

A Resource-Based
View of Elite Kenyan
Running Successes



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A Resource-Based View of Elite Kenyan Running Successes

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Abstract

Aims: In general, the aim of the study was to explain Kenya's endurance running successes from 1978 to 2009. Specifically, the study focused on: (a) evaluating the impact of the 1990 Kenya Government's liberalization policy on Kenya's endurance running successes and (b) investigates the correlation between the stock of its endurance running resources and the nation's endurance running successes.

Methods: The setting of the study was Kenya-a globally dominant force in endurance running events. The study used a repeated measures design with quantitative analysis of multiple archival data sources. The data was then analysed by using nonparametric statistical techniques such as Kendal Tau, Friedman Test and Wilcoxon Test. The study used dedicated statistical software such as PASW[®] statistic 18, SAS[®], JMP[®] start statistics and GPower[®].

Findings: The 1990 Kenya Government's liberalization policy had a positive and significant impact on both endurance running resources and endurance running successes. Of the three resources, the greatest contributor to Kenya's endurance running successes was organizational resources when contrasted with endurance running human and endurance running physical resources.

Conclusions: This research underscores the relevance of policy efforts aimed at improving elite sports through resource targets. Moreover, it highlights the need to develop multi-level policy approaches that address specific weaknesses that a relatively poor nation like Kenya may face. The results are consistent with many studies which demonstrate that resources are paramount to improved performance-both in business and elite sports.

Keywords: Competitive advantage, Liberalization policy, Human resources, Organizational resources, Physical resources and Resource-Based View, Sustainable competitive advantage.

STUDENT DECLARATION

I, Peter Omondi Ochieng, declare that the PhD thesis entitled “*A resource-based view of Kenyan running successes*” is no more than 100,000 words exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signature: Date

November 4th, 2010

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CHAPTER 1

INTRODUCTION

Kenya is one of the best known nations in Africa, and has many claims to fame. It is believed to be the place where modern humans originated, it has some the most spectacular wildlife reserves in the world, and it produces many exotic strains of tea and coffee. It was a British colony until 1964, at which time it claimed independence and subsequently became a democratic state. Its immediate neighbours are Somalia, Ethiopia, Sudan, Uganda and Tanzania. The country's overall population is around 35 million and Nairobi, the capital city, accommodates over 3 million people. It has many modern features, and attracts nearly 1.5 million foreign tourists a year (IMF, 2010; UNDP, 2010, WB, 2010).

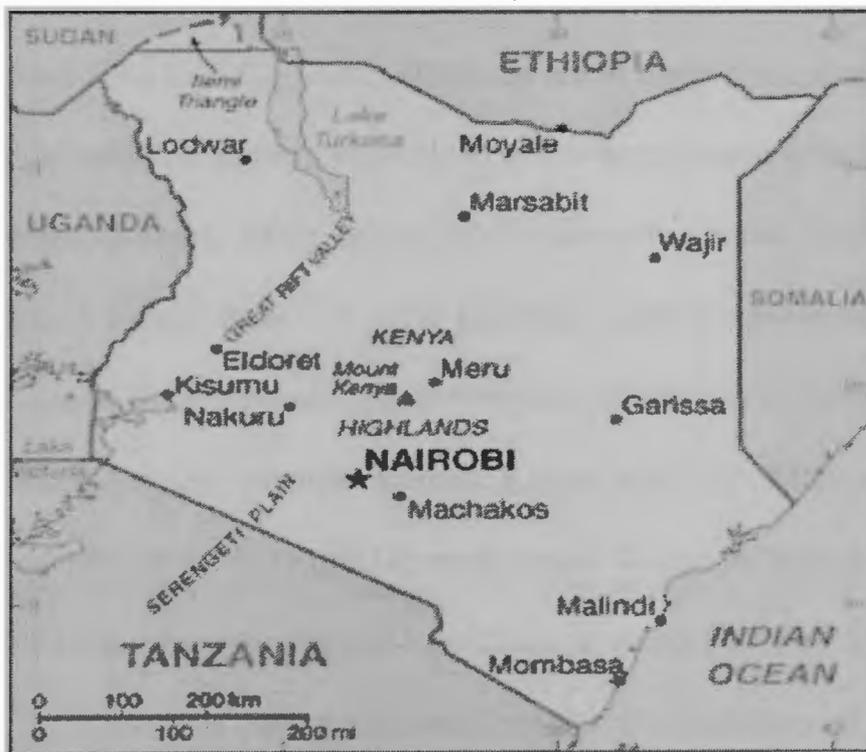


Figure 1.1: The map of Kenya

Kenya is also well known for its participation in various international sporting events such as the Olympic Games and IAAF World Championships. Where endurance running is

concerned, Kenya is referred to as the “powerhouse” of middle and long distance running (Entine, 2000) – since no country matches the rate at which it produces world class runners (Wirz, 2006). One popular sport journalist described this best by saying:

“Never in one single sport has one country dominated the way Kenya has, and does, in distance running” (Tanser, 2008, p.x).

Kenya’s endurance running dominance is multi-faceted. Its athletes hold the African record in 800m, world youth best performance in 1,500m, world junior record in 1mile race, 3,000m steeplechase, and 5,000m junior record. The nation currently holds more than half of the best race-times at 5,000 and 10,000 meters, as well as the best 60 race-times in 3,000-meter steeplechase. It also won the World Cross-Country Championships overall title every year from 1986 to 2003 (IAAF, 2010). At ten of those championships, Kenya’s dominance was so profound that its team was able to beat a team chosen from the best finishers of the rest of the world (Larsen, 2007). At the Commonwealth Games, Kenya holds performance records in men’s 1 mile, 3 mile, 6 mile, 10,000m, 3,000m steeplechase and 5,000m events, while the Kenyan women possess similar records in both the 10,000m and 1,500m races (CGF, 2008). Finally, at the Olympic Games, Kenya holds the 1,500m men, and 3,000m steeplechase records. Of the sixty one Olympic medals Kenya secured from 1964 to 2004, 50 out of 61 or 82% were from middle and long distance events (IOC, 2010).

Despite these outstanding results, the backdrop of this success is equally complex. Kenya is defined as a developing nation (WB, 2008), its GDP per capita/head is less than US\$900, and it has a high rate of infant deaths as a result of the heavy incidence of malaria and cholera. Kenya also has a low life expectancy of 45 years (UNDP, 2008), with a majority (60%) of the inhabitants regularly faced with poverty, disease and desperation while living

below US\$2.00 per day (IMF, 2008). Amidst all these barriers, Kenya's performance in endurance running continues to get better. Furthermore, a number of studies demonstrate a significant correlation between national wealth and elite sporting successes (Tcha & Perchin, 2003; Morton, 2002). One such study for example, suggests that the wealthy western nations dominate both world championships and Olympic Games events. Also, nations with large populations – which provide a large supply of talent reserves such as USA and China, gain significant competitive advantages (Hoffmann et al., 2002b; John & Ali, 2002). Why then, has Kenya, with a relatively small population (compared to USA) with a poor economy (compared to Germany) been able to dominate these nations in endurance running events? How can these successes be explained in the light of all the many disadvantages that Kenya has to deal with?

In the last decade several studies have been conducted to explain the possible reasons for the Kenyan successes in endurance running. Notable theoretical explanations have cited: (a) diet (Fudge et al., 2006; Onywera et al., 2004; Christensen et al., 2002; Mukeshi & Thauru, 1993), (b) physiological advantages such as oxygen uptake, genetics and muscular capillarization (Scott et al., 2005a ; Saltin et al., 1995b), (c) biomechanical advantages such as suitable muscle types for endurance running, efficient plasma lactate and running economy (Larsen, 2007; Larsen et al., 2005; Saltin et al., 1995a), (d) high altitude adaptation (Scott et al., 2007; Moore et al., 2007; Onywera et al., 2006; Schmidt et al., 2002), (e) psychological advantages such as mental toughness (Baker & Horton, 2003; Hamilton, 2000; Hamilton & Watson, 2000), and (f) socio-cultural advantages such as way of life and traditional life practices (Manners, 2007; Bale; 2007; Mayes, 2005).

These studies have mostly used micro level of analysis based on biomechanical, physiological, psychological and socio-cultural approaches to explain the Kenyan successes. However, these studies however failed to consider a number of macro factors that had been in

operation around the same time. Kenya's sports delivery system was mainly controlled by the central government from 1964-1989. In 1990, the government introduced a liberalizing policy by withdrawing from the direct and daily governance and control of all sports governing bodies (Wirz, 2006). This marked the genesis of privatized sports with a professionalized model where endurance running at the international sporting competitions became the main focus. The impact of the 1990 Kenya Government's liberalization policy has never been included in empirical studies explaining Kenya's running success before. This study not only includes this 'missing link'-the 1990 Kenya Government's liberalization policy, and explains its impact on Kenya's endurance running successes from a managerial standpoint using the Resource-Based View as the main theoretical base. The main focus of this study therefore, was - for the first time - to examine how the Kenyan Government's 1990 liberalization policy impacted Kenyan endurance running success. The analysis was undertaken within a conceptual frame supported by of the Resource-Based View (RBV) of strategic management.

Research Aims

The aims of the research were:

- a) To evaluate the impact of the Kenyan Government's 1990 liberalization policy on the nation's athlete development infrastructure and, more specifically, its endurance running resources, where these resources can be categorized as human, organizational and physical.
- b) To investigate the correlation between the stocks of Kenya's endurance running resources and the nation's endurance running successes.

Hypotheses

Guided by the research aims, the following eight research hypotheses were addressed.

- H₁*: The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running human resources.
- H₂*: The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running organizational resources.
- H₃*: The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running physical resources.
- H₄*: The 1990 Kenya Government's liberalization policy had a positive impact on the stock of marathon running successes.
- H₅*: There is a high correlation between Kenya's stock of endurance running human resources and marathon running successes.
- H₆*: There is a high correlation between Kenya's stock of endurance running organizational resources and marathon running successes.
- H₇*: There is a high correlation between Kenya's stock of endurance running physical resources and marathon running successes.
- H₈*: The stock of the three endurance running resources had a positive effect on Kenya's marathon running successes.

Assumptions

The study was guided by the following three assumptions which flow from the RBV strategic management theory:

- a) Sports interest, ability and success rarely develop in a vacuum; they evolve as a function of opportunity, training, commitment and experience (Colvin, 2008; Ericsson, 2006; Starkes & Ericsson, 2003; Carron et al., 2002).
- b) With a sound financial base, individual player, teams and nations are more likely to accumulate competitive human, physical and organizational resources for enhanced elite sport performance (Fletcher, 2006; Gerrard, 2005; Ivey, 2004; Won, 2004; Rosaaen, 2002; Smart & Wolf 2000; Poppo & Weigelt, 2000).
- c) With the combination of the first and second assumptions, only policies that are (i) strategically planned and (ii) resource supported, are most likely to lead to success in elite sports competitions (Santo & Mildner, 2010; De Bosscher, 2008; Houlihan & Green, 2008; Stewart et al., 2004).

Conceptual Framework

Building on the strategic management theory and sports policy research, the researcher developed and proposed a model which posits that resources which were accumulated as a result of the 1990 Kenya Government's liberalization policy may explain Kenya's endurance running successes (Figure 1.2). The RBV strategy theory was used to explore the possible link between the 1990 policy shift, the accumulation of endurance running resources, and Kenya's endurance running successes. As such, this work represents an analysis of the relationship between resources acquisition and their use as a strategic tool for securing an additional competitive advantage, and building a platform for further success.

Of particular interest is the way these acquired endurance running resources were applied to enhance Kenya's endurance running achievements. For a better understanding of the analytical and theoretical framework, the conceptual model illustrated below was used.

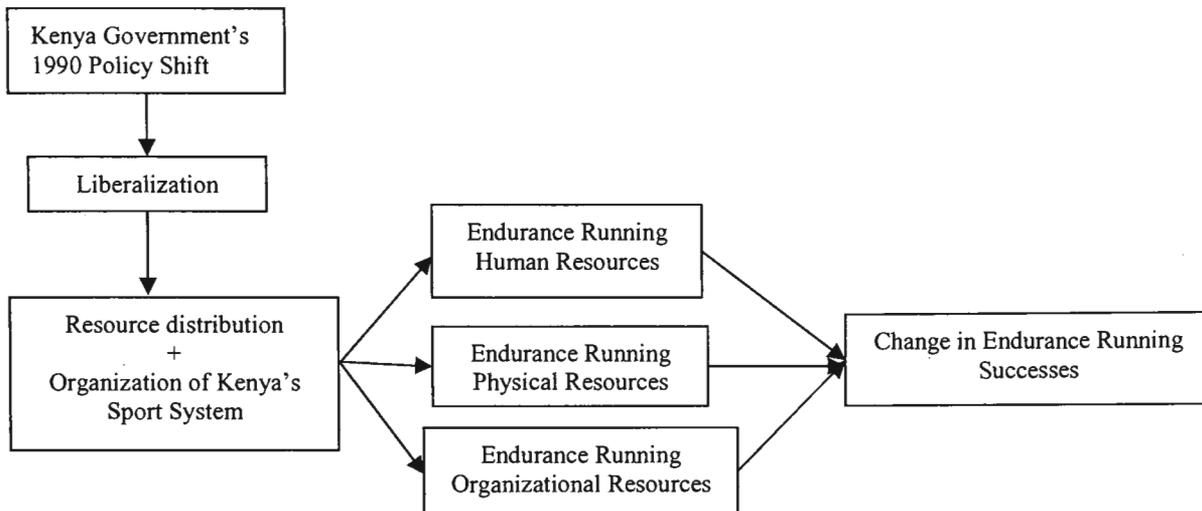


Figure 1.2: Proposed model of policy impact on resources and successes

It provides a schematic overview of the human, organizational and physical variables to be studied, the relationship between the variables, and the pivotal place of the resources to support Kenya's endurance running program. It should also be noted that the endurance running resources, comprising human, organizational, and physical, necessarily overlap. For instance adequate financial resources may positively influence the building of running camps, hiring of top runners and sport agents as well as developing the required organizational skills.

Research Methodology

The study used quantitative analysis based on archival data. The setting of the study was Kenya-a globally dominant force in endurance running events. Data was collected before-liberalization (1978-1993) and after-liberalization (1994-2009) with a total sample size of 32. The data was then analysed using nonparametric procedures such as Kendall Tau,

Wilcoxon and Friedman's tests to predict the value of endurance running resources and evaluate the impacts of the policy shift.

Dissertation Plan and Structure

For enhanced flow, and the logical sequencing of arguments and analysis, the dissertation was planned thus: Chapter 2 explores various theoretical explanations on Kenya's endurance running successes. For over a decade the explanations for Kenyan endurance running successes have been awash with rumours, whispers, and innuendos. This chapter seeks to analyse the strengths and weaknesses of past explanations of Kenyan endurance running successes while offering plausible alternatives. Chapter 3 is the theoretical core of the study. It not only compares and contrasts alternative views of Kenya's endurance running success; it also proposes the Resource-Based View (RBV) as a strong and viable substitute explanation of Kenya's endurance running successes. This chapter also discusses the three categories of resources applied to this study, and how they related to Kenya's endurance running in general and elite marathon running in particular. Chapter 4 represents the methodological procedures with explanations of data sources, research constructs and analytical techniques. Chapter 5 deals with reporting the results, with the aim of isolating significant outcomes. Chapter 6 is the centre-piece of the discussion and synthesis of the results, which attempts to evaluate whether Kenya's endurance running resources were a source of their sustainable competitive advantage. Chapter 6 concludes by expounding on the contribution it makes to the field and implications of the study for further research into the area of endurance running success.

