descriptive statistics, instead of inferential statistics, which affects the accuracy of the findings. The limitation was mitigated, to an extent, by gathering further qualitative data in the form of semi-structured interviews. The fact that only three participants were interviewed led to a further limitation in terms of data saturation. The author is, however, of the opinion that no new information would have emerged from additional interviews. Most of the concerns raised by the participants related to public funding and the dependence of the NSFs on public funding.

7. Conclusion

The aim of this study was to explore the relationship between the funding models used by SASCOC, the NSFs and their performance at international competitions and events. A mixed-methodology approach was used, which included gathering the financial data of six South African sports federations for a period of 12 years. This study appears to be the first of its kind in a South African context. The author did not manage to find similar South African studies during the literature review, which might explain why it was such a difficult process to gather the data and information from the NSFs.

The quantitative research findings were discussed with three industry experts, representing three different NSFs. The findings contradicted the current literature, which were mostly based on developed countries, and made it incomparable to South Africa with its controversial history and legacy left by the policies of the apartheid regime.

7.1 Principal Findings

The results from the quantitative research did not reveal any clear relationship between the variables listed below and the performance of the NSFs, which contradicts the current literature.

- Public Income
- Private Income
- Total Income
- Elite Sport Expenditure
- Mass Participation Expenditure

The literature review in chapter two of this study indicated that a positive relationship exists between public income and the performance of NSFs, as well as the elite sport expenditure and performance of the NSFs (Mitchell et al., 2012; Shibli et al., 2012; Škorić et al., 2012). The findings from these studies were mostly based on the performance and funding models of developed countries, such as Australia, Canada and the United Kingdom.

The results obtained from the qualitative research process proved to be of great value. The participants were in agreement that funding plays a vital role in the performance of NSFs, but noted that there are various reasons why no clear relationship between the current funding models and performance of South African NSFs were identified during the quantitative research process. The majority of the reasons related to the contributions

made to sport by the South African government. NSFs argued that the current funding model from public sources is inconsistent, inadequate, untimely and difficult to manage. This problematic funding model has a direct impact on the ability of the NSFs to do long term planning, ultimately affecting the performance of the NSFs on the international stage. The availability of funds does not guarantee success, as resources need to be managed and allocated effectively (Frisby, 1986; Shibli et al., 2012).

These internal issue are further exacerbated by the fact that no sustainable elite sport funding model exists in South Africa. Government's main priority is the promotion of mass participation and development in sport, which means that elite sport is required to be funded by the private sector. The NSFs argued that a balance should first exist between elite sport and the promotion of mass participation, before a significant improvement in the performance of NSFs can be expected.

7.2 Implications for Management

The implications and recommendations to management have been arranged in accordance with the aim of the research as documented under section 1.7.

7.2.1 The South African government

Governments around the world have numerous factors that motivate them to provide extensive funding to national sports teams. One such factor is the “potential to exploit elevation in nationalistic pride that attends international sporting success” (Mitchell et al., 2012, p. 7). It is understandable that the main priority of the South African government is the development of sport and mass participation. According to Škorić et al. (2012), access to all and mass participation can only be achieved by strong public involvement, driven by government intervention through financial support. It is clearly evident from the SRSA 2015/16 annual plan that the South African government is targeting mass participation and transformation in sport. Roughly 75% of its 2015/16 budget has been allocated between strategic goal one and two. Mass participation as a governmental priority was also one of the key themes that emerged from the interview process.

The author suggests that government should revisit its current funding allocation to ensure that a balance exists between the funding of elite sport and mass participation. Government is ultimately responsible for the funding of national sports teams, to ensure that these teams are competitive at an international level. The performance of national

sport teams cannot be the sole responsibility of the private sector, but government can assist this development by introducing incentives to make sports sponsorships more attractive to private organisations. Government should introduce tax breaks and the amendment of the BBBEE codes to include the recognition of investments in sports development.

A second key theme that emerged from the interviews was the inconsistent manner in which public funds are granted. Government should be looking at introducing multi-year funding programmes. Instead of NSFs having to apply for grants every single year, government should enter into agreements with a minimum term of four years, which will ensure that NSFs are in a better position to do long term planning. The four year term could also be aligned to the Olympic Games of Commonwealth Games cycles, to further edify the management processes of SASCOC and NSFs.

7.2.2 SASCOC and the National Sports Federations

SASCOC and the rest of the NSFs are becoming increasingly dependent on public grants, either directly from government or the National Lottery. A need exists for NSFs to supplement its income with additional revenue streams, so as to ensure that the organisation's operations are adequately funded. NSFs have to be managed effectively and efficiently in order to be seen as attractive investment opportunities for corporations looking to enter into sponsorship agreements. The cooperation between NSFs and sponsors can lead to a competitive advantage and also ensure that the goals of both parties are achieved more effectively and efficiently (Dilys & Gargasas, 2014). Due to the South African government's focus on mass participation, NSFs require both forms of funding in order to be successful at international events. Private financing is required to fill the gap in elite sports funding, which, as has already been highlighted, is not presently the priority of the South African government.