Delimitations

The study was delimited to an investigation of Kenya's successes in endurance running with special reference to selected marathon events-namely Berlin, Boston, Chicago, New York and Stockholm. The study did not address the negative effects of the 1990 Kenya Government's liberalization impact on endurance running. Since it was possible that the impact of the 1990 Kenya Government's liberalization policy (which had a deregulation and a decentralization component) on endurance running resources and endurance running successes may not directly apply to other nations, the results of the study may not be wholly generalizable to other nations with centralized sports delivery systems.

Summary

The preceding section provided an important direction for this thesis. It makes clear the aims of the study, the hypothesis, assumptions, conceptual frame, methodological choices and the entire dissertation structure.

CHAPTER 2

REVIEW OF LITERATURE

This chapter has four main sections: (a) Kenya's endurance running delivery system, (b) sports policies and international sporting successes, (c) the evaluation of the 1990 Kenya Government's policy shift, and (d) the past studies on Kenya's endurance running. This chapter focuses on the previous studies that have been conducted on the reasons for Kenya's endurance running successes. The section takes a critical view of psychological, physiological, high altitude, diet and lifestyle theories that have previously been used to explain Kenya's endurance running successes. It then addresses the weaknesses and drawbacks of the theories, and, lastly, a summary of the chapter is offered. This chapter also analyses the literature on Kenya's endurance running delivery system. It commences by discussing the sources of talent, and then moves on to summarize the body of literature pertaining to the same. Next it describes governing bodies and summarizes their evolution from a traditional model (government run) to a professional model (privately run).

Kenya's Endurance Running Delivery System

This section analyses the literature on Kenya's endurance running delivery system. It commences by discussing the sources of talent, and then moves on to summarize the body of literature pertaining to the same. Next it describes governing bodies and summarizes their evolution from a traditional model (government run) to a professional model (privately run).

Sources of Kenya's Endurance Running Talents

Kenya channels and derives her athletic talents from three main sources. Stage 1 comprises of primary and secondary schools. These are amateurs aspiring for fame and glory. Stages 2 are universities and government departments. These are also called semi-professionals for they have jobs and also run part-time. Stage 3 comprised the very best-professionals who dedicate 100-percent of their time to running. A closer look at each is next.

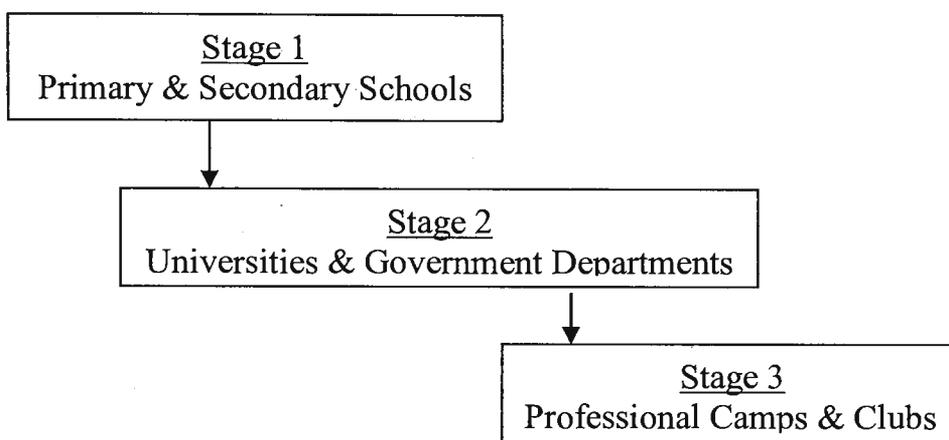


Figure 2.1: Sources of Kenyan Running Talents

Primary and Secondary Schools

Under the auspices of Kenya Schools Athletic Association–KSAA (founded in 1966) separate primary and secondary schools organize competitions in a hierarchical order starting from the lowest (sub-locations) to division, district, and provincial and national levels being the highest (MoE,2009). The table below demonstrated the number of competitions based on national administrative demarcations. A cautionary look at it demonstrates that the number of competitions is directly proportional the number of demarcations across time. It is the best that represent their provinces in the nationals and those are the few that are selected to join the camps, armed forces, or USA colleges.

Year	Provinces	Districts	Divisions	Locations	Sub-locations	Total
1965	8	41	154	567	2,410	3180
1975	8	41	154	567	2,410	3180
1980	8	41	184	618	3,111	3962
1985	8	41	184	618	3,111	3962
1990	8	41	260	1,099	3,553	4961
Total 1965-90	208	1066	4440	15784	71,956	93454
1995	8	41	260	1,099	3,553	4961
2000	8	69	497	2,427	6,612	9613
2005	8	69	497	2,427	6,612	9613
2006	8	69	497	2,427	6,612	9613
2007	8	254	497	2,427	6,612	9798
2008	8	254	497	2,427	6,612	9798
Total 1991-2008	144	1388	7050	33,062	94,544	136188

Table 2.1: Number of Competitions, 1965-2008

Note: Truncated data of the number of competitions every 5 years from 1965-2005 and then 2006-2008. Totals are cumulative.

The secondary schools are therefore the main source of junior athletes who represent the nation in World Junior Championships. The most prolific high schools include; St. Patrick's Boys High School, Kapkenda Girls High School, Kipsoan and Singore Girls and Kapkenda Girls. The first four are boarding schools contrary to the popular belief that walking and running to school applies to all students. It is important to note that the schools were very pivotal point for nurturing the young talent for international competitions especially when in 1986 IAAF introduced the World Junior Championships. This helped refocus and revive school athletics that had been facing myriad human, physical constraints from Ministry of Education Budgetary cuts. The secondary schools therefore, were an important talent tapping points for the following reasons:

Firstly, because it was the only place a young runner (below 18 years) could get encouragement. Esther Kiplagat (the 1992 3rd finisher at the Paris Marathon and earning US \$ 52,000 in 2001) stresses how difficult it was were it not for the school she attended:

“It was not easy, not easy, to be running back in those days. I don’t know how I survived! At school the support was there, but elsewhere? Forget it. You could be hearing some very negative things when you were trying, trying your hardest to be the best. I always wanted to be a runner, and I suppose that it gave me the strength to keep on persevering when it was the difficult times.”

In a gender biased society like Kenya, such kind of support could have been very important for the young girls dreaming and striving to be runners in such hostile environments. Moreover, because they were boarding and therefore away from home chores, the girls could focus and commit rigorous training commonly lasting for two one hour sessions per day such as at Singore Girls. Additionally, the double lure of a US scholarship or a lucrative professional running career may have softened the efforts. Secondly, the work ethic instilled in the Kenyan schools systems “...that you have to you have to work hard in life to get any chances or opportunities, and that if you are not diligent and hard working as a schoolchild your life will be unproductive and fruitless” (Tanser, 2008, p.52). Lastly, during the athletics season (May to July) participation was compulsory for both primary and secondary schools (Gordia, 1989).

The results are encouraging; the Kenya junior women have never failed to be at the podium and have won the World Team title 7 out of 8 years since the championship division was introduced. As of 2000 junior men had earned 10 individual cross country road racing wins in 1985, 1987-88, 1990, 1992-94, 1996-97, and 2000. They also held 12 team titles. The

junior women were equally impressive with 5 individual wins in 1991, 1993-94, 1997, and 2000. The women also captured 9 team wins.

USA Universities and Government Departments

Prior to 1990 government departments such as Kenya Power, Kenya Ports Authority and Kenya Postal Services etc had sports teams who competed annually against each other (Gordia, 1989). For example Tekla Lorupe and Joyce Chepchumba were Post office employees (Collings & Sykes, 2004). Masya (winner of the Honolulu marathon in 1991, 1992, and 1994) was also a Post Office worker. It is worth noting that as privatization of government assets gained pace after 1993, many of these departments cut down or completely discontinued offering sports in general and running in particular for their employees.

In regards to sports in USA universities and colleges, the USA, has been and continues to be the most popular destinations for talented student athletes (Hollander, 1980 & Bale & Sang, 1991). The USA universities were more special and attractive to Kenya student-runners for many reasons: One, the students could earn both money and education-a possibility which did not exist in Kenya. Two, the USA colleges had abundant human (coaches and trainers), physical (modern facilities) and organizational resource (exposure to both indoor and outdoor competitions year round) far much more suited for talent enhancement. To echo the organizational advantage, Manners, (1975, p.69) adds that: “young Kenyans on track and field in the United States gain immeasurably through competition with the best American runners. If they were at home they could stagnate through lack of competition”. This was more true, prior to 1990 as noted by Boit in Bale & Sang, (1994, p.213): “the fact that athletes from the developing countries generally have little chance to an organized training program and support system unless they are in the police or the military,

both which are unavailable to high school age students.” USA colleges approached sports training professionally with full backing of advanced resources relative to Kenya’s poor ones. Tekla points out that: “It was in America that I learned about coaching.” Nzau who went to University of Wyoming had this to say: “I came to know intervals, hill climbing, and how to train instead of just going out to run miles. These things I had never done in Kenya, never” (Tanser, 2008, p.67).

As the word of USA advantages spread all talented high school men and women wanted to join them! To date, over 1,000 Kenyan student-athletes have benefited from USA colleges. This was so because, on graduation, the secondary school graduates could have only two options; the best one was to join USA colleges and universities as: “There were no guarantees in sports. I mean, then, if you did not get a scholarship, you simply did not get out” (Valentini, 2003, p.123). The other alternative was to join the professional ranks-with the former being more common pre-1990 and the later increasingly becoming the first choice after the 1990 Kenya Government’s Liberalization. This second option was much harder for the juniors who were mostly too inexperienced. The table below shows the distribution of ‘scholarships’ awarded to student-athletes from 1971-78 (Hollander, 1980; Bale & Sang, 1991, p.212).

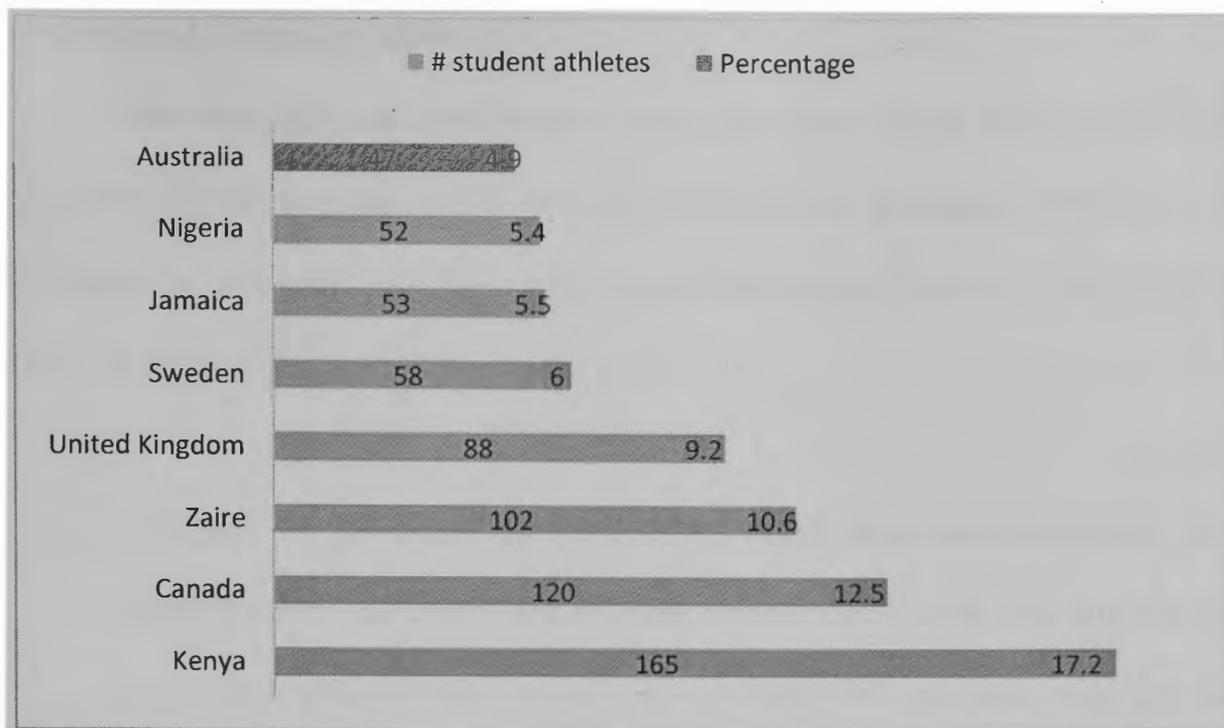


Table 2.2: Kenyan Students in NCAA Championships, 1971-78.

The notable concentrations of Kenyan students were Richmond, Iowa State, Washington State and University of Texas at El Paso (Bale & Sang, 1994). A review of the NCAA records reveal that Kenya supplies the distance runners, the Caribbean and West Africa the sprinters and Scandinavia the throwers (www.ncaa.com).

Nation	Number of students per event				
	Sprints	Distances	Jumps	Throws	Total
Gabon	8	0	9	3	20
Cameroon	0	0	0	11	11
Morocco	0	26	26	38	90
Senegal	44	0	26	9	79
Congo	11	3	3	0	17
Tunisia	0	48	23	24	95
Ivory Coast	30	0	9	20	59
Egypt	0	0	0	50	50
Kenya	41	249	119	94	503
Zimbabwe	17	28	0	12	57
Algeria	39	74	49	46	208
Tanzania	35	0	0	0	35
Total	225	428	264	307	1224

Source: Bale & Sang, 1994,p.218

Table 2.3: African student athletes in USA Universities

Professional Camps and Clubs

The Armed Forces comprise the Army, Air Force, Navy, Police, and Prisons-all of which have running camps at their bases scattered all over the nation. They play a major role in the talent production as they possess many advantages. Tanser (2008, p.121) sums the advantages thus:

“Imagine: on any given day, at least 30 world class training partners, food preparation for you daily, live-in-coaches and medical staff, high altitude, and a perfect running climate- for an eight-to-nine month span each year. Is it any wonder that Kenya is producing excellent results in the athletics world?”

A closer examination of the advantages may suffice. The excellence of Armed Forces camps may be attributed to the following five reasons: (a) From 1964-1990 Armed Forces had a monopolistic advantage on talent as they were the only places where talented runner could sharpen his/her skills prior to 1990 (Weiz, 2005; Kirk-Green,1987). Apart from USA scholarships, there were simply no other outlets until 1990 onwards when camps emerged (Bale & Sang, 2003).(b) Because sports was considered an essential part of overall fitness training programs, it developed a rich running tradition and so received extended attention and resources which were simply not available elsewhere in Kenya (Gordia, 1989; Mahlamann, 1987). In a land of endemic scarcity such as Kenya, the AF is one of the only camps that have regular full-time trained and experienced coaches making them more able to offer specialized training (Tanser, 2008). (c) The Armed Forces running camps operate on a strict “invitation only” policy where only dedicated, disciplined and obedient runners are tolerated. This strict military style culture has been cited as the reason for their success as depicted in the words of Coach Solomon Kaptoch: “Our runners are very serious, very

disciplined. Look around the camp, you will see everyone wants to do his or her best and no one is fooling around... I think we have a big advantage right there.” (Tanser, 2001, p.142).

(c) Furthermore, the concentrated number of runners creates a team advantage were mentorship, role modelling and free learning from one another instils success in junior runners. One legendry AF runner, Paul Tergat praises his military stint when he lamented: “it gave me a sense of pride. It gave me motivation...patient and Only as a team are you able to succeed...and that he had the opportunity to “train with the best” (Weiz, 2005, p. 37).

Furthermore, from an organizational perspective the Armed Forces also organizes and participates in a variety of competitions such as the annual Armed Forces Championships, World Military Games, as well as special races such as the Armed Forces Cross Country Championships. Three of the best known female runners, Catherine Ndereba, Edith Masai, and Margaret Okeyo belong to the Armed Forces prisons camp. Next is training camps.

Prior to 1990, there were simply no other running clubs apart from what the Armed Forces offered. After 1990, onwards some of the first private camps started appearing across the Rift Valley. Most of these camps are sponsored by shoe companies, foreigners/agents, and corporate entities such as Nike, Adidas, and Fila etc. The Athletics Kenya (AK) no longer has the power, all the power has been accumulated by the agents. AK carries out the selection for international championships and takes care of athletes on the spot and that all more or less (Wirz, 2006). The agents are the ones who decide together with the athletes and meet organizers where and when to run. For the first time in the running history of Kenya power was transformed from a top-down approach to a bottom-up approach. This power can best be grasped from the following quote from Wirz (2006, p. 44-45):

“The athlete’s agents are a stronger force these days. They are well aware of their importance. They are the ones who were establishing camps in the country and who are still spending a lot of money on developing young talents.”

There was clearly a managerial philosophical difference between AK and the agents. AK felt that because they were the national body, they “owned” the athletes who were as the first generation athletes place patriotism ahead of individuality. On the reverse, the agents and the athletes in particular strongly felt and believed that running was their profession and they had to utilize the opportunity as their running careers were very short. So it could not pay to run for the nation, camp for a month or two then compete. This was simply a waste of time and potential earning opportunity which if they chose to do, they demanded compensation. However, AK continues to insist that part of representing the nation is attending a mandatory national training camp. They suspended Noah Ngeny and Tegla Lorupe in 2001 from the World Championship national team for not joining the national training camp as a result of other European running commitments. It is worth noting that Kenyan athletes do not receive any monetary support from AK or the national sport authorities despite being the national governing body. The money an athlete earns she/he gets via the agent from appearance fees and prize money and commercial contracts if any.

The Governing of Kenya’s Endurance Running

Kenya Sports Delivery System (KSDS) is governed from a three layered top-down model (See figure 2.3 below). Upper level consists of Ministry of Sports and Youth Development (MSYA) and middle level has National Olympic Committee of Kenya (NOC-K) and Athletics Kenya (AK), with the last lower level having Local Federations (LFs) and

Kenya Colleges and Schools Sports Council (KCSSC). Kenya's Sports Development System (KSDS) is therefore mainly controlled by the central government with assistance from the Ministry of Sports Ministry and Youth Services (MSYS). The government regulates sports under its legislative, executive and judicial branches. The Kenyan government as compared to that of western nation such as Australia, Britain, and USA has greater control in sports. The minister, permanent secretary and the commissioner of sports are selected and earn their salaries from the government.

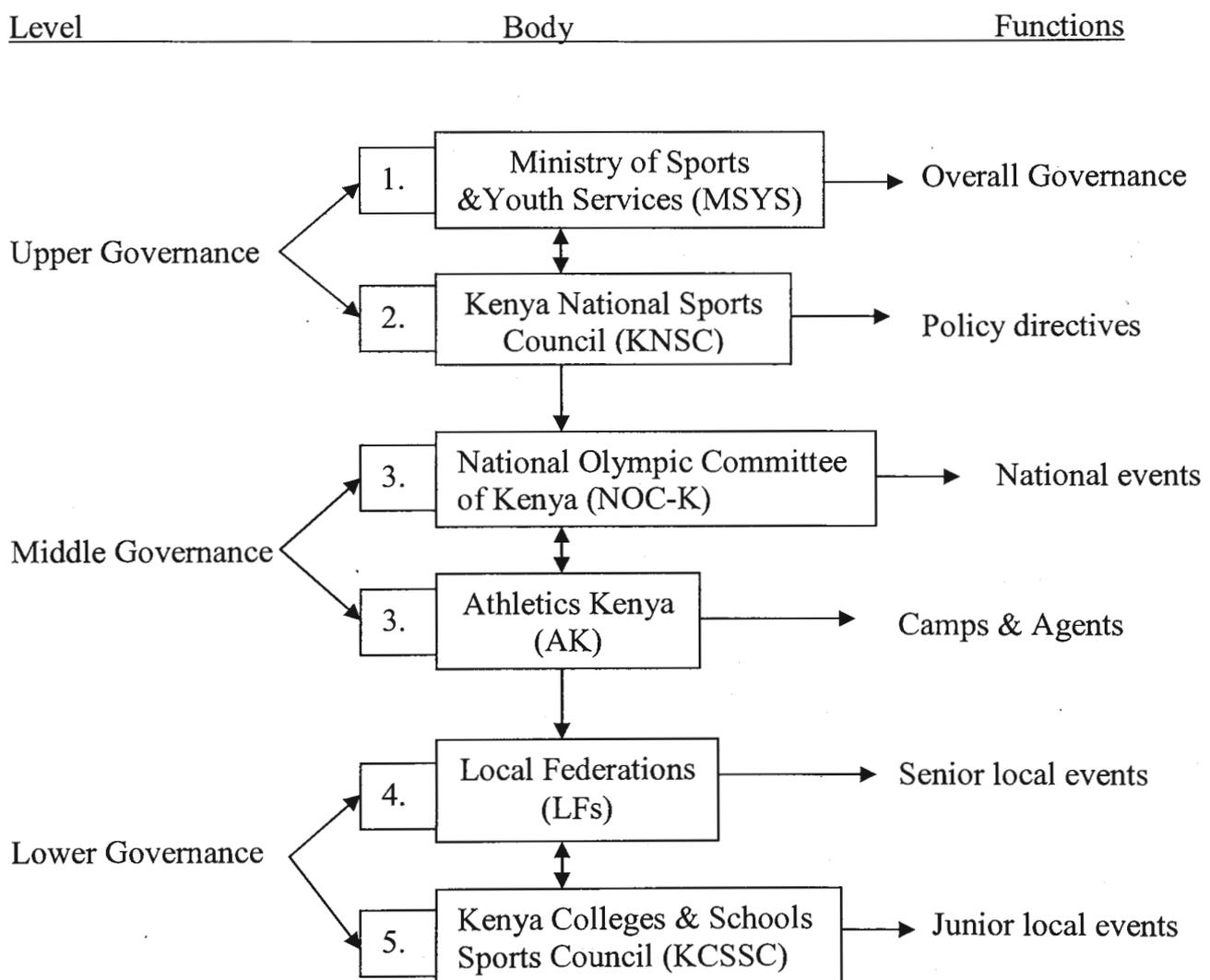


Figure 2.2: Governance of Kenyan Sports

Upper Governance

The upper level of governance consists of the Ministry of Sports and Youth Services (MSYS) and the Kenyan national Sports Council (KNSC).

Ministry of Sports and Youth Services

Ministry of Sports and Youth Services (MSYS) department was established through a presidential Decree in 1987 and came into being in 1988. The department is headed by a Sports Secretary and has Provincial Officers in each province and District Sports Officers in some districts (www.youthaffairs.go.ke). The MSYS was inaugurated in December 2005 and is responsible for the overall governance of sports in Kenya.

Kenya National Sports Council

The Kenya National Sports Council (KNSC) is the supreme sports body with all national sports associations affiliated to it. It is therefore the direct link between the Ministry of Sport and Youth Services channels its funds to the national associations (Godia, 1989). The ministry, therefore coordinates the development and administration, and financing of local sports associations. Furthermore the ministry also assist in developing facilities and offer advice and or management interventions when need arises. KNSC plays a complementary role as the associations are autonomous unless a particular association is experiencing management problems.

The objectives of KNSC are as follows:

1. To advice the government on sports and physical recreation.
2. To encourage, develop, and control of sport and physical recreation,
3. To plan the general policy in regard to sports and physical recreation.

4. To encourage and facilitate corporations concerned with sports and physical recreation locally and internationally
5. To coordinate international and national sports competitions, festivals, and tours and to advice on the use of national colours on such occasions
6. To assist local authorities with:
 - a) Training, staff and secretarial services
 - b) Grants-in-aid
 - c) Playing fields, equipment, and other facilities

Middle Governance

The middle governance consists of the National Olympic Committee of Kenya (NOC-K) and Athletics Kenya (AK).

National Olympic Committee of Kenya

The Kenya Olympic association (KOA) was formed in 1954. The name was changed to the National Olympic Committee of Kenya (NOC-K) in 1955 and recognized by IOC in the same year (Mallon & Buchanan, 2006). Previously headed by Samuel Mbogo, and then Charles Mukora who was latter expelled from IOC for accepting bribes for the bid committee of Salt Lake City Winterer Games. When asked about the allegation Mukora exonerates himself by lamenting: "If you accept that getting a watch or a gift is a bribe, then all of us were bribed" (Wirz, 2006, p.58) NOC-K is currently headed by Kip Keino- a former world record holder in distance running.

The objectives of NOC-K are as follows (Godia, 1989, p. 274).

1. To encourage interest in the Olympic Games by fostering the aims and ideals of Olympism and to ensure that Kenya is worthily represented at the Olympic Games.
2. To raise money by public appeals or otherwise for the furtherance of Olympic goals
3. To consult with other associations, institutions, or persons upon matters of common interest
4. To establish, guarantee, or administer any trusts for the furtherance of any of the objectives of the association and to hold and administer any property or funds subject to any such trusts.
5. To subscribe, guarantee, or lend money to any association or institution for the purpose of calculated to further the objectives of the association.

Athletics Kenya

Athletics Kenya (AK) was originally called Kenya Amateur Athletic Federation (KAAF). Established in 1951 AK is in charge of all athletics at the national and local level with a government mandate to do so. AK is also mandated to assist in the development of Kenyan athletics through financing, training, administration and team selection. For instance, John Hancock Financial Services (and a major sponsor of Boston Marathon) was reportedly granted Kshs. 1.2 million for the development of track and field (Bale & Sang, 1994). Irrespective of this important role, AK has been accused of being corrupt, money minded and not interested in the plight of athletes (Lukalo, 2006). The federation officials (such as the Chairman Isaiah Kiplagat) have been referred to as political appointees who have never been runners in their lives and can therefore not appreciate the struggle runners go through. Other runners share similar view, with Ondieki recommending that: "The officials should be thrown out" Another adding; "It is hard to fight a powerful organization, but we are trying and

putting our money into it. None of the runners racing in Europe have received had assistance from the federation. There is money coming in through sponsorship but nobody can see where it is being spent!"(Tanser, 2001, p.149).The favourite punitive method by AK is usually to exclude any athlete who criticizes them from the squad to prestigious international events such as Olympic Games and World Championships. Notable examples include Moses Tanui, Catherine Ndereba etc. The federation has training camps at Iten, Kapsabet, Kaptagat, Kapsoit, Nairobi, Eldoret and Ngong.

Lower Governance

The lower governance consists of Kenya Colleges and Schools Sports Council - (KCSSC) and Local Federations (LFs).

Kenya Colleges and Schools Sports Council

The Kenya Colleges and Schools Sports Council-KCSSC (formed in 1977) governs all sports in all educational institutions from primary, secondary schools, and teachers training colleges (Godia, 1989). Its roles include coordinating the movement of students across borders during international competitions and the promotion of sports in the educational institutions. KCSSC is further composed of 3 representatives from Kenya Primary Schools and Sports Association (KPSSA), the Kenya Secondary Schools Spots Association (KSSA), and the Kenya Colleges Sports Association (KCSA), together with sports ministry representatives, national inspector of physical education, physical education curriculum specialist, from the Kenya Institute of Education, one representative from KNSC, and up to five members appointed by the council. KCSSC is funding by the Ministry of Education, private firms, and KNSC.

The objectives of KCSSC are as follows (Godia, 1989, p. 275).

1. Promote games and sports within Kenya's educational system.
2. Offer advice on the role and development of games, sport, and physical education within Kenyan educational system.
3. Liaise, negotiating and coordinating with the Ministry of Education, other government departments.
4. Issue annual calendars for all national games and sports competitions
5. Coordinate all national competitions between representative teams from colleges and schools within the jurisdiction of the Ministry of Education.
6. To organize and run all international games and sports competitions within the Ministry of Education's jurisdiction.
7. To raise funds for the achievement of the objectives stated.

Local Federations

The local federations are affiliated to AK and have provincial, district, divisional, locations and sometimes sub-location centres. Each centre organizes hierarchical competitions which gradually lead to national championships. The list of competitions in figure 2.4, pg 16 indicates the role of the LFs in the talent development.

Summary

What have we learned from this chapter? Two key things; One, that the KERDS before the 1990 Kenya Government's Liberalization policy mainly sourced its talents from AF, government departments, and public high schools. Two, after the 1990 Kenya Government's Liberalization policy shift, privately running camps with deep-pocketed

individuals and corporations such as Nike, Fila, and Adidas took the lead. The talent production essentially became privatized. It seems the KSDS works. This is so because, from its modest beginnings, nearly 45 years ago, the KESDS has been transformed from a small local power to a global one convincingly defeating (in endurance races) nations (such as Nigeria, India, and USA) which are more than double or triple its population. By any measure, Kenya is now a global force in endurance running, especially after 1990 Kenya Government's Liberalization policy change. Kenya's sports delivery system does give rise to questions within and outside the quality and quantity context of sports delivery systems. These questions include: (1) Is the KSDS adequately supplied resource wise? (2) Does the KSDS produce enough junior talents? (3) Is it functionally sound? These questions will be answered in the next section.

Additionally, from this section three other issues became apparent. (a) Kenya, in its short history (after independence in 1964) has never had a 'pure' ministry of sport. (b) With the introduction of private running camps the main governing bodies like NOC-K, and AK became weakened as their main focus was reduced to 'national' events such as the Olympics and Commonwealth Games as majority of the runners began gravitating towards lucrative private races such as the Wold Marathon Majors. (c) The governing model is steadily evolving from a traditional one to a professional one as sponsors take greater control of the management of elite running.

Sports Policies and Elite Sports

'Policy' is "a course of action or a set of principles determining the general way of doing something." (Dictionary of Business, 2006, p.305). Specific to sports, sports policies are a course of sports related actions or a set of sports related principles that help determine the general way of managing the sports sector. In sports policy research to date, only six

approaches/frames will be discussed purely based on their relevancy to this study. By definition, frames could be perceived as models of organizing ideas so as to simplify their coherence. This section therefore covers the stages model, institutional analysis, multiple streams, advocacy coalition, and the management frameworks.

Approaches and Frameworks for Sports Policy Analysis

The sports policy area is characterised by recency, increasing government intervention, embedded beliefs, a dispensed administrative context and experiences of significant exogenous influences (Houlihan, 2000b). In regard to recency, sports continue to be an established feature in the machinery of governments of first world nations such as Australia, Britain and Germany. Second, after 1995, there has been an increase in the rise in government intervention in sport policy (Houlihan, 1991, 1997). Additionally, the sports policy area is characterised by many competing ideologies and beliefs (Neil, 2009). Lastly, the sports policy area is characterised multiple administrative and organizational bodies representing federations, agencies, and government bodies all with a different aspect of the policy area (Houlihan & White, 2002; Roche, 1993). In sum all these shape the model or framework that guides the policy in place (Neil, 2009).

Criteria for evaluating theoretical frameworks include; First, the frame's capacity to explain both policy stability and change in that the frame should facilitate a 5-10 year historical analysis of policy change (Sabartier, 1999). Second, the frame should be holistic in a broad based and exploratory nature (Neil, 2009). Howlett & Ramesh (2003, p.48) adds: "What is needed in policy analysis ...is an analytical framework that permits consideration of the entire range of factors affecting public policy." However, this may not be possible as the consideration of 'entire range of factors' is itself impossible. Third, a proposed theoretical frame should have applicability and utility across policy areas, as sports policy areas

generally experiences 'policy spill-over' from other areas (Houlihan, 2005; Neil, 2009). Finally, a meso-level policy analysis framework should be located at the macro-level, within the theory of the state and therefore the 'theory of power' (Neil, 2009, p.22).