NSFs should realise that the funding of sport is critical to the success of the NSFs, but that the availability of funds does not necessarily guarantee success. Various other factors contribute to the success of NSFs, as was highlighted by the model described by Winand et al. (2010) presented in figure 1, as well as the SPLISS model described by De Bosscher et al. (2010) presented in figure 2. P3 drew attention to the problem of adverse media reports arising around some of the NSFs, and how these reports create a negative image in the minds of potential sponsors.

The NSFs should be approaching government with solutions to these challenges, and work on building a strong relationship that is beneficial to both parties. It was evident from the interview process that P2 had a better relationship with SRSA, compared to the relationship which P1 had with the same organisation. P2 explained that the NSF has a very good relationship with SRSA and that they have “never found it difficult to obtain the grant”.

7.2.3 Academia

The literature revealed that limited research was available on the relationship between the funding models of South African NSFs and their performance. The majority of existing research focuses on the comparison of performance at major events, between different countries and not between the different sports codes within a specific country. The study provides evidence that the context in which the study occurs should be considered, and that certain findings from previous studies are not always relevant in a specific context.

The data, which comprises of 72 years of summarised financial data, contributes to academia in the sense that no such database, to the knowledge of the author, currently exists. It is however unfortunate that such database does not exist in the sports environment, which the author feels should be freely available in the public domain.

7.3 Limitations of the Research

The data consisted of 12 years of financial information for six federations, which equates to a total of 72 years of summarised financial information. A significant limitation is the fact that the results obtained from the quantitative research process were based on descriptive statistics, instead of inferential statistics, which affects the accuracy of the findings. The limitation was mitigated, to an extent, by gathering further qualitative data in the form of semi-structured interviews. The author was therefore not in a position to determine the statistical significance of the relationships between the different variables and the trends identified during the data analysis process.

The data preparation phase included the assignment of different financial line items, per the annual financial statements, to the variables as documented under section 4.6.2.2 of this chapter. The author acknowledged the fact that some of the line items might have been misinterpreted and assigned to the incorrect variable categories.

The study required the imputation of data, which could have resulted in researcher bias. The missing data only affected two of the NSFs, from which the data gaps were not considered significant enough to affect the outcome of this study.

The quality of the data gathered from the annual financial statements were considered to be a limitation. The annual financial statements were not standardised due to the fact that different auditors were used by the different NSFs. Some of the NSFs changed auditors during the period under review, which left some of the line-items open for interpretation during the process of assigning values to the different variables.

7.4 Suggestions for Future Research

This study revealed that several opportunities for future research do exist. It is recommended that qualitative and quantitative research be conducted to expand on the findings of this study.

7.4.1 Qualitative

Future research could include the evaluation of the sports policies of individual NSFs by using either of the models described by Winand et al. (2010) presented in figure 1, or the SPLISS model described by De Bosscher et al. (2010) presented in figure 2. The data gathering process should mainly consist of interviews with the individual NSFs. Even though limited interviews were performed during this study, the author found that the insights gained from the interviews were of more value than the information obtained from the quantitative research.

7.4.2 Quantitative

Future research should include the gathering of data over a longer period to ensure that inferential statistics can be applied to the data. The data gathering process will, however, have to be conducted over a longer period, so as to provide the NSFs with more time to respond to requests for such data.

References

- Andreff, W. (2008). *Sport in developing countries*. Retrieved from sportanddev:
<http://www.sportanddev.org/en/learnmore/?uNewsID=84>
- Binns, J. T. (2009). *The Use of Performance Based Funding in a Sport Organization: A Case Study of the United States Olympic Committee* (Doctoral dissertation). Available from Proquest (UMI No. 3372714). Retrieved from
<http://www.dtic.mil/dtic/tr/fulltext/u2/a505164.pdf>
- Burnett, C. (2010). Sport-for-Development Approaches in the South African Context: A Case Study Analysis. *South African Journal for Research in Sport, Physical Education and Recreation*, 32(1), 29-42. Retrieved from http://0-reference.sabinet.co.za/innopac.up.ac.za/sa_epublication_article/sport_v32_n1_a3
- Cardinelli, J. (2012, August 15). *Start of something good: Olympic Games*. Retrieved from Financial Mail: <http://www.financialmail.co.za/fm/2012/08/15/olympic-games>
- Carney, M., Smolianov, P., & Zakus, D. H. (2012). Comparing the practices of USA Rugby against a global model for integrated development of mass and high performance sport. *Managing Leisure*, 17, 182-206.
doi:10.1080/13606719.2012.674394
- CGF. (n.d.). *Countries: South Africa*. Retrieved from thecgf:
<http://www.thecgf.com/countries/intro.asp?loc=RSA>
- Christiansen, N. V., Kahlmeier, S., & Racioppi, F. (2014). Sport promotion policies in the European Union: results of a contents analysis. *Scandinavian Journal of Medicine & Science in Sports*, 24, 428-438. doi:10.1111/j.1600-0838.2012.01500.x
- Coates, D., Wicker, P., Feiler, S., & Breuer, C. (2014). A Bivariate Probit Examination of Financial and Volunteer Problems of Non-Profit Sport Clubs. *International Journal of Sport Finance*, 9(3), 230-248. Retrieved from
http://www.researchgate.net/profile/Christoph_Breuer/publication/260712943_A_bivariate_probit_examination_of_financial_and_volunteer_problems_of_non-profit_sport_clubs/links/53de35640cf216e4210c4f4e.pdf
- Creswell, J. W. (2014). *Research Design* (4th ed.). Dorchester: SAGE Publications.