Stages Model and Sports Policy Research

The stages model acts as a heuristic device in understanding policy processes (Neil, 2009). Stages model dominated policy analysis in the 1970s and 1980s. It is a process focused policy based on the rational actor model with varying stages (Hoolihan, 2009; John, 1988; Hogwood & Gunn, 1984). It is isolated into nine stages namely: agenda setting, deciding how to decide, issue definition, forecasting, setting objectives and priorities, options analysis, policy implementation, evaluation and review, and policy maintenance, succession or termination (Howlett & Ramesh, 2003). Notable studies that have applied stages model to public policy research include; Kingdon, (1995) on agenda setting of public policies, Guba & Lincoln (1987) on evaluation of public policies and Pressman & Wildavsky (1973) on implementation of public policies. According to Houlihan, 2005,p. 168), the stages model, therefore:

“...draws attention to the interaction between policy process and the context within which it takes place.”

Specific to sports policy, Houlihan (1990, 1991) used Stages model to investigate football hooliganism in England, and doping in Britain. The study was wanting on explaining the policy process and impact with no grasp on ideological base. Irrespective of its weaknesses, Houlihan (2005, p.169) reported that the stages model is advantageous as: “it is more

effective in capturing particular moments in the policy process than in identifying patterns of influence and outcomes over a sustained period.”

Stages model has been found to be weak in the following areas; (a) it is too simplistic thereby facing the risk of unreliability and un-objectivity in results. Notably, Sabatier (1999, p.7) concluded that: “the stages heuristic has outlived its usefulness and needs to be replaced”, (b) it gives a false degree of the rationality of the policy process as it fails to get into the finer thrust of policy making process (John, 1998 in Neil, 2009); (c) it is more descriptive than causal thereby being better for basic researchers as opposed to empirical testing (De Leon, 1999b in Neil,2009), (d) it has a top-down biases with excessive focus on legislation, (e) it discriminately theorizes the policy process, (f) it suggests that policy actors make decisions and attempt to solve policy problems in a linear and rational manner (Jenkins-Smith & Sabartier, 1993b).

Institutional Analysis and Sports Policy Research

According to Thelen & Steinmo (1992, p.2) institutions “shape how political actors define their interests and . . . structure their relations of power to other groups” and are seen as significant constraints and mediating factors in politics. Institutional analysis emphasizes institutions such as agencies, departments, and parliaments or cultural entities which emphasize shared values, norms, and beliefs.

Specific to sports, studies based in the UK, USA and Canada have used Institutional Analysis in researching how organizational infrastructure shaped the respective sport policies; [Green, 2003; Houlihan & White, 2002; Henry, 2001; Pickup,1996; and Roche, 1993]] for UK, [Wilson,1994; Kraus, 1990] for USA, and [Macintosh, 1991; Macintosh & Whitson,1990)] for Canada. Furthermore, beliefs, norms and values associated with social class (Birley, 1996), gender (Hargreaves, 1994), disability (Thomas, 2003), and ethnicity

(Carrington & McDonald, 2000) have all been found to impact the character of UK sport policies.

The advantages of the Institutional analysis approach are that it is focused on the behaviour of actors and the structures within which they operate (Hall, 1986). It also highlights the power of state institutions. More importantly, it is applicable over a range of policy areas and is useful in directing attention to the significance of both organizational and cultural structures for sport policy in a historical context. However, its drawbacks are that it is more of an analytic orientation as opposed to being based on institutionalism and that it treats ideas as interests, and also assumes that institutions strongly influence interests (Pontusson, 1995). In regard to sport policy, Institutional Analysis is therefore weak in explaining stability and change especially in regard to longitudinal studies of elite sports.

Multiple Streams Framework and Sports Policy Research

Multiple Streams Framework is primarily concerned with the process of agenda setting and it emphasizes the anarchical character of organizations and the policy process (Zahariodis, 2003; Kingdon, 1995; Zahariodis & Allen, 1995; March & Olsen, 1984; Cohen, et al., 1972 all in Neil, 2009). The framework assumes that the adaptation of specific choices is partly dependent on when policies are made (Neil, 2009). It also assumes that political ideology is central to policy formulations. Kingdon (1984) identifies distinct streams such as; (a) the problem stream-comprising those issues which policy makers have identified as requiring action and may only be implemented if they are technically feasible and compatible with the dominant values of the community. Problems in the policy area may include 'a lack of national success in sport' or a 'decline in participation in sport' (Neil, 2009, p. 38), (b) the political stream focuses on the national mood, organized political entities as political parties and pressure groups and government.

Kingdon (1984) gives a sound critique of rational models of decision-making, which stretches further the notions of static policies to a 'spillover' of policy implications. This view specifically can be valuable given the vulnerability of sport policy to manipulation by diplomatic, health and educational interests (Houlihan, 2000; Dery, 1999). In particular to sports policy studies by Houlihan & White, 2002; Roche (1993) have drawn attention to the lack of systemic embeddedness of sport in national policy systems. Unfortunately in sports, the direct use of the Multiple Streams Framework has been very scant and to date has only been utilized by Chalip (1996) to investigate New Zealand sport policies and also by Bergsgard (2000) to analyse decision-making in Norwegian sport.

Multiple Streams Framework harbours the following advantages; a) It has a wide applicability across a range of policy areas including sport, but less transferability across political systems; b). It allows analysis over the medium term. On the contrary, Multiple Streams Framework has the following limitations; a) it offers only a partial analysis of stability and change. This is so because it is not clear on the theory of power as the significance of ideas in relation to interests and power is under-theorized; b) it is too preoccupied with agenda setting (which in real life may change frequently) and c) it also neglects implementation which is usually very crucial for the realization of a successful sports delivery system.

However, it also suffers from the following weaknesses (Neil, 2009, p. 40): a) it downplays institutional power and systemic bias which may make it not be able to fully explain sport policy, b) it may understate the significant influence of the state on policy, c) The framework has undergone little empirical testing because it has no explicit hypothesis and therefore falsification is problematic.

Advocacy Coalition Framework and Sports Policy Research

Advocacy Coalition Framework is quite a popular policy analysis tool which to date, has been applied to over 50 case studies across a range of policy areas mainly in the United States, but also in Canada, the UK, Italy, and Poland. It does not assume that actors are driven primarily by economic/political self-interest, but assumes that actors' goals are usually complex (Neil, 2009). The focus of ACF is on beliefs in policy processes, where pre-existing beliefs constitute a lens through which actors perceive policy, and further, it is policy core beliefs that provide the principal glue in coalitions of interest (Zafonte & Sabatier, 1998 in Neil, 2009). Advocacy Coalition Framework is based on five guidelines namely; a) a requirement for at least a 10 year time analysis for policy change; b) an emphasis on policy sub-systems/policy communities encompassing practitioners from government, international organizations and other countries; c) importance of the possession and use of technical information; d) the incorporation of value priorities and causal assumptions of policy (Jenkins-Smith & Sabatier, 1994).

Advocacy Coalition Framework is weak in: 1) explaining change; 2) it is usually vague in specifying the membership and relations of coalitions, 3) it assumes that memberships of coalitions is open, 4) lastly, it is weak in theorizing power. On an advantageous side, Advocacy Coalition Framework is more robust and holistic compared to the policy analytical methods explained above.

Specific to sports policy research, the use of the Advocacy Coalition Framework has been a recent phenomenon. For example, Green & Houlihan (2005) used these frame to analyse elite sport development policies in Australia, Canada and the UK. The results indicated that there was tangible evidence of the use of the advocacy coalitions in general but more specific to the UK sport policy system. Other studies include the use of Advocacy Coalition Framework by Parrish (2003) to sports regulatory policy in the European Union,

and Houlihan & White (2002) to the investigation into the study of UK sport development policies. Their conclusions were similar to those of Green & Houlihan (2005). Similarly, the frame has been used in the study of disability sports (Thomas, 2003), and sport ethnicity (Carrington & McDonald, 2003) and organizational infrastructure (Roche, 2003; Henry, 2001; Pickup, 1996) as well as sport regulatory policy in the European Union (Parrish, 2003). The studies reported that ACF was advantageous as a sports policy analytical framework particularly given its broad-based approach to the whole policy process.

Managerial Approach and Sports Policy Research

Managerial approach, which is drawn from sub disciplines such as organizational behaviour, financial economics, decision sciences, marketing etc focuses on the improvement of efficiency and effectiveness. (Parsons, 1995). In light of the wave of privatization initiatives in Britain, Canada, USA, and Australia in the 1980s and 1990s, Managerial Approach has had such a profound effect in both government and private sector's corporate planning, corporate governance and strategic management partly due to the frustrations of expensive bureaucratic systems and the new wave towards cost cutting (Parsons, 1995). The approach has been heavily influenced by the following scholars; Drucker, P. (1993). *Management for results*; Peter, T. & Waterman, R. (2004). *In search of excellence*; Porter, R. (1998). *Competitive advantage of nations*; and Barney, J. (2007). *Sustainable competitive advantage*-just to name a few. This study is grounded on the strategic management theories of Barney which are focused on how human, organizational and physical resources impact performance. The impact of this approach has been widespread (OECD, 1991-2009) and is now considered to be the dominant framework in the theory and practice of public and private sector (Parsons, 1995).

Managerial Approach was adopted for this study as the other approaches are process based while this study was impact based as it was mainly concerned with the realization of

results and not the political machinations that underpin the formulation and implementation of policies. This approach was therefore selected for the following reasons: One, it illustrates well the relationship between strategic policy choices and performance (based on efficiency and effectiveness). Two, as compared to the other four policy approaches, it is the most fully developed, with proven reliable empirical evidence having produced sustainable and consistent evidence over a longitudinal time frame. Furthermore, these approaches may assist in the transformation of each other, they are theoretically equivalent, but the discussions of their advantages and disadvantages turn not as a policy question but a strategic managerial focus. Each approach sheds light on a different aspect of data and they should be regarded as allies not rivals as each contributes something to the understanding of the policy impact in question. Managerial Approach was then calculated most simply in the manner just described – by the direct use of human, organizational and physical resources indicators. This approach will be discussed more fully in the next chapter.

Past Studies on Sports Policies and Elite Sports

According to De Bosscher et al, (2006), elite sport performance can be explained by macro, meso and micro factors. The macro factors include economic, geographic, population and cultural systems. The meso factors include sports policies and politics while the micro factors investigate individual athlete's genetic qualities and their close environment with parents, friends, and coaches. In general, nations that tend to succeed at international sporting events more frequently than not implement sport policies directed towards enhancing international sports success (Hums & MacLean, 2009; Green & Houlihan, 2005). Recent studies show that there is a significant relationship between effective sporting policies

(Green, 2007; Oakley & Green, 2001; Misener, 2001), resource accumulation, utilization and performance (De Bosscher & De Knop, 2004; Digel, 2001).

Nations may have a greater chance of success subject to the effectiveness of sports policies and strategic investment decisions made in elite sport especially at IAAF World Championships, Olympic Games and the FIFA World Cup (De Bosscher et al., 2007; Kim, 2001; Waters, 1996; Amis, 1992; Toohey, 1990). Green & Houligan, (2005) reported that sports policies that greatly enhanced elite performances in swimming, athletics and yachting in Canada, the United Kingdom and Australia were geared towards: (a) development of elite-level facilities, (b) emergence of “full-time” athletes, (c) development in coaching, sport science and sports medicine, and (d) competition opportunities for elite level athletes. Oakley & Green (2001) summed the sports policies that stimulate success in industrialized nations as: (a) effective sports agencies (b) a culture of excellence amongst sports personnel (c) well developed training facilities and priority access for elite athletes (d) targeted resources (e) comprehensive planning for each sports needs (f) appropriate funding for infrastructure and personnel and (h) lifestyle support and preparation for life after sport. In a previous study with similar conclusions, Clumpner (1994) found that sports policies that were critical to elite sport success were focused on (a) financial support for elite training centres and personnel, (b) an ongoing integrated Olympic sport system and (c) athletic talent enhancement. On the other hand, sports policies leading to international elite sport success by former communist nations attest to the fact that they share the following common characteristics: (a) recognized physical education and sport within constitutional law, (b) early talent identification and high training frequencies in schools (c) structured training and qualification systems of professional coaches (d) financial support for programs (e) high priority of applied scientific research (All in Sedlacek, et al., 1994; Broom, 1991; Riordan, 1991; Semotiuk, 1990 Douyin, 1988; Buggel, 1986; Kruger, 1984).

However, sport policy research suffers from a lack of sound theory “as a sound theory of sports policy, factors leading to international sporting success has not yet been devised (De Bosscher, et al., 2007, p. 196). The majority of the sport policy studies have focused on single policy aspects such as sports facilities or sports finance while neglecting the role of human and organizational perspectives. Moreover, policy theorist tend to view policy actors as possessing clear objectives, organizational capabilities and specific resources which are not widely researched or theorised (Neil,2009). Houlihan (2000,p.1) adds that:

“while the current state of theory building has provided a number of insights into sport policy process, too many concepts, theories and frameworks have been neither inappropriate or have required significant adaptation..”

According to Neil (2009), major theorizations tend to assume that the policy process consists of a distinct set of policy actors working within a definite policy sector irrespective of the fact that in sports, the boundaries of ‘policy are’ are less distinct. Furthermore no study has specifically looked into sports policies that may have contributed to Kenyan success in endurance running events. This study will attempt to cover these gaps by focusing on how the 1990 Kenya Government’s liberalization policy may have impacted on resource which may have further contributed to Kenya’s marathon running success.

This study attempted to cover these gaps with the help of the RBV strategy theory by focusing on how 1990 Kenya Government’s liberalization policy may have impacted on resources and how these resources relate to Kenya’s marathon success. In accordance with the definitions, sports policy was considered to be a product of strategic decision-making from the Kenyan Government. Furthermore, the study was conducted with the realization that a sports policy product is a complex endeavour intertwined with power from the state,

the provincial administrators and interest groups, all interlocked in response to social, political and economic factors within the policy process and product. This attributes were beyond the scope of this study.

Summary

Bearing in mind that the discipline of Sport Policy is still in its infant stages, all the approaches and frameworks have been 'borrowed' from multiple field and therefore not commonly used in sports research. In full acknowledged and realization of this drawback, the researcher reviewed the five models/approaches and eventually settles on the managerial approach. After having ascertained the strengths and weaknesses of each framework, the researcher selected the managerial framework as it is the best suited for the study-which is focused on impact and not process.

The 1990 Kenya Government's Liberalization Policy

Privatization is the transfer of ownership of goods and services from government sector to the business or private or non-public sector by selling, partnerships, floating on shares and freeing of entry into to an industry (Kibua & Mwabu, 2008; Kariuki, 2006; Rurii, 2003). Privatization is a generic term used to describe a range of policy initiatives designed to alter the mix of ownership or management away from government toward the private sector (Glenday & Ryan, 2003; Nyongo, 2000; Abudo, 1994). Privatization is therefore a government's economic strategy and is part of micro-economic policy and private equity studies whose underlying idea is to improve industry performance by increasing the role of market forces (Bello, 2005; Bishop et al., 1994; Grosh, 1988).

At the onset of the privatization, the Kenyan government participated directly and indirectly through equity in over 255 enterprises (Kariuki, 2006; Nyongo, 2000). Most of the

firms slated for privatization were mismanaged, overstaffed, and financially ruined (HDR, 2005; Mwakio, 1995; Wayande, 1993). In the Kenyan case, the orientation of micro-economic policies determined the direction and even type of privatization methods used. Kenya, more than any other African nation, has relentlessly pursued a deliberate program towards industrialization with aggressive privatization targets as: “the underlying philosophy was to use industrialization as a means of promoting economic growth, create employment and eradicate poverty” (HDR, 2005,p. 12). In the Kenyan case therefore:

“...privatization should be seen as a strategy to restructure the role of the state in order to promote industrialization” (HDR, 2005, p. 16).

Privatization had been in the Kenyan governments agenda since 1980s, but progress in this area had been slow, with the actual shift from controlled to free market occurring between 1992 and 1994 (HDR, 2005; Grosh, 1988). Throughout this chapter, the term ‘government’ is used in its broadest sense to signify any form of government, including central or local government, government agencies etc The following section will therefore explain why Kenya privatized, the background to the Kenyan privatization as it unfolded under Structural Adjustment Programs (SAPs).

Forms of the Privatization Adopted by Kenya

A review of the literature indicate that there generally four basic forms that a privatization program may adopt.

1. Privatization of financing- Financing a service that continues to be produced by the public sector (Bagaka, 2009; Bello, 2005; Johnson, 2003).

2. Privatization of production – Services continues to be financed by the public sector (usually out of taxation) as in contracting out education vouchers (Moindi, 2008; Gichuri, 2006; Mushi, 1983).
3. Denationalization/decentralization- Is the selling public enterprises and transfer of state functions to private sector (Leino, 2008; Nyongo, 2001; Mvano, 1981).
4. Liberalization-meaning relaxing any statutory monopolies or licensing arrangements that prevent private sector firms from entering markets previously exclusively supplied by the public sector. It is also the opening up of markets for competition (Nzumo, 2008; Sebuharara, 2005; Muyatwa, 2000).

Kenya's Liberalization Process

Kenya was one of the first African nation to implement the Structural Adjustment Programs (SAPs) enforced by the Breton Woods Institutions (Wayende, 1993; Martin & Wasow, 1992; GOK, 1990). The first attempts to privatize were echoed in the landmark Sessional Paper no. 10 of 1965. Further actions have been reflected on government policy blueprints, such as the National Poverty Eradication Plan, the Poverty Reduction Strategy Paper, the Economic Recovery Strategy and the Strategy for Revitalization of Agriculture (Nyongo et al., 2008; WB, 2008; UNDP, 2007; GOK, 2006). However, the main ingredients of SAP were trade liberalization, devaluation, deregulation of domestic markets, reduction of public sector employment, privatization of government enterprises and support for private sector development (Leino, 2008; Kariuki, 2006; HDR, 2005; GOK, 2005). The SAPs were generally unwelcomed as they were seen as western form of colonially tainted financial bullying which directly led to mass retrenchments of public employees, increased user fees in schools and health facilities, and the abolishment of price controls (Bagaka, 2009; Nyangau, 2009; Bello, 2005; HDR, 2000; GOK, 1999).

Sessional Paper no. 10 of 1965

The first attempts to privatize were echoed in the landmark Sessional Paper no. 10 of 1965 (subtitled “African socialism and its Applications to Planning in Kenya”) which identified poverty, disease and ignorance as the major development challenges facing Kenya (WB, 2006; HDR, 2005; Glendy & Ryan, 2003; GOK, 2002). The decade from the mid 1980s to the mid 1990s witnessed major changes in Kenya’s Industries in general as a result of an overall program of SAPs mandated by World Bank (WB) and International Monetary Fund (IMF). The SAPs consisted of a set of policies designed to make economies more efficient and productive aimed at increasing the use of local resources, greater employment creation and the encouragement of exports (Gichuri, 2006; GOK, 2006; Martin & Wasow, 1992; Mvano, 1981). “State participation was considered to be obstructive to efficient management and had to be removed” (HDR, 2005, p.14). This was the very idea that oiled the hinges of the Kenya’s privatization.

Sessional Paper no. 1 of 1994

In 1993 Kenyan government liberalized the foreign exchange market after which the Paper entitled ‘Recovery and Sustainable Development to the Year 2010’ was aimed at accelerating the country’s economic development so as to generate a vibrant industrial sector based on primary production, manufacturing, commerce and services (HDR, 2005; Rurii, 2003; GOK, 2002; Abudo, 1994).

Sessional Paper no. 3 of 2003

The paper entitled; ‘Development of Micro and Small Enterprises’ was designed with the objective of promoting more equitable distribution of industrialization across the various regions of the country. Furthermore, the Kenyan government’s 2003 ‘Economic Recovery

Strategy for Wealth and Employment Creation' (ERS) re-emphasized the role of industrialization as a key factor of economic recovery through public-private partnerships so as to enhance efficiency and equity in the delivery of social services (WB, 2004; UNDP, 2003; GOK, 2002).

Sessional Paper no. 3 of 2005

In a collaborative effort, a draft Sessional paper was completed by the institute of sport and forwarded to the Ministry in 2002 (GOK, 2004). The policy specifically highlights fundamental issues such as funding of sport through a lottery system, cash award schemes, building of youth centres, and partnerships with corporations-all with the aim of improving performance at international competitions. It is important to note that this was the first Sessional paper in Kenya's 44 year history that was specifically focused on sport. Its impact is yet to be seen.

Kenya National Youth Policy-2006

Even though the Kenyan youth have been the majority of the entire population (at 75-percent in 2006 of the entire Kenyan population), this was the first document to realize and embrace their potential power or importance (GOK, 2006, GOK, 2005). The Youth Policy outlines seven priority areas, namely: Employment creation, Health, Education and training; The Environment, Art and culture; Youth empowerment and participation in national life; Youth and the media and lastly Sport and recreation. As it states, it hope to:

“...visualize a society where youth have an equal opportunity as other citizens to realize their fullest potential, productively participating in economic, social, political, cultural and religious life without fear or favour’ (MYA, 2006,p. 4).

It is important to note that Sport and Recreation priority is mainly targeting the use of sport to promote peace, unity, health, discipline, and leadership-but not elite sport performance. The policy specifically urges for the following concerns to be addressed:

- 1) Establish and improve accessibility to recreation and sporting facilities in schools, communities and villages;
- 2) Use sporting activities as platforms to advocate and campaign for behavioural change such as the prevention and the spread of HIV/AIDS and drug abuse;
- 3) Liaise with youth organizations to protect sportsmen and women from exploitation by clubs and agencies;
- 4) Remunerate and honour sportsmen and women who represent the nation in various competitions;
- 5) Make the National Youth Development Program more effective.
- 6) Promote traditional games for recreation and as a way of preserving culture;
- 7) Gazette sporting facilities and recreational spaces as a way of protecting them from being acquired by individuals;
- 8) Ensure that youth are represented on committees and bodies that make decisions on sports.

Ministry of State and Youth Affairs Strategic Plan, 2007-2012

The Ministry of State and Youth Affairs Strategic Plan (MSYA) outlines the following key priorities in its 2007-2012 strategic plan which it projects will cost Kshs. 111.4 billion to be implemented (MSYA, 2007,p. 12). The plan acknowledges the numerical strength of the youth as they form a large part of the population. The plan focuses on the following areas:

- Youth and employment
- Youth empowerment and participation
- Youth education and training
- Youth and information communication technology
- Youth and health
- Youth crime and drugs
- Youth and environment
- Youth leisure, recreation and community services

This last objective is articulated as: “To increase participation of youth in leisure, recreation, art, culture and community service,” with a focus on human resources and equipment at the cost of Kshs. 500 million (MSYA, 2007, p.70).

Rationale for the 1990 Liberalization Policy

The two recurring aims of Kenya’s privatization were to promote competition and to increase economic efficiency (GOK, 2009; HDR, 2008). Other lesser aims were the promotion of wider share ownership among both employees and the public. This study adopted the view that: “...the main aim of privatization is to guide resources to the most highly valued uses” (Bishop et al., 1994, p. 21). With the assistance of the figure below, Kenyan privatization was explained as follows:

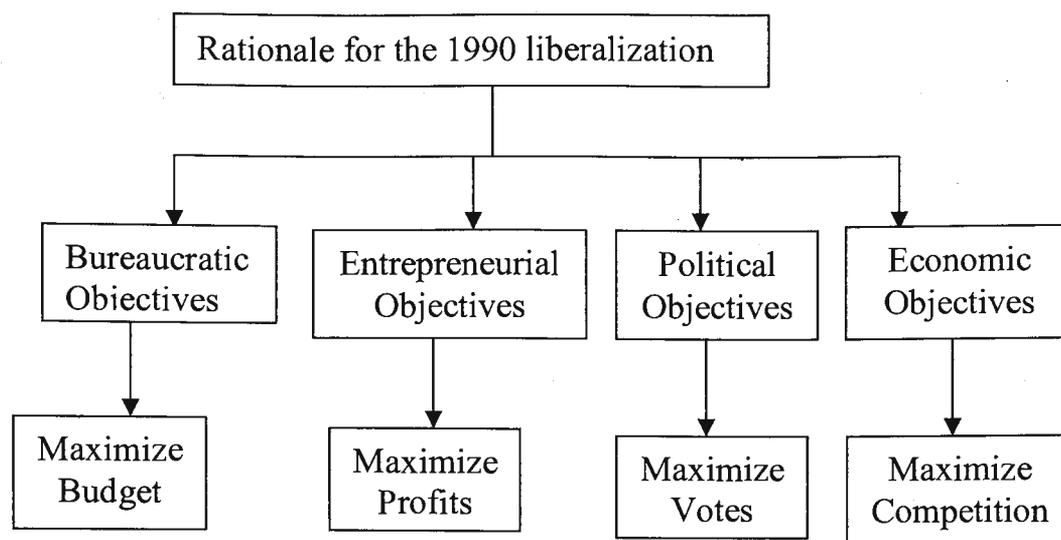


Figure 2.3a: Rationale for the 1990 Liberalization

The privatization initiatives were meant to improve efficiency and to spread popular capitalism through wider shareholding (HDR, 2005). According to multiple sources, the Kenyan privatization was intended to accomplish and enhance the following objectives (IMF, 2007, WB, 2007, UNDP, 2007; GOK, 1990-2009):

Political objectives

The core of the political objectives was to maximizing democratic reforms. When Kenya obtained substantial loans from IMF and World Bank, the awards of the loans came with certain stringent terms and condition such as of forced reduction of government employees, increased democratic transparency and reducing corruption, enhance social justice and accountability among others (WB, 2010; UNDP, 2009; Nyangau, 2009). To the western donors, political freedom had a double dependency on private property and pegged to the view that the size of government is inversely proportional to the quality of liberty (Clinkenbeard, 2004; Feeley, 2006; O'Brian & Ryan, 1999). Privatization may therefore be viewed as an economic instrument to jumpstart the rise of liberty, especially in African nations such as Kenya. It was therefore hoped that privatization could open up social

solutions not possible in and under nationalized industries (Bello, 2005; Nyinguro, 1999; Cohen, 1993). Secondly, this period was characterized by frequent labour union strikes and mass political demonstrations for change by the working poor supported by the trade unions (Abudo, 1994; Wanyande, 1993. Privatization being a very powerful anti-union weapon, whether it is by selling off government enterprises or contracting out was very effective in the Kenyan case. The government therefore 'toned' down by bowing down to these pressures by privatizing. Wiltshire, (1987) arguments based on the privatization of British firms, confirms that sometimes privatization process makes it possible for the government to smash the power of trade unions, fix tax cuts before next elections, and reduce public sector borrowing requirements. A well-reasoned privatization's role by Pirie (1985, p.2-3), emphasizes this by arguing that:

“In effect, privatization controls the public sector by gradually replacing it. Thus it offers 'reverse ratchet', a means of systematically reducing the public, government-directed part of the economy. Once a program is operating successfully outside of the state sector, subject to consumer inputs and responding accordingly, it can stay there. Each piece of privatization can thus permanently diminish the overall scope of state involvement in the economy.”

Bureaucratic objectives

Bureaucratic objectives were meant to enhance efficiency and effectiveness maximization through enterprise restructuring and corporate governance improvement (Nyangau, 2009; Bello, 2005). The government was and still is poor in coordinating, implementing and managing state projects. The move from “big government” to “small government” may be archived by enterprise as an intentional and strategic restructuring and

corporate governance improvements as it is one of the most effective means of generating greater efficiency and consumer benefits (Bagaka, 2009; Tomlison, 1981). Big government creates 'managerial diseconomies'-that is the organization becomes too large to be efficiently managed with its operating costs becoming higher than its income-a situation which could not have arisen if there were multiple competitors (Akwuole, 2005; Nyongo, 2002; Cohen, 1993). When these changes occurred, the resources released may have been used productively as the elimination of inefficient production and restrictive labour practices means the release of more resources (Kibua & Mwabu, 2008; Nzuma, 2008). Efficiency takes place better when companies are: "... allowed to expand or contract, diversify or specialize, as market forces dictate" (Bishop et al., 1994).

Privatization as an entrepreneurship tool may reduce the politicization (and its related fluctuating political pressures) of decision making and therefore takes politics out of the day-to-day running of corporations (Patchimanan, 2008; Nyinguro, 1999)-this has greatly improved service delivery for the Kenya populace. The principal idea here was to depoliticize the corporations, leaving commercial decisions to experts and business people who were best to decide when, how, and what to produce goods and services (Leino, 2008; Rurii, 2003). It was also hoped that the privatised sectors could be more effective and responsive to local needs.

Entrepreneurship/Economic objectives

The core of the entrepreneurship/economic objective was geared towards profit maximization so as to enhance the distribution of capital and or income based on the argument that private ownership of resources encourages 'social equity' (Leino, 2008; Bello, 2005; Wayende, 1993; Cohen, 1993). This was so because, privatization is intended to change motivations of management towards profit-making, as a privatized company

compared to a government owned one, will be less willing to provide uneconomical services (Nyangau, 2009; Sebuharara, 2005; Bello, 2005). Profit maximization generally enhances the distribution of capital and or income based on the argument that private ownership of resources encourages 'social equity' (Kimenyi et al., 2003; Muyatwa, 2000). Pirie (1985,p.2-3) sums the entrepreneurship objective well:

“Close to the heart of the case of privatization lies the recognition that private programs are subject to economic disciplines, and respond to choices made by beneficiaries of these programs. While it may be impossible to control the costs and scope of a public program, if such a program can be moved to the private sector it automatically becomes subject to market based pressures”.

Privatization may therefore be viewed as a means of spreading private share ownership to a wider public both to the public and employees while raising revenue for the government (Bello, 2005; Nyongo, 2002; Work, 2002). This action ostensibly increases competitiveness, enhances technical innovation, and breaks barriers between employees and management (Rurii, 2003; WB, 2001). Ownership of shares breaks down barriers between owners and earners, and contracting out introduces more specialized expertise, more flexible work practices, and deployment of manpower (UNDP, 2009; IMF,2008). However, pundits of privatization complain that it cannot be seen as a genuine economic objective, but rather is the improvements of economic welfare through increased competition aimed at an efficient division of labour and the implementation of competitive markets (Ray, 2006; Sabuharara, 2005; Rosenbaum et al., 2000).

In sum, the liberalization objective was to increase the amount of completion in the product, labour and capital markets (Bagaka, 2009; Nyangau, 2009; Akwuole, 2005).

Evidence of these objectives was doted in numerous policy papers and statements. For instance, the 1996 policy document attested to the Kenya government's plan to privatize state owned firms (WB, 2005, IMF, 2002; GOK, 1996) with the 2003 policy statement entitled the 'Economic Recovery Strategy' reiterating the government's commitment to encourage commercial activities by relinquish the ownership or direct control to private firms so as to increase efficiency and effectiveness (Nyangau, 2009; GoK, 2003; Mushi, 1983). In this study, I choose to focus on liberalization but briefly discuss the political, entrepreneurship, and bureaucratic objectives even though they were beyond the scope of this study.

The Nature of a Liberalized Sport Sector

As is evident in the Kenyan case, the 1990 Kenya Government's liberalization impact has to be studied as part of a broader process of economic restructuring and institutional changes. The first dimension will be to examine its impact in generating private organizations such as sponsors and financiers. A second dimension will be to investigate performance results impact from the beginning of privatization to the present day. And a third stand will look into the development of markets i.e. the spread of Kenya search for international sporting glory. As mentioned earlier, the analytical focus therefore will be the 1990 Kenya Government's liberalization impact on marathon running and not privatization as a process.