- De Bosscher, Shilbury, D., Theeboom, M., Van Hoecke, J., & De Knop, P. (2011). Effectiveness of National Elite Sport Policies: A Multidimensional Approach Applied to the Case of Flanders. *European Sport Management Quarterly*, 11(2), 115-141. doi:10.1080/16184742.2011.559133
- De Bosscher, V., Shibli, S., van Bottenburg, M., De Knop, P., & Truyens, J. (2010). Developing a Method for Comparing the Elite Sport Systems and Policies of Nations: A Mixed Research Methods Approach. *Journal of Sport Management*, 24, 567-600. Retrieved from <http://0-web.b.ebscohost.com/innopac.up.ac.za/ehost/pdfviewer/pdfviewer?vid=4&sid=4f13bc9b-797f-4fb5-9485-64fe24377489%40sessionmgr111&hid=107>
- de Villiers, O. (2015, July 09). *Athletics SA set for R6.2m boost*. Retrieved from Sport 24: <http://www.sport24.co.za/OtherSport/Athletics/Athletics-SA-set-for-R62m-boost-20150709>
- de Villiers, O. (2015, July 08). *Sam: We need to get out of dip*. Retrieved from Sport 24: <http://www.sport24.co.za/OtherSport/Sam-We-need-to-get-out-of-dip-20150708>
- Dilys, M., & Gargasas, A. (2014). Structural Business Model Based on Cooperation between Sports Organisations and Sponsors. *Engineering Economics*, 25(1), 94-102. doi:<http://dx.doi.org/10.5755/j01.ee.25.1.2680>
- Doherty, A., & Murray, M. (2007). The Strategic Sponsorship Process in a Non-Profit Sport Organization. *Sport Marketing Quarterly*, 16(1), 49-59. Retrieved from <http://0-web.b.ebscohost.com/innopac.up.ac.za/ehost/pdfviewer/pdfviewer?vid=3&sid=d1787ab9-391e-43e0-9dc3-a8797a243b77%40sessionmgr198&hid=105>
- Ergul, N. (2010). Analysing of the effects of league performance of Turkish sport clubs over the financial performances of the corresponding sport companies. *China-USA Business Review*, 9(12), 69-79. Retrieved from <http://www.davidpublishing.com/davidpublishing/upfile/3/7/2013/2013030781986345.pdf>
- Forrest, D., Sanz, I., & Tena, J. (2010). Forecasting national team medal totals at the Summer Olympic Games. *International Journal of Forecasting*, 26, 576-588. doi:10.1016/j.ijforecast.2009.12.007

- Frisby, W. (1986). Measuring the Organisational Effectiveness of National Sport Governing Bodies. *Canadian Journal of Applied Sport Sciences*, 11(2), 94-99.
Retrieved from
http://www.researchgate.net/profile/Wendy_Frisby2/publication/19431314_Measuring_the_organizational_effectiveness_of_National_Sport_Governing_Bodies/links/547ce8d90cf27ed978623033.pdf
- Green, M. (2007). Olympic golry or grassroots development?: Sport policy priorities in Australia, Canada and the United Kingdom, 1960 - 2006. *The International Journal of the History of Sport*, 24(7), 921-953. doi:10.1080/09523360701311810
- Hallmann, K., Breuer, C., & Wicker, P. (2011). Determinants of sport participation in different sports. *Managing Leisure*, 16, 269-286.
doi:10.1080/13606719.2011.613625
- Humphreys, B. R., & Ruseski, J. E. (2015). The Economic Choice of Participation and Time Spent in Physical Activity and Sport in Canada. *International Journal of Sport Finance*, 10(2), 138-159. Retrieved from <http://0-search.proquest.com.innopac.up.ac.za/docview/1675021894/fulltextPDF?accountid=14717>
- IOC. (n.d.). *Sports*. Retrieved from Olympic: <http://www.olympic.org/sports>
- Isaacson, D. (2014, November 19). *Sam lowers SA's medals target for 2016 Olympics*. Retrieved from Business Day Live:
<http://www.bdlive.co.za/sport/othersport/2014/11/19/sam-lowers-sas-medals-target-for-2016-olympics>
- Isaacson, D. (2015, January 15). *Cinderella Sports: Show them the money*. Retrieved from Financial Mail:
<http://www.financialmail.co.za/coverstory/2015/01/15/cinderella-sports-show-them-the-money>
- Luiz, J. M., & Fadal, R. (2011). An economic analysis of sports performance in Africa. *International Journal of Social Economics*, 38(10), 869-883.
doi:10.1108/03068291111170415
- Mitchell, H., Spong, H., & Stewart, M. (2012). Gambling with Public Money: An Economic Analysis of National Sports Team Funding. *The Economic and Labour Relations Review*, 23(2), 7-22.

- Mkhize, N., & Savides, M. (2015, February 12). *Durban set to host Commonwealth Games as rival quits race*. Retrieved from Business Day Live:
<http://www.bdlive.co.za/national/2015/02/12/durban-set-to-host-commonwealth-games-as-rival-quits-race>
- Munteanu, S. M. (2015). Empirical Investigation on the Corporate Financing for Sport Development in E.U. *Business Excellence and Management*, 5(2), 43-54.
Retrieved from <http://beman.ase.ro/no52/5.pdf>
- National Sport and Recreation Act. (1998). *Act no 110 of 1998 as amended*.
- Newman, D. A. (2003). Longitudinal Modeling With Randomly and Systematically Missing Data: A Simulation of Ad Hoc, Maximum Likelihood, and Multiple Imputation Techniques. *Organizational Research Methods*, 6(3), 328-362.
doi:10.1177/1094428103254673
- Oliveira, M. S., & Bortoleto, M. A. (2012). Public Sports Policy: The Impact of the Athlete Scholarship Program on Brazilian Men's Artistic Gymnastics. *Science of Gymnastics Journal*, 4(1), 5-19. Retrieved from <http://0-web.a.ebscohost.com/innopac.up.ac.za/ehost/detail/detail?vid=3&sid=4581695d-b0f8-4339-9be1-d7d9a9c6ae54%40sessionmgr4002&hid=4114&bdata=JnNpdGU9ZWZwhvc3QtGIZ2ZSZy29wZT1zaXRI#AN=83332336&db=s3h>
- Pomfret, R., & Wilson, J. K. (2011). The Peculiar Economics of Government Policy towards Sport. *Agenda*, 18(1), 85-98.
- PwC. (2014). *Entertainment and media outlook: 2014-2018 South Africa, Nigeria & Kenya* (5th ed.). Johannesburg: PricewaterhouseCoopers.
- Ratten, V. (2011). International Sports Management: Current Trends and Future Developments. *Thunderbird International Business Review*, 53(6), 679-686.
doi:10.1002/tie.20444
- Rosner, S., & Low, D. (2009). The Efficacy of Olympic Bans and Boycotts on Effectuating International Political and Economic Change. *Texas Review of Entertainment & Sports Law*, 11(1), 27-79. Retrieved from <http://0-web.b.ebscohost.com/innopac.up.ac.za/ehost/pdfviewer/pdfviewer?sid=4f0cc316-3d76-4f97-9b61-ded1618c8aad%40sessionmgr112&vid=4&hid=101>

- Sam, M. (2012). Targeted investments in elite sport funding: wiser, more innovative and strategic? *Managing Leisure*, 17, 207-220.
doi:10.1080/13606719.2012.674395
- SASCOC. (2006). *Annual Report 2006: Putting our athletes first*. Johannesburg: Author.
- SASCOC. (2010). *Annual Report 2009 - 2010*. Johannesburg: Author.
- SASCOC. (n.d.). *History*. Retrieved from SASCOC: <http://www.sascoc.co.za/history/>
- Saunders, M., & Lewis, P. (2012). *Doing Research in Business & Management: An Essential Guide to Planning Your Project*. Essex: Pearson Education Limited.
- SBD. (2015, August 06). *U.K. Government To Review How It Finances Elite Athletes*. Retrieved from SportsBusinessDaily:
<http://www.sportsbusinessdaily.com/Global/Issues/2015/08/06/Finance/UK-Funding.aspx>
- Shibli, S., Gratton, C., & Bingham, J. (2012). A forecast of the performance of Great Britain and Northern Ireland in the London 2012 Olympic Games. *Managing Leisure*, 17, 274-290. doi:10.1080/13606719.2012.674399
- Skoric, S., Bartoluci, M., & Custonja, Z. (2012). Public financing in Croatia sport. *Financial theory and practice*, 36(2), 179-197. doi:10.3326/fintp.36.2.3
- Sport 24. (2015, April 05). *R100m for 10 Olympic medals?* Retrieved from Sport 24:
<http://www.sport24.co.za/OtherSport/South-Africa/SASCOC-see-R100m-for-Olympics-20150405>
- SRSA. (2015a). *Sport and Recreation South Africa: Annual performance plan 2015/16*. Pretoria: Sport and Recreation South Africa. Retrieved from
<http://www.srsa.gov.za/pebble.asp?relid=2367>
- SRSA. (2015b). *Sport and Recreation South Africa: 2015-2020 Strategic Plan*. Pretoria: Sport and Recreation South Africa. Retrieved from
<http://www.srsa.gov.za/pebble.asp?relid=2368>
- "Total population sampling". (n.d.). *total-population-sampling*. Retrieved from
<http://dissertation.laerd.com/>: <http://dissertation.laerd.com/total-population-sampling.php#what>