In the Kenyan case, there could be very few social gains for the government to maintain a tight (un-liberalized) control over sports as there was simply no money to cope with the overproduction of runners who needed training facilities, travelling money and general sporting infrastructure. The government realized that its monopoly on the day-to-day running of athletics was actually promoting a fall in standards, as corruption, mismanagement, and extreme high unjustified costs plagued the entire running of athletics. As a result of this, there was a genuine effort to liberalize the Kenyan Running Production

System (KRPS) by introducing competitions into the supply and labour production of runners. The government removed the control of running (with a focus on distance events) but not other sports. This shift took the form of liberalized sports agents licensing, privatization of running clubs and running camps as well as lifting restrictions on travelling and the hiring of coaches.

Relaxing restrictions on runners international travels

Prior to the 1990 Kenya Government's liberalization policy, runners required lengthy, difficult and complex special permission from both the government and AK to participate in international running events within and outside Kenya. The policy was to "run for your country" with the only viable international opportunities being at the All-African Games, Olympic Games, Commonwealth Games or World Championships. After the 1990 Kenya Government's liberalization, athletes' international travelling was encouraged and fastened resulting to the explosion of the involvement of Kenya in global events thereby exponentially heightening their international exposure.

Relaxing restrictions on licensing sports personnel

Prior to the 1990 Kenya Government's liberalization, no foreign coaches were allowed to coach any Kenyan athletes without prior government approval. Because Kenya was pro-west, any athlete or coach with communist connotation could have been deemed to be politically unwelcomed or out rightly dangerous. However, since the 1990 policy shift, managers, coaches and agents were granted free access to transact any business dealings with Kenya runners. Some of the managers have even gone further to build their own training camps with their own competitions and facilities (Mutwota, 2009; AK, 2008).

Relaxation of facility ownership

Currently, it is estimated that there are over 100 specialized endurance running camps in Kenya mainly in high altitude regions of the Rift Valley (Mutuota, 2009). Most of the facilities are seasonal and operate from hotels or rental places. Internationally there are also camps in Europe, US and Japan. More detailed discussion of this topic is in the latter chapters.

Relaxing restrictions on collaborations

Kenya has developed closer bilateral sports related ties with China, USA, Germany, and UK. The German government has offered sports aid in form of equipment and coaching for over a decade. The Chinese government contributed funds and personnel to building the 50,000-seater stadium that hosted the 1987 All-African Games. The US government through the Peace Corps program, offered young, energetic students to teach Physical Education and other subjects in rural Kenyan schools. These students were instrumental in popularizing basketball and introducing talented runners to US Colleges and universities (Bale & Sang, 2005).

The impact of the 1990 Liberalization on Kenya's Performance

As an evaluation framework of the 1990 policy impact, the model below indicates how policy led to inputs (human, organizational and physical resources), which were later utilized to provide outputs (the opportunity availability) and lastly how these impacted marathon running performances (Figure 2.3).

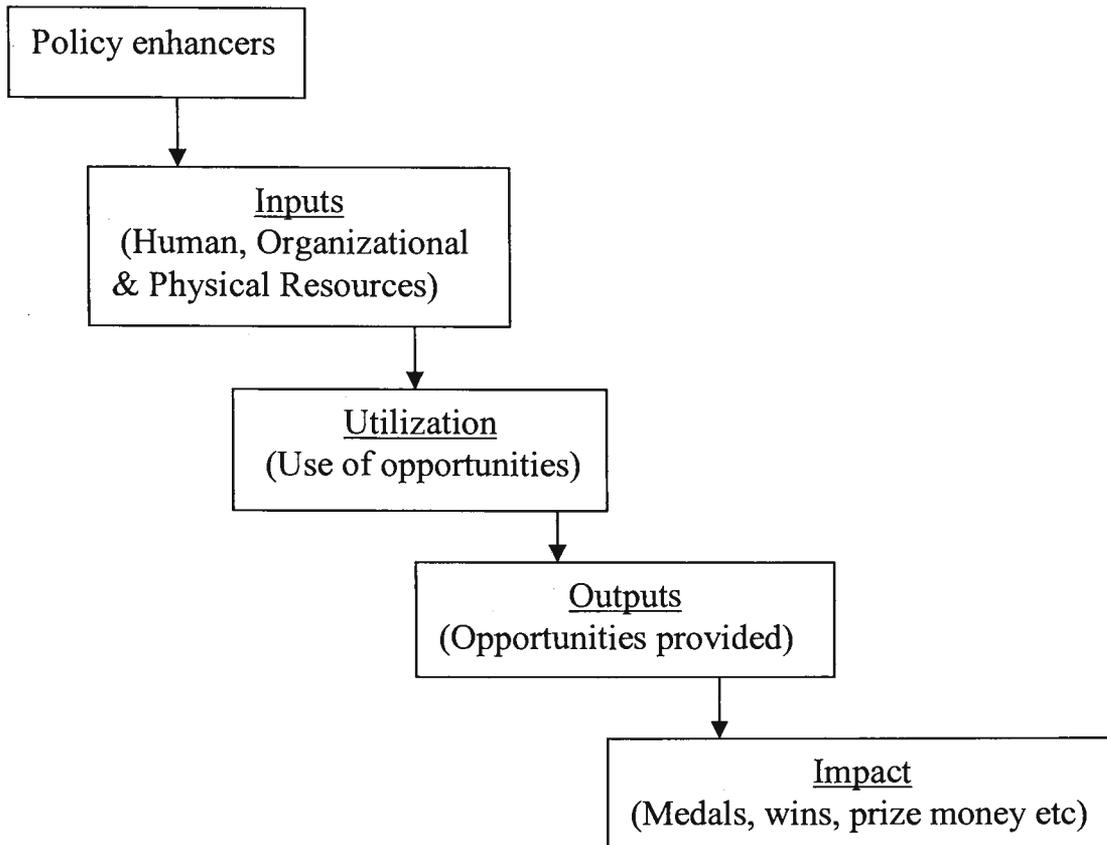


Figure 2.3b: Evaluation Framework of the Liberalization Policy

This section covers the comparison of the global performance before and after the 1990 liberalization in selected events. For a distinct and clear exploration, the performance tables are subdivided into two periods; pre-Liberalization (1964-1990) and post-Liberalization (1991-2008). It goes further to discuss the performances at major world events such as Olympic Games with an emphasis a review of selected ‘big city’ marathons such as London, Chicago and New York.

Kenya’s World Rankings in Endurance Events

Each year, Track and Field News and IAAF ranks the top 10 performers all over the world and awards them points. Since Kenya attained independence in 1964, her results have steadily improved with the current ranking averaging 56% of all the top ten endurance

runners (Table, 2.5). From Figure 3.4a, Kenya has done exceptionally well in 3,000m Steeplechase followed by 5,00m events. While figure 3.4b demonstrates that overall, the performance after the 1990 Kenya Government's liberalization kept on increasing.

	1965-1990			1991-2008		
	Before Liberalization			After Liberalization		
	All	Men	Women	All	Men	Women
800m	44	44	0	80	64	16
1,500m	24	24	0	78	73	5
3,000m	45	45	0	137	117	20
3,000m SC	43	43	0	114	114	0
5,000m	27	27	0	117	78	29
10,000m	26	26	0	101	81	20
Marathon	8	0	0	109	76	33
	217	217	0	726	603	103

Sources: iaaf.org; Track&Field.org

Table 2.5: Kenya's World Rankings in Endurance Events

Kenya at the Olympic Games

Kenya has taken part in 10 Olympiads with the exception of two which it boycotted- the first being in 1976 Olympics to press for the end of apartheid rule in South Africa and the second was dragged into the cold war ideological antics between the USSR-USA led boycotts of 1980 (IOC, 2009). The following illustrative bar graph further demonstrated the improvement before the 1990 Kenya Government's liberalization (at 31 medals) and 44 after once more highlighting the impact of the policy shift.

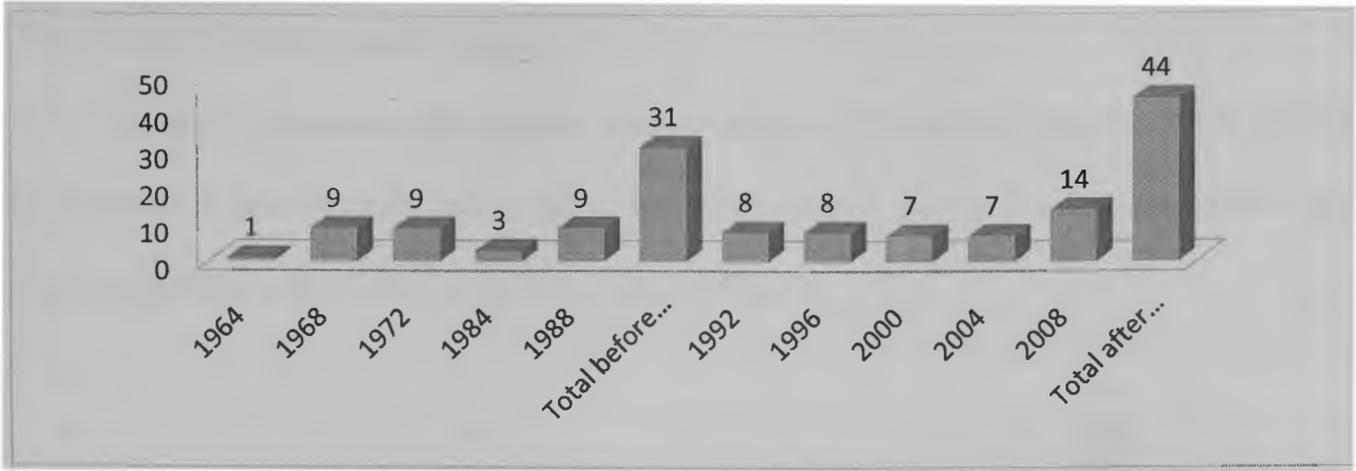


Figure 2.4: Kenya's Performance at the Olympic Games, 1964-2008

Kenya at the All African Games

Kenya has taken part at all the 8 All African Games competitions. In 1987, Kenya achieved its best performance where as host, it won 63 medals overall. The sum of medals after the 1990 Kenya Government's liberalization policy shift was 180 as compared to the 151 before (Figure 2.4).

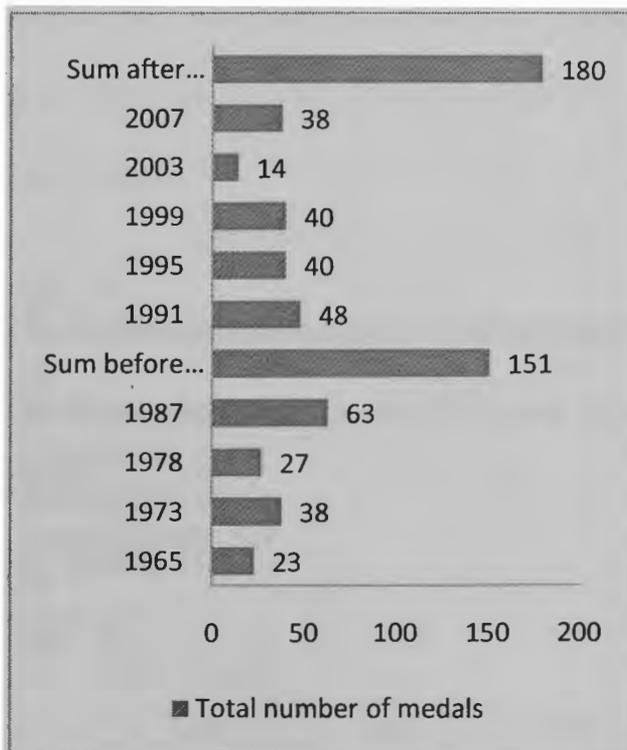


Figure 2.5: Kenya's Performance at the All African Games

Kenya at the Commonwealth Games

At the Commonwealth Games, Kenya attained 69 medals after the 1990 Kenya Government's liberalization compared to 86 before, mainly due to the fact that there were more competitions (6 total) as opposed to the previous 4.

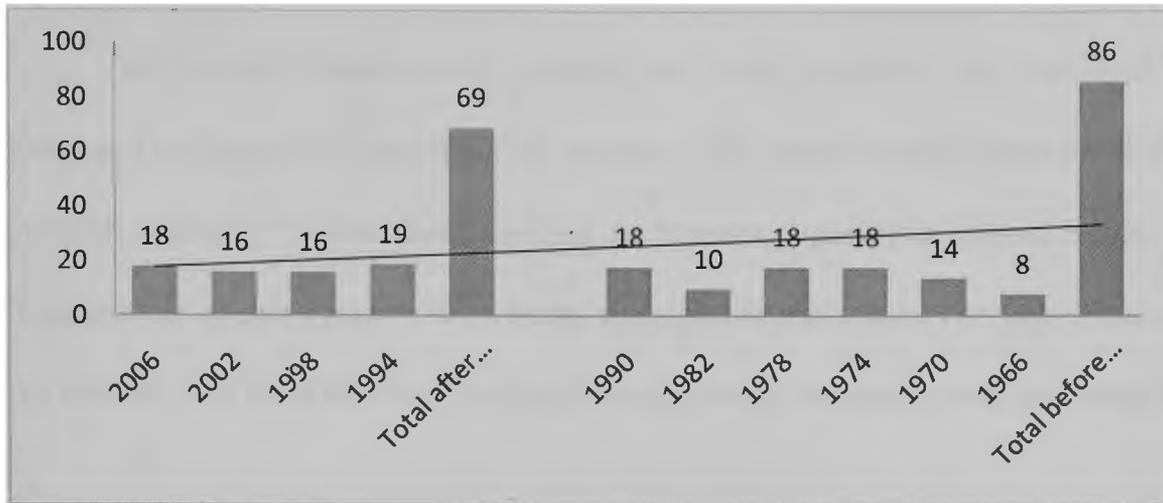


Table 2.6: Kenya's performance at the Commonwealth Games, 1966-2006

Kenya's Marathon Performances

Kenya has become an important marathon producing nation. Table 4.1 below demonstrated the rate of sub 2:20 increasing from 0 in 1975 to 490 in 2005 (a 490-percent increase in 20 years).

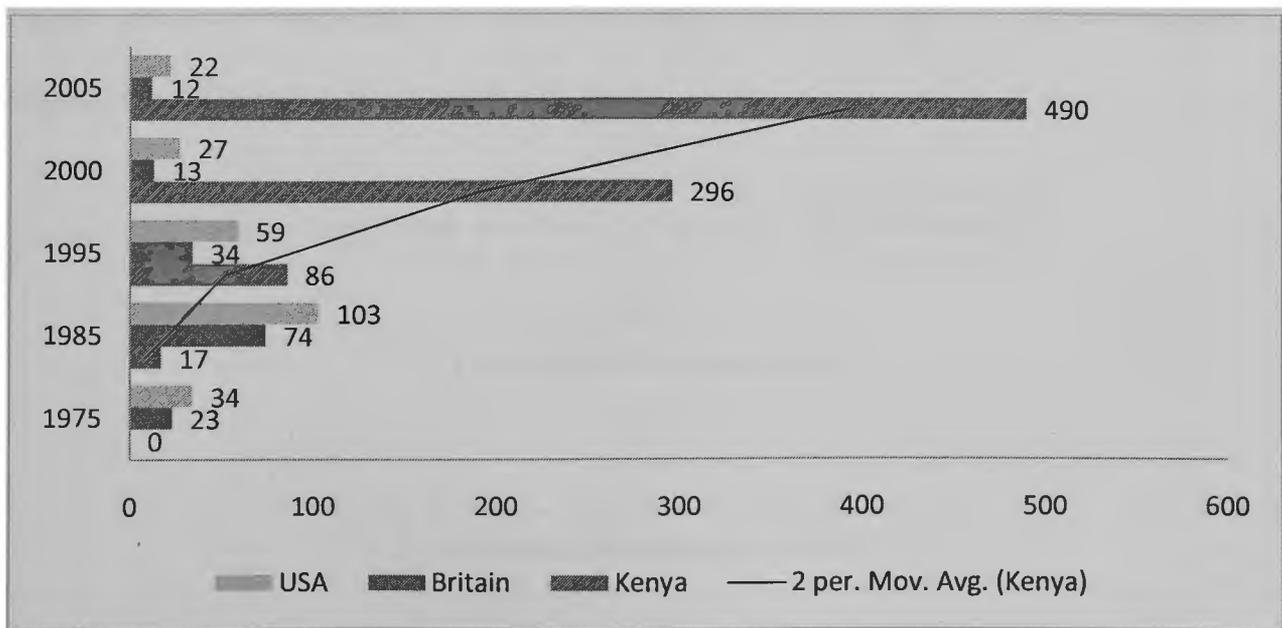


Table 2.7: Kenya's Sub 2:20 Marathon performances, 1975-2005

After 2005, the rate of production got better. As of 2008, 20 of the top 30 fastest times were Kenyan men. In 2007, 67% of the top 100 men's times at the marathon were run by Kenyan athletes (IAAF, 2009).