- Vaczi, J., & Berkes, P. (2010). Integrating Communication and Marketing Efforts to Influence Governmental Sport Funding: An Analysis of an Innovative Sport-Financing Program in Hungary. *International Journal of Sport Communication*, 3(1), 12-26. Retrieved from <http://0-web.a.ebscohost.com/innopac.up.ac.za/ehost/pdfviewer/pdfviewer?sid=4581695d-b0f8-4339-9be1-d7d9a9c6ae54%40sessionmgr4002&vid=7&hid=4114>
- van Hilvoorde, I., Elling, A., & Stokvis, R. (2010). How to influence national pride? The Olympic medal index as a unifying narrative. *International Review for the Sociology of Sport*, 45(1), 87-102. doi:10.1177/1012690209356989
- Winand, M., Zintz, T., Bayle, E., & Robinson, L. (2010, October). Organizational performance of Olympic sport governing bodies: dealing with measurement and priorities. *Managing Leisure*, 15, 279-307. doi:10.1080/13606719.2010.508672

Appendices

A. Financial Data

		Income				Programmes/Expenditure				NetProfit/(Loss)
		Var1	Var2	Var3	Var4	Var5	Var6	TotalExpenses		
		PublicIncome	PrivateIncome	TotalIncome	EliteSport	MassParticipation	Administration			
NOCSA	2001	1,300,000	16,217,528	17,517,528	22,900,149	-	9,238,181	32,138,330	-14,620,802	
NOCSA	2002	1,515,866	9,434,861	10,950,727	9,367,055	-	8,628,663	17,995,718	-7,044,991	
NOCSA	2003	3,652,061	29,434,729	33,086,790	14,243,175	-	15,978,164	30,221,339	2,865,451	
NOCSA	2004	3,967,477	22,798,577	26,766,054	15,713,349	-	20,448,033	36,161,382	-9,395,328	
		10,435,404	77,885,695	88,321,099	62,223,728	-	54,293,041	116,516,769	-28,195,670	
NOCSA	2005									
SASCOC	2006	32,937,895	5,007,709	37,945,604	29,625,356	-	13,927,316	43,552,672	-5,607,068	
SASCOC	2007	23,242,106	9,769,096	33,011,202	12,842,023	-	9,776,633	22,618,656	10,392,546	
SASCOC	2008	31,030,919	30,010,336	61,041,255	43,535,593	-	9,524,853	53,060,446	7,980,809	
		87,210,920	44,787,141	131,998,061	86,002,972	-	33,228,802	119,231,774	12,766,287	
SASCOC	2009	35,155,235	22,863,765	58,019,000	57,255,302	-	10,538,572	67,793,874	-9,774,874	
SASCOC	2010	48,445,538	13,665,874	62,111,412	32,602,319	-	14,824,584	47,426,903	14,684,509	
SASCOC	2011	60,021,530	22,917,480	82,939,010	70,594,447	-	18,522,290	89,116,737	-6,177,727	
SASCOC	2012	112,561,026	26,447,160	139,008,186	104,133,558	-	17,902,375	122,035,933	16,972,253	
		256,183,329	85,894,279	342,077,608	264,585,626	-	61,787,821	326,373,447	15,704,161	
		353,829,653	208,567,115	562,396,768	412,812,326	-	149,309,664	562,121,990	274,778	
	Year Games took place									

		Var1	Var2	Var3	Var4	Var5	Var6	TotalExpenses	NetProfit/(Loss)
		PublicIncome	PrivateIncome	TotalIncome	EliteSport	MassParticipation	Administration		
		NOCSA	1999	1,150,000	17,032,517	18,182,517	6,901,515		
NOCSA	2000	1,000,000	16,069,820	17,069,820	9,900,902	-	5,855,776	15,756,678	1,313,142
NOCSA	2001	1,300,000	16,217,528	17,517,528	22,900,149	-	9,238,181	32,138,330	-14,620,802
NOCSA	2002	1,515,866	9,434,861	10,950,727	9,367,055	-	8,628,663	17,995,718	-7,044,991
		4,965,866	58,754,726	63,720,592	49,069,621	-	29,104,051	78,173,672	-14,453,080
NOCSA	2003	3,652,061	29,434,729	33,086,790	14,243,175	-	15,978,164	30,221,339	2,865,451
NOCSA	2004	3,967,477	22,798,577	26,766,054	15,713,349	-	20,448,033	36,161,382	-9,395,328
NOCSA	2005								
SASCOC	2006	32,937,895	5,007,709	37,945,604	29,625,356	-	13,927,316	43,552,672	-5,607,068
		40,557,433	57,241,015	97,798,448	59,581,880	-	50,353,513	109,935,393	-12,136,945
SASCOC	2007	23,242,106	9,769,096	33,011,202	12,842,023	-	9,776,633	22,618,656	10,392,546
SASCOC	2008	31,030,919	30,010,336	61,041,255	43,535,593	-	9,524,853	53,060,446	7,980,809
SASCOC	2009	35,155,235	22,863,765	58,019,000	57,255,302	-	10,538,572	67,793,874	-9,774,874
SASCOC	2010	48,445,538	13,665,874	62,111,412	32,602,319	-	14,824,584	47,426,903	14,684,509
		137,873,798	76,309,071	214,182,869	146,235,237	-	44,664,642	190,899,879	23,282,990
SASCOC	2011	60,021,530	22,917,480	82,939,010	70,594,447	-	18,522,290	89,116,737	-6,177,727
SASCOC	2012	112,561,026	26,447,160	139,008,186	104,133,558	-	17,902,375	122,035,933	16,972,253
SASCOC	2013	105,867,605	51,623,960	157,491,565	138,328,747	-	21,164,927	159,493,674	-2,002,109
SASCOC	2014	111,377,001	18,566,739	129,943,740	99,095,706	-	21,450,619	120,546,325	9,397,415
		389,827,162	119,555,339	509,382,501	412,152,458	-	79,040,211	491,192,669	18,189,832
		573,224,259	311,860,151	885,084,410	667,039,196	-	203,162,417	870,201,613	14,882,797
	Year Games took place								

		Income			Programmes/Expenditure				
		Var1	Var2	Var3	Var4	Var5	Var6		
		PublicIncome	PrivateIncome	TotalIncome	EliteSport	MassParticipation	Administration	TotalExpenses	NetProfit/(Loss)
NSF1	1999	91,000	1,744,832	1,835,832	512,874	40,616	1,282,568	1,836,058	-226
NSF1	2000	128,000	1,364,786	1,492,786	244,514	40,000	1,130,647	1,415,161	77,625
NSF1	2001	70,000	1,307,501	1,377,501	1,220,101	-	1,136,148	2,356,249	-978,748
NSF1	2002	100,000	1,628,950	1,728,950	280,257	-	1,078,789	1,359,046	369,904
		389,000	6,046,069	6,435,069	2,257,746	80,616	4,628,152	6,966,514	-531,445
NSF1	2003	252,128	2,329,175	2,581,303	723,512	70,000	1,718,887	2,512,399	68,904
NSF1	2004	391,373	2,368,569	2,759,942	685,718	8,345	1,813,996	2,508,059	251,883
NSF1	2005	468,630	2,435,092	2,903,722	529,137	156,748	1,741,129	2,427,014	476,708
NSF1	2006	1,052,973	2,233,658	3,286,631	676,960	225,170	2,027,207	2,929,337	357,294
		2,165,104	9,366,494	11,531,598	2,615,327	460,263	7,301,219	10,376,809	1,154,789
NSF1	2007	1,564,006	2,467,621	4,031,627	770,791	43,445	2,919,824	3,734,060	297,567
NSF1	2008	1,115,718	2,609,544	3,725,262	749,879	4,555	2,719,638	3,474,072	251,190
NSF1	2009	1,206,958	3,045,439	4,252,397	923,510	480	3,070,692	3,994,682	257,715
NSF1	2010	2,439,680	3,284,963	5,724,643	616,272	267,138	4,491,543	5,374,953	349,690
		6,326,362	11,407,567	17,733,929	3,060,452	315,618	13,201,697	16,577,767	1,156,162
NSF1	2011	1,753,130	3,259,072	5,012,202	625,781	749,505	3,429,644	4,804,930	207,272
NSF1	2012	2,016,188	3,265,937	5,282,125	860,344	1,007,956	3,173,137	5,041,437	240,688
NSF1	2013	1,000,000	3,373,873	4,373,873	802,374	1,059,672	2,244,703	4,106,749	267,124
NSF1	2014	1,000,000	3,768,935	4,768,935	953,206	800,000	2,731,242	4,484,448	284,487
		5,769,318	13,667,817	19,437,135	3,241,705	3,617,133	11,578,726	18,437,564	999,571
		14,649,784	40,487,947	55,137,731	11,175,230	4,473,630	36,709,794	52,358,654	2,779,077
	Year Games took place								

		Income			Programmes/Expenditure				
		Var1	Var2	Var3	Var4	Var5	Var6		
		PublicIncome	PrivateIncome	TotalIncome	EliteSport	MassParticipation	Administration	TotalExpenses	NetProfit/(Loss)
NSF2	1999	218,282	479,783	698,065	43,432	63,776	542,030	649,238	48,827
NSF2	2000	273,021	818,305	1,091,326	189,954	118,410	532,336	840,700	250,626
NSF2	2001	750,915	1,143,255	1,894,170	562,474	266,149	912,551	1,741,174	152,996
NSF2	2002	646,086	1,201,590	1,847,676	739,202	84,896	934,814	1,758,912	88,764
		1,888,304	3,642,933	5,531,237	1,535,062	533,231	2,921,731	4,990,024	541,213
NSF2	2003	4,677,631	1,449,755	6,127,386	1,036,445	128,679	1,990,416	3,155,540	2,971,846
NSF2	2004	2,165,940	1,392,803	3,558,743	1,825,028	426,575	1,921,271	4,172,874	-614,131
NSF2	2005	2,171,046	1,643,441	3,814,487	910,278	456,193	2,650,105	4,016,576	-202,089
NSF2	2006	2,825,422	1,952,602	4,778,024	1,607,165	894,028	2,932,525	5,433,718	-655,694
		11,840,039	6,438,601	18,278,640	5,378,916	1,905,475	9,494,317	16,778,708	1,499,932
NSF2	2007	4,827,690	2,361,029	7,188,719	3,451,922	581,506	3,156,192	7,189,620	-901
NSF2	2008	2,230,218	3,999,965	6,230,183	2,570,219	19,383	3,901,194	6,490,796	-260,613
NSF2	2009	2,734,928	4,152,598	6,887,526	2,161,460	586,266	4,240,167	6,987,893	-100,367
NSF2	2010	4,298,585	4,123,915	8,422,500	2,322,987	1,242,495	6,384,642	9,950,124	-1,527,624
		14,091,421	14,637,507	28,728,928	10,506,588	2,429,650	17,682,195	30,618,433	-1,889,505
NSF2	2011	5,174,553	6,636,883	11,811,436	866,615	1,222,463	7,913,059	10,002,137	1,809,299
NSF2	2012	5,107,938	3,253,217	8,361,155	2,399,869	646,552	5,180,172	8,226,593	134,562
NSF2	2013	4,342,806	2,621,434	6,964,240	2,260,726	59,803	4,722,095	7,042,624	-78,384
NSF2	2014	4,451,279	3,955,679	8,406,958	2,661,445	-	6,852,372	9,513,817	-1,106,859
		19,076,576	16,467,213	35,543,789	8,188,655	1,928,818	24,667,698	34,785,171	758,618
		46,896,340	41,186,254	88,082,594	25,609,221	6,797,174	54,765,941	87,172,336	910,258
	Year Games took place								