Summary

This section attempted to explain the social, political and historical roots of the Kenyan Government's liberalization process. The initial results indicate that from 1990 onwards, Kenya's international running performance greatly improved across the selected international events ranging from 800m through the marathon. The next chapter documents the theories that have been put forth to date as to why Kenya succeeds in distance running.

Past Studies on Kenya's Endurance Running

This section covers the past studies on Kenya running. A variety of advantages are discussed together with their strengths and weaknesses.

Psychological Advantages

Psychological advantages may be sourced from self-belief and mental toughness. Figure 2.8a below highlights the view that having both self belief and mental toughness may explain Kenya's endurance running successes.

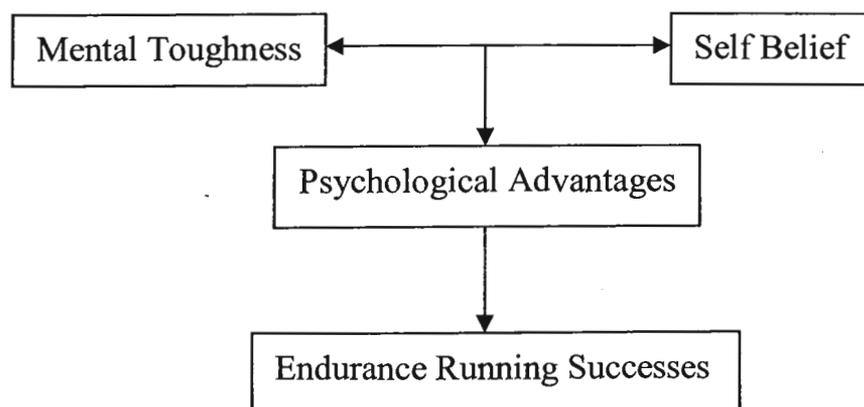


Figure 2.8a: Conceptual framework of psychological advantages

How then can these two constructs act advantageously to the Kenyan endurance running successes? The next section deals with this question.

Self Belief

Self belief is an individual's ability to trust that he/she will excel in self chosen endeavour/s (Starkes & Ericsson 2003). How then can this belief be transformed to become an advantage to the Kenya's endurance runners? Noakes (2003, p.123) appropriately elucidates:

“The outcome of the performance is there, from what you really believe, before the first step is taken. The body will always give up; you have to make the mind run the body. Kenyans are great believers.”

When an endurance runner is capable of managing their self belief, it can enhance an athlete's quality of choices leading towards extra effort (Eriksson, 1996). Tanser (2008, p. 208-210) adds:

“The self-belief that Kenyans have in themselves is unmatched... Simply put, Kenyans do not hope to win a race; they take action to try to win that race...” and as one physiotherapist (Phil Wharton) confirms: “They mentally give it all. They are great believers.”

Furthermore, the ability to believe in the self may also result in a positive performance attitude as highlighted by Bill Rogers who raced against Kenyan runners in the 1970s and 80s. He had this to say (www.runningabout.com , n.d):

“I can say that every Kenyan runner I met was like the salt of the earth; very friendly and low key, humorous, and very, very determined to win. I just loved that attitude! Run forever Kenya!”

Many other notable runners have also attested to their reliance on their personal self belief. One such example, Peter Rono, a 1,500m Olympic gold medallist remarked: “If I asked myself why I won the Olympic gold, it is because I truly believed in myself that I would win.” (www.marathonrunning.com ,n.d).

Mental Toughness

Mental toughness is the ability of the mind to withstand pain-either in training or in competition. How, then, can Kenyan runners translate this ability into positive performance results? The mentally tougher athletes usually prevail and the difference between success and failure is often more easily and perhaps more appropriately attributed to factors such as psychology (Baker & Horton, 2007; Iso-Ahola, 1995). Mental toughness becomes more profound and apparent at the ability of an athlete to focus and strive on irrespective of the odds (Monroe, 1999) and also manage negative psychological energy such as anger from defeat (Striegel, 1996; Mahoney, 1995). Similar views are held by Hamilton, 2000; Hamilton & Watson, 2000; Baker & Horton, (2003) attesting that the Kenyan ‘mindset’ is now an additional factor in maintaining a competitive advantage. Thus they have developed an aura of invincibility both in their own minds and the minds of their opponents.

A good example that Kenya may relate to emanates from Tanzanian athlete Akhwaki. Bloodied and bandaged, he entered the Olympic Stadium one hour after the winner. He was the reigning African champion but had taken a fall that isolated his knee. Despite

excruciating pains, he however limped all the way to the finish. When asked why he continued, his answer:

“My country did not send me to Mexico to start the race. They sent me to finish.”

The act of finishing against such adversity was a courageous testimonial for runners all over the world. Berg-Schloser cited in Bale & Sang (2003) disclosed in the 1970s that of all the Kenyan ethnic groups, it is the Kalenjin (who produce most of the elite Kenyan runners) that had the highest achievement motivation. Mahlmann (1989) found that the Kalenjin had the greatest ascetic experiences which built mental toughness.

Physiological Advantages

The second popular explanation of Kenya's endurance running successes is physiological advantages. This advantage encompasses; muscle type, leg muscle oxidation enzymes, capillaries, plasma lactate, ammonium response and genetics (Figure 2.8b).

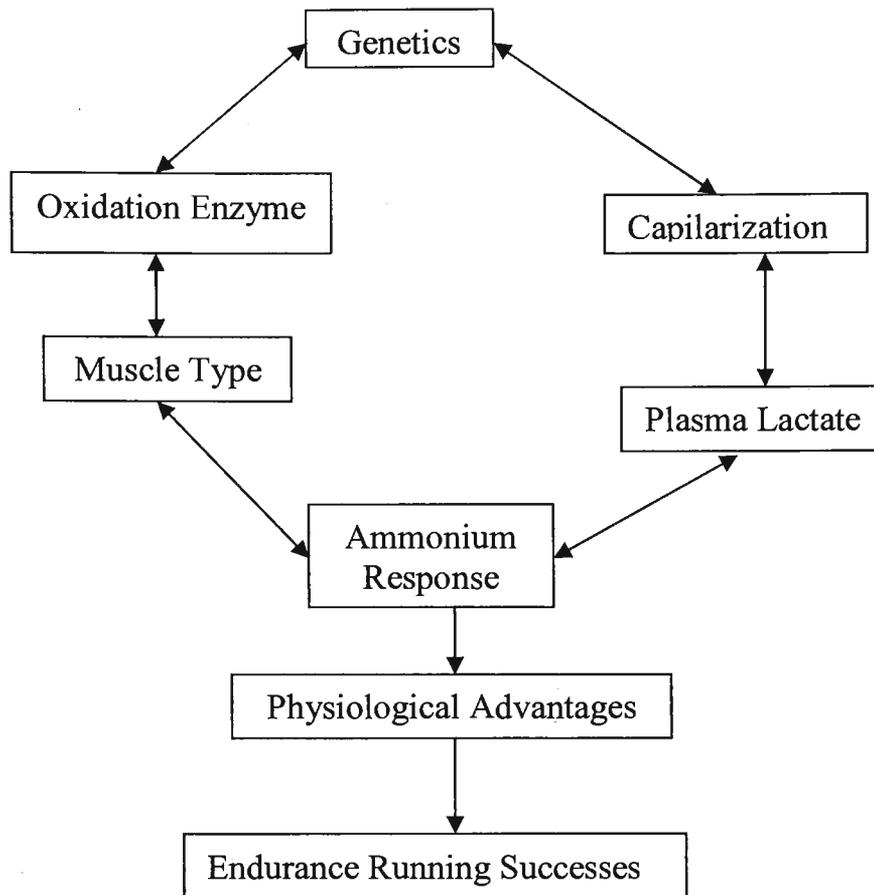


Figure 2.8b: Conceptual framework of physiological advantages

A review of the literature supports the view that the Kenyan runners may advantageously possess these attributes comparable to other world class endurance runners. How then can physiology possibly be a source of Kenya's competitive advantage?

Muscle Type

Muscles can be divided into three categories-slow twitch, fast twitch A, and fast twitch B-with the higher the percentage of slow twitch muscles the greater the potential of becoming a successful endurance runner (Pritzinger & Douglas, 2001). World class marathon runners often have slow twitch of over 75% as compared with that of the general population of 50%-this is determined by muscle biopsy (Pritzinger & Douglas, 2001). There is a

moderate to strong relationship between distance running performance and the proportion of type I muscle fibres (Costel et al, 1973; Sjodin & Jacobs, 1981 in Larsen, 2003) and the same is also true for well-trained cyclists (Coyle et al., 1988). The percentage of type I muscle fibres has been considered as an indicator of the “trainability” of athletes (Sjodin et al., 1982). Kenyan endurance runners (Saltin et al., 1995a) and Kenya boys (Larsen et al., 2003a) have been reported to have high percentages of type I muscle which is more suited for endurance running as compared to the general population.

Leg Muscle Oxidation Enzymes

Everton et al., 1999 in Larsen, (2003), have shown positive correlations between the activity of three oxidative enzymes, citrate synthase, succinate dehydrogenase (GPDH), and performance running. Weston et al., (1999) also found a positive correlation between the citrate synthase activity and time of exhaustion when running at given percentage of peak velocity. When citrate synthase of Kenyan and Scandinavian runners was compared, no difference was found (Saltin et al., 1995a). In the same study Kenya runners had higher activity of the b-oxidative enzyme HAD in their muscle. From Pfitzinger & Douglas (2001, p. 16) the link between aerobic enzymes and possible endurance performance becomes clearer:

“Lactate threshold training increases aerobic enzyme activity; this adaptation improves the efficiency of your mitochondria. The more aerobic enzyme activity in your mitochondria, the faster you produce energy aerobically.”

However a study of untrained Kenyan boys and Danish boys showed that the latter group had 30% higher citrate synthase activity, but no difference in HAD activity (Larsen et al., 2005).

Capillaries

A good functional network of capillaries determine the oxidative profile of musculature and is closely related to VO_{2max} (Larsen, 2003), meaning that they are able to transport large amounts of oxygen to their muscles which becomes able to extract and use a large amount of oxygen (Pfitzinger & Douglas, 2001). Although the maximal heart rate is determined genetically, it can't be improved by training and so it is not a factor in determining marathon success (Pfitzinger & Douglas, 2001). Age-wise, the advantage is summarized in Table 2.6:

Average Individual	VO2max score
sedentary 35-year old man	45ml/kg/min
35-year old male runner	55ml/kg/min
35-year old male marathoner	60-65 ml/kg/min
elite male marathoner	70-75 ml/kg/min
Source: Adopted from Pfitzinger & Douglas, 2001, p.18-19	

Table 2.6: Relationship between Vo2 max and age

The capillary density has also been shown to be positively correlated with running velocity at which blood lactate begins to accumulate (Sjodin & Jacobs, 1981 in Larsen et al., 2004).

Pfitzinger & Douglas (2001,p. 16) clarifies this link:

“With the correct training, you increase the number of capillaries per muscle fibre. With more capillaries per muscle fibre, oxygen is more efficiently delivered where it's needed. Capillaries also deliver fuel to the muscle fibres and remove waste products such as carbon dioxide.”

When Kenyan and Scandinavian runners were compared, higher capillarisation was more prevalent on Kenyan runners. But studies of Kenyan rural boys compared with Danish ones revealed similar capillarisation and VO₂ uptake (Larsen et al 2004).

High Lactate Threshold and Ammonia Response

High lactate threshold is the most important physiological variable for endurance running and most directly determines performance in any event lasting more than 30 minutes (Pritzinger & Douglas, 2001). Lactate threshold reflects both the ability of the heart to transport oxygen to the muscles and the rate at which muscles can produce energy aerobically (Pritzinger & Douglas, 2001). The average runner's lactate threshold occurs at about 75 to 80 percent of his or her VO₂ max, with that of successful runners being 84-88 percent of VO₂ max and that of elite ones being 88-91 VO₂ max. Blood lactate response to sub-maximal running is a good predictor of endurance running performance and primarily reflects the local metabolic response in the 'running muscles' (Larsen, 2003). Kenya elite runners had lower blood lactate, both at altitude and at sea level, compared to other runners at high intensities (Saltin et al., 1995a). This is so because with the accumulation of lactate in the blood, the ammonia concentration usually increases but only at very high intensities and then to a lower extent than other runners (Saltin et al., 1995a). Kenyan runners also had peak ammonia concentration following maximal tests of only half to one third as compared to other elite runners. In a separate study Kenya boys demonstrated lower blood ammonia concentration as compared to Danish boys (Larsen et al., 2003b; Larsen et al., 2004).

Genetics

The literature on genetics focuses on 'performance genes', which is thought to be common in endurance runners. Geneticists speculated till recently to be the 'obvious' cause

of Kenyan success but the evidence remains ‘intriguing but uncertain’ (Yang et al., 2007; Onywera et al., 2006). Recent genetic studies on cyclists (Lucia et al., (2006), rowers (Paparini, 2007; Gayagay et al., 1998), South African triathlon runners (Collins et al., 2004), Ethiopia runners (Scott et al., 2005b), Ethiopia and Nigerian athletes (Yang et al., 2007), British runners (Myson et al., 1999), Kenyan runners (Scott at al., 2005a) have produced no significant results. Further doubts are cast by Saltin, 1995a:

“We have no clue if there is one single gene, but we know there is a genetic advantage and that training of the body is a key factor. It is the activation of the gene that is the factor; they play a role but have nothing to do with ethnic groups”.

The genetic advantage theory has produced very little support (Collings & Skykes, 2004). Furthermore, the genetic advantage theory has not proved consistent considering that previously the Finns and the Swedish athletes were the long distance running greats. Tim Noakes, the author of *The Lore of Running* sums it well, “I think Kenyan running is something more than genes.” Why don’t they [Finns and Swedish athletes] use this advantage anymore? This lack of formative technical training is probably why Kenya has not yet produced sprinters.

Biomechanical Advantage

The third popular explanation of Kenya’s endurance running successes is biomechanical advantage. This advantage addresses how physical anthropologists postulated that Kenya endurance runners have specifically thin legs, narrow hips, extra strong ankles

which when combined constitute to the perfect biomechanical machine for endurance events (Pitsiladis, 2006). Entine has referred to African runners as “near perfect biomechanical package for endurance: lean, ectomorphic physiques, huge natural lung capacity, high proportion of low-twitch muscle fibres” (Collings & Sykes, 2004,p.166). This view seems premised on the notion that an efficient biomechanical body is associated with better running. Biomechanical advantage also called the thin-calf theory does not sufficiently explain the success as nearly identical-bodied Tanzanian Luo community that borders Kenya and other local communities are yet to produce any endurance runners. Pitsiladis, (2008) casts doubts when he comments that:

“I am not convinced by the East African thin-calf theory, although it may be part of the answer. A small part and not a prerequisite to success.”