		Income			Programmes/Expenditure				
		Var1	Var2	Var3	Var4	Var5	Var6		
		PublicIncome	PrivateIncome	TotalIncome	EliteSport	MassParticipation	Administration	TotalExpenses	NetProfit/(Loss)
NSF3	2001	558,401	659,699.14	1,218,100	569,294	83,093	428,216.24	1,080,603	137,497
NSF3	2002	619,035	731,333.51	1,350,369	702,533	102,541	528,438	1,333,512	16,857
NSF3	2003	1,048,940	1,083,736	2,132,676	1,013,056	78,000	1,089,741	2,180,797	-48,121
NSF3	2004	1,542,500	1,977,817	3,520,317	2,058,928	370,382	1,220,971	3,650,281	-129,964
		3,768,876	4,452,586	8,221,462	4,343,811	634,016	3,267,366	8,245,193	-23,731
NSF3	2005	1,548,483	1,501,197	3,049,680	1,233,708	65,000	1,681,901	2,980,609	69,071
NSF3	2006	4,914,765	1,333,067	6,247,832	2,713,942	-	3,361,977	6,075,919	171,913
NSF3	2007	5,469,388	2,112,849	7,582,237	2,716,352	-	5,507,177	8,223,529	-641,292
NSF3	2008	5,015,101	1,462,344	6,477,445	2,117,586	-	6,060,132	8,177,718	-1,700,273
		16,947,737	6,409,457	23,357,194	8,781,588	65,000	16,611,187	25,457,775	-2,100,581
NSF3	2009	4,568,716	1,400,714	5,969,430	1,402,072	70,230	2,800,511	4,272,813	1,696,617
NSF3	2010	5,703,997	1,529,678	7,233,675	1,945,858	22,982	2,014,459	3,983,299	3,250,376
NSF3	2011	5,869,293	330,210	6,199,503	2,609,508	30,820	2,701,506	5,341,835	857,668
NSF3	2012	3,300,834	258,620	3,559,454	3,260,254	38,506	3,375,193	6,673,953	-3,114,499
		19,442,840	3,519,222	22,962,062	9,217,692	162,538	10,891,670	20,271,900	2,690,162
		40,159,453	14,381,265	54,540,718	22,343,091	861,554	30,770,223	53,974,868	565,850
	Year Games took place								

		Income			Programmes/Expenditure				
		Var1	Var2	Var3	Var4	Var5	Var6		
		PublicIncome	PrivateIncome	TotalIncome	EliteSport	MassParticipation	Administration	TotalExpenses	NetProfit/(Loss)
NSF4	2003	1,727,610	2,789,538	4,517,148	3,130,376	310,000	789,028	4,229,404	287,744
NSF4	2004	2,277,356	4,869,794	7,147,150	5,019,203	450,000	1,430,037	6,899,240	247,910
NSF4	2005	5,163,122	3,657,459	8,820,581	5,416,439	1,351,860	874,335	7,642,634	1,177,947
NSF4	2006	7,190,498	3,410,771	10,601,269	7,054,915	1,634,892	1,389,149	10,078,956	522,313
		16,358,586	14,727,562	31,086,148	20,620,933	3,746,752	4,482,549	28,850,234	2,235,914
NSF4	2007	8,389,135	12,615,128	21,004,263	12,879,690	1,027,995	3,558,113	17,465,798	3,538,465
NSF4	2008	3,548,137	12,040,925	15,589,062	11,219,069	733,982	4,087,668	16,040,719	-451,657
NSF4	2009	4,323,838	10,369,669	14,693,507	12,441,751	360,000	4,966,261	17,768,012	-3,074,505
NSF4	2010	6,560,666	6,775,010	13,335,676	9,427,905	500,000	3,029,145	12,957,050	378,626
		22,821,776	41,800,732	64,622,508	45,968,415	2,621,977	15,641,187	64,231,579	390,929
NSF4	2011	7,863,716	9,924,732	17,788,448	10,638,366	750,510	2,720,108	14,108,984	3,679,464
NSF4	2012	2,975,156	15,064,399	18,039,555	17,965,036	560,000	3,161,760	21,686,796	-3,647,241
NSF4	2013	1,608,232	7,260,255	8,868,487	6,417,484	280,000	3,168,943	9,866,427	-997,940
NSF4	2014	7,515,550	14,546,627	22,062,177	13,715,555	738,000	3,684,763	18,138,318	3,923,859
		19,962,654	46,796,013	66,758,667	48,736,441	2,328,510	12,735,574	63,800,525	2,958,142
		59,143,016	103,324,307	162,467,323	115,325,789	8,697,239	32,859,310	156,882,338	5,584,985
	Year Games took place								

		Income			Programmes/Expenditure				
		Var1	Var2	Var3	Var4	Var5	Var6		
		PublicIncome	PrivateIncome	TotalIncome	EliteSport	MassParticipation	Administration	TotalExpenses	NetProfit/(Loss)
NSF5	2001	261,773	623,490	885,263	316,834	2,979	347,454	667,267	217,997
NSF5	2002	402,188	672,852	1,075,040	447,542	8,300	429,547	885,389	189,651
NSF5	2003	617,920	726,122	1,344,042	632,172	23,130	531,036	1,186,337	157,705
NSF5	2004	949,372	783,609	1,732,981	892,970	64,451	656,504	1,613,925	119,056
		2,231,253	2,806,074	5,037,327	2,289,517	98,860	1,964,542	4,352,919	684,408
NSF5	2005	1,073,800	863,645	1,937,445	861,563	93,686	950,611	1,905,860	31,585
NSF5	2006	2,876,000	793,276	3,669,276	2,302,193	810,724	535,133	3,648,050	21,226
NSF5	2007	1,384,000	1,239,072	2,623,072	2,526,981	550,094	283,866	3,360,941	-737,869
NSF5	2008	2,342,416	1,112,534	3,454,950	2,396,897	42,600	587,363	3,026,860	428,090
		7,676,216	4,008,527	11,684,743	8,087,634	1,497,104	2,356,973	11,941,711	-256,968
NSF5	2009	1,981,693	1,195,956	3,177,649	2,177,508	67,600	892,139	3,137,247	40,402
NSF5	2010	6,144,615	1,215,533	7,360,148	5,428,981	377,242	1,316,502	7,122,725	237,423
NSF5	2011	9,784,919	1,219,805	11,004,724	8,019,104	1,276,865	1,646,764	10,942,733	61,991
NSF5	2012	7,523,940	1,290,540	8,814,480	5,921,888	1,119,698	1,703,079	8,744,665	69,815
		25,435,167	4,921,834	30,357,001	21,547,481	2,841,405	5,558,484	29,947,370	409,631
		35,342,636	11,736,435	47,079,071	31,924,632	4,437,369	9,879,999	46,242,000	837,071
	Year Games took place								

B. Interview Guideline

Name:

Date:

Position:

Years in position:

Contact number:

Introduction:

Thank you for your time

Anonymous and confidential

6 Federations participating

Background:

Study to explore the relationship between the following variables and the performance of the National Sports Federation at either the Olympic Games or Commonwealth Games

1. **Public Funding:** Government Grants, Lotto etc.
2. **Private Funding:** The res
3. **Elite Sport Expenditure:**
4. **Mass participation/ Development expenses:**
5. **Administration**

Questions:

Research Question 1

The literature review suggests that an increase in total operating budget could potentially lead to an increase in performance. NSFs with larger operating budgets have the capacity to provide athletes with better training, equipment and financial support which provides the platform for better performance.

Response:

Research Question 2

The literature review suggests that an increase in public funding could potentially lead to an increase in performance if applied correctly.

Response:

Research Question 3

The literature review suggests that national sport teams with a focus on elite sport investments and high performance programmes perform better at international competitions, compared to those who invests in grassroots development and mass participation.

Response:

Any other factors that affects the performance of the NSFs?

Recommendations to improve current funding model?

C. Turnitin Report

D. Ethical Clearance

Submissions - Windows Internet Explorer

https://up.iims.ac.za/ComplianceNET/UI/De/Submissions.aspx?Projid=390E1D63-CCAE-48E6-BD73-0F2161430436&ObjectType=01

The relationship between the funding models and performance of national sports teams affiliated to the South African Sports Confederation and Olympic Committee
 Wessel WJ Strydom - Gordon Institute of Business Science

Protocol Temp2015-01297

- Submissions (2)
 - Initial Application (2)**
 - Adverse Event (0)
 - Final Report (0)
 - Administrative Action (0)
 - Response to Deferral (0)
 - Progress Report (0)
 - Amendment (0)
 - Documentation (0)
 - Communications (2)

Submissions			
Type	Investigator Submitted On Date	Status	Approved From
Initial Application	26-Jun-2015	Conditional Approval	06-Jul-2015
Response To Conditional Approval	14-Aug-2015	Approved	24-Aug-2015