Biomechanical advantage also referred to as running economy have correlated well with Kenyan lab performance tests because of their ability to use more efficiently higher percentages of their VO_{2max} when running (Larsen et al, 2005; Larsen et al., 2004; Saltin et al., 1995b). Walter Abmayr, a former Kenyan National Athletic Coach supports the efficiency theory when he adds: “A wide heel bone, which enables a better force transfer in the stride...” However there is still some controversy in the field of running economy. Some studies have shown that running economy is improved by training (Sjodin et al., 1982; Svedenhag & Sjodin, 1985; Franch et al., 1998 all in Larsen 2003). On the contrary, others have shown no improvement by in running economy with training (Daniels et al., 1978; Wilcox & Bilbulian, 1984; Lake & Cavanagh, 1996 all in Larsen et al., 2003).

High Altitude Advantage

The fourth popular explanation of Kenya's endurance running successes is high altitude advantages. A literature review of this advantage leans towards the view that the Kenyan highlands may assist in cardiovascular adaptations, conducive weather for training, and strength training from hilly environments. High altitude advantage will be explained based on the conceptual frame below (Figure 2.8c).

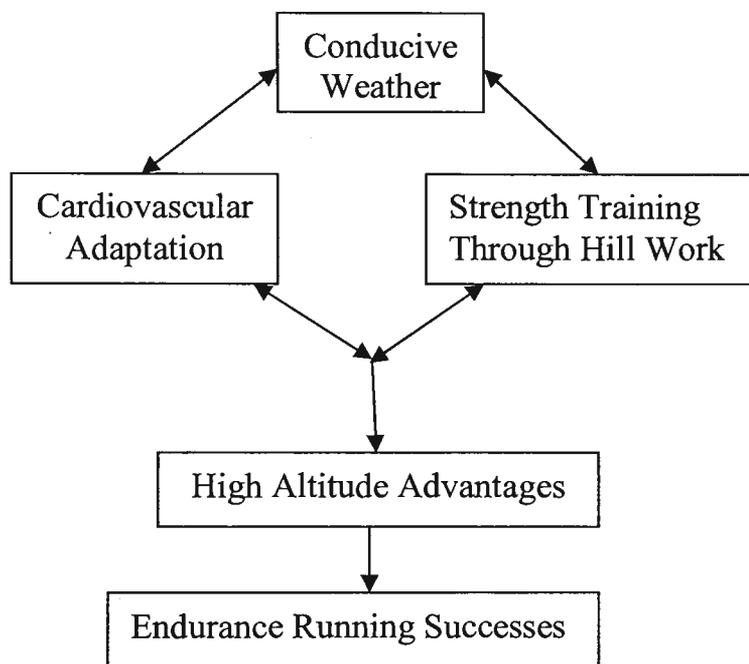


Figure 2.8c: Conceptual framework of high altitude advantages

How then may altitude contribute to the Kenyan successes? A number of arguments have been put forward, and they are discussed below.

Cardiovascular Adaptations

It has been widely believed that Kenyans are successful because they reside and train at altitude (Onywera et al., 2007; Collings & Skykes, 2004; Scott et al., 2003;), despite

conflicting evidence from Nepal and Peru which are yet to produce any notable endurance runners. As in the words of Colm (who has coached Kenyans for over 3 decades):

“There are a number of factors which make the Kenyans the runners they are. Altitude and good climate do play an important role” and that: “Kenyans rely on training long hours and running over hills as their reason for success”.

Mongetti (a former legendary Australian endurance runner) also observed when he was on a trip to Kenya that: “The other obvious factor for Kenya’s success includes living at altitude which gives them an inherent edge when utilizing oxygen whilst running.” (Mongetti & Hoeley, 1996, p.146).

This advantage may be explained thus: Living and training at altitude results in a variety of advantageous physiological adaptations such as the: “...benefit from the thin air they breathe, developing powerful hearts and lungs to compensate for the deficiency of oxygen.”(Tanser, 2001,p.7). These benefits also have support from (Dehnert et al., 2002; Jones et al., 2002; Woods & Montgomery, 2001 all in Scott et al., 2007) but the exact nature and relative importance of these adaptations to the success of endurance athletes is yet to be elucidated (Hamilton, 2000). According to Mackay (1976), events held at altitude are affected by 7 percent reduction on aerobic power and reduced wind resistance.

Bale & Sang, (1994, p.219) opposes the altitude thesis: “Such a view also ignores the fact that early success of Kenyan athletes was distributed across a variety of events. In addition, it ignores the concept of the ‘ecological fallacy’; that is, in this context, that while on average Kenya is a nation of high athletic productivity and high-altitude country, it is not necessarily the case that all the best athletes come from high altitude areas. Indeed, in some cases, such as that of marathon runner, Douglas Wakihuri, leading runners were born in

coastal Mombasa. Saltin et al, (1995b) found that altitude training did not enhance muscle buffering capacity of Kenyans who reside at altitude. On the contrary, even high altitude areas within Kenya like Lokiroung and Lodwar in the Rift valley are yet to produce any notable world class endurance runners. Similarly, Tibetans and Bolivians born and bred at the highest peak are also yet to produce any endurance running athletes. Despite the controversies, amongst the most dramatic influences of altitude has been the 1968 Mexico Olympic when nations residing from high altitude areas achieved unprecedented results as compared from those from low altitudes (Bale, 2003). Further doubts may be detected in the comments of the former legendry New Zealander Peter Snell: "I suppose, I thought, like the popular consensus at that time, they are good because of the altitude. Now I am not that sure."

Conducive Weather

Conducive weather as pertaining to training, Kenyans say "azima anga" (meaning magic air) when talking about Iten's (a popular high altitude training camp) where most Kenyan runners train and live. The same generally applies to the climate of the highlands which are conducive to training almost year-round, with low humidity making running pleasantly comfortable with the result of an ideal training condition. As mentioned, temperature, wind, soil, rainfall and relief affect running quality in a variety of positive ways (Lobozewicz, 1981, Thomas, 1997 both in Bale, 2003). For instance in very hostile climates like in Siberia and Antarctic (too cold) and Egypt and Chad (too hot), training outdoors throughout the year is not advisable and can even be fatal. On the reverse, the Kenyan highlands have cool with low humidity and pleasantly spacious terrains for training.

Strength Training Through Hill Work

Strength training addresses how hill work and daily chores may act as advantages. Tanser (2008, p.112) adds that “Kenyans place great faith in hill work” as much of the Kenya’s highlands are very hilly and “More likely than not, one will encounter a few hills on any training run.” These hills can ascend for miles and miles. Mix in the thin air and the heat and one gets a demanding session! The perfect hills are therefore most suitable for building leg strength and have been recorded to be in many training logs of Kenyan runners. Comments from the former national coach, Mike Kosgei on why he favoured a 200m hill for the national team may give more insights on the belief in hill training:

“I like the seniors to run for at least twenty-five repeats, the juniors twenty times, the women twenty, and the girls fifteen. When they reach the top, there is no rest; turn and stride back down for the next repeat. This is a very tough session and the athlete should be rested before attempting it.”

All the high altitude training camps follow similar gruelling hill-work regimes. The reason for this dedication to hill work is that it develops the leg strength to concur any competition as comments from Ibrahim Hussein, 1 time New York and three times Boston and Honolulu marathon winner makes it clear:

“If you work the hills, then running on the flat is easy.”

Moreover, the hills are usually muddy thus making: “It very good to build up good strength...It does not matter whether you run the 800m or the marathon, the cross country training is very important; it builds strength for all distances.” Says Kip Cheruiyot in Tanser,

2008, pp. 258). A similar argument was made by Collings & Skykes (2004, p. 158) that: “Perhaps the greatest advantage claimed by runners from Great Rift valley, a great mountain range that cuts across East Africa through Kenya and Ethiopia, is their high-altitude backgrounds, which give them a natural strength from birth that their rivals can only attain through hard training schedule outside their own countries.”.

From an organizational culture perspective, the Nandi hills have gained a legendary status where athletes flock to train believing that because the past successful runners used particular hill for training, then they will also benefit from the same. This legendary status is confirmed by Sang’s driver: “All the greats have run this hill. Ibrahim Hussein often ran up this hill; his house is at the top. Kip Keino used to run here, and Henry Rono ran long up this hill.” Additionally Collings & Skykes, 2004, p.158-159 adds:

“The long-term culture seen in the inhabitants of the Rift Valley is often touted as a reason for their impressive success on the world marathon stage.”

Diet Advantage

The fifth popular explanation of Kenya’s endurance running successes is diet advantages. Diet advantage refers a particular selection of food - as far as the quality, quantity, and times of day a person eats - especially as prescribed to improve the physical condition, regulate weight, or cure a disease (Macquire Dictionary, 2007; Kent, 2006). In the Kenyan case, a growing number of journalists and researchers have supported the diet advantage view (Tanser, 2008,2001; Onywera et al., 2007 ;Bale & Sang, 2003). To help explain, it conceptually, Kenyan runners compared to other runners are prudent fresh foods food eaters (Figure 2.8d). What is therefore unique and advantageous in the Kenyan diet?

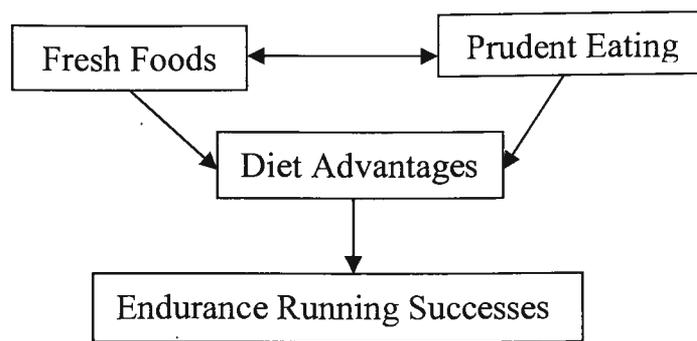


Figure 2.8d: Conceptual framework of dietary advantages

Prudent Eating

Prudent eating refers to the consumption of the right quality and quantity of your food requirements in accordance with your particular sport. For example endurance running ought to consume in excess of 3,500Kcal per day and predominantly from carbohydrates (Fudge et al., 2008). Diet as a performance boost has been investigated by a handful of scholars such as Fudge et al., 2006; Onywera et al. (2004) who assessed the hydration status of endurance Kenyan runners and concluded that their nutrition intakes corroborated well with current American College of Sports Medicine recommendations. In another study, Hulley et al., (2007) compared eating disorders and menstrual dysfunction (using questionnaires) among Kenyan and British female athletes to find none in the former. The weakness of this study was that it did not account for the possible negative effect of cultural taboos about sexual issues such as the taboo of a public discussion of menstruation. In another study, Mukeshi & Thauru (1993), evaluated the food intake of male Kenya runners for 2-days per month over three months period using a combination of recall and direct observations to report a negative energy intake. The three studies can be rated weak as the samples were very small; the studies too short and therefore lacked the power of generalizability.

Fresh Foods

Fresh foods studies on this topic have been done mainly through interviews. On Kenyan diet, Phil Wharton (a physiotherapist of elite Kenyan runners) explains:

“The food there is so fresh: the meat is just slaughtered and oozing with enzymes and energies....They fuel at much higher level compared to us. The whole key is not to break down in training and nutrition plays a big part in this.”(Tanser, 2001, p.53).

Steven Mongetti (one of Australia’s most outstanding distance runner) on a visit to Kenya observed that: “Their diet is also natural, with very little processed food.” (Mongetti & Hoeley, 1996, p.146). In the words of Margret Okeyo (the 2007 New York Half-Marathon champion): “You must eat fresh to stop the body from breaking down with the hard running.” (in Tanser, 2008,p.252). On interviewing Christensen (an exercise physiologist from Denmark) commented that: Kenyans often mention their intake of ugali and milk as one of the reasons for their success in running” with ugali being the main contributor of their high carbohydrate intake-which is recommended for endurance events (ACSM, 2008). Furthermore, Tanser (2008) adds that: “The diet common to the average family from the rural towns and villages, were virtually all Kenyan runners grow up and live, is quite nutritious.” He further attest to the fact that the cost of production is cheap as fertile land, labour, and rainfall is plentiful.

Lifestyle Advantages

The sixth popular explanation of Kenya’s endurance running successes is lifestyle advantages. Lifestyle advantages refer to running or walking to school and the narrow range

of alternative sports and recreation activities (Figure 2.8e). A growing and steady accumulation of epidemiological evidence now clearly pinpoint to lifestyles choices as the key determinant of the growing catastrophic proportions of hypo-kinetic diseases such as obesity, diabetes, and cardiovascular problems in Australia, USA, Britain and Canada (CDC, 2009). It is now an open secret that the more active your lifestyle is the healthier you are more likely to become (WHO, 2009). In the Kenyan case, lifestyle choices are most prevalent in two key areas:

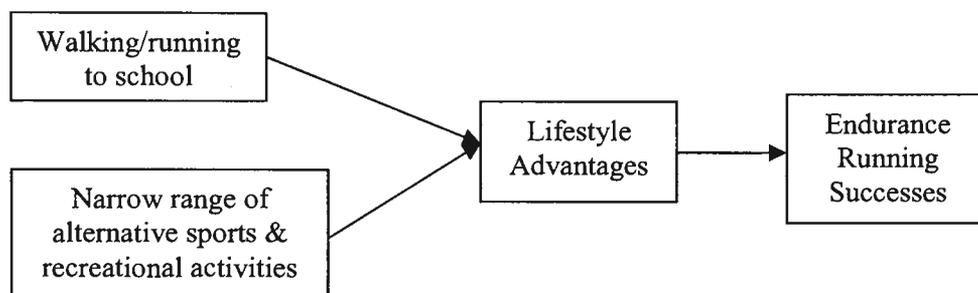


Figure 2.8e: Conceptual frame of lifestyle advantages

In summary, the general lifestyle of Kenyans is very demanding compared to the average Australians or Americans - and having been brought up in such a “tough” environment teaches them that hard work is a prerequisite for survival and commonly the only way out of poverty:

“Perhaps the hardships of life take away the comforts of dreams. The Kenyans I observed do not sit around waiting for a lucky break or a miraculous transformation of athletic form. They believe in the input-equal-output ratio.”(Tanser, 2008,p.104).

Running/walking to School

Firstly, years of walking to or running from school, and running for the school teams has been proposed to contribute to the Kenyan production of runners (Onywera et al. 2007; Saltin et al 1995a). This may be so because from independence in 1964, Kenya had very few primary and secondary schools, and the few that were there were quite far away from most homes. Apart from having to run or walk every day to and from school, Physical Education (mainly running) was compulsory in schools, with High schools like St. Patrick's, Kapsabet, Kapkenda Girls and Singore producing world class runners. Lydia Cheromei claims that: "I ran to school to avoid a canning for being late." Peter Snell a former 1960 Olympic 800m champion reiterates:

"Lifestyle is critical. When I grew up in New Zealand, it was a lot like Kenya. Today, New Zealand is moving more toward being like USA, and people aren't running well. I was bloody poor when I was a runner. I would walk everywhere and cycle to work, but I had all I needed."

Even when Mongetti was on a trip to Kenya he observed that: "When we were driving up through the Rift Valley, there was no public transport; everyone was on foot, old ladies walking down the road. It's all to do with lifestyle." (Mongetti & Howley, 1996, p.146).

However some current runners have reported that this wasn't the case as they lived close to school (Bale & Sang, 2003). Like Rose Cheruiyot (one of the most successful female runners) dispels the myth by commenting that: "I never ran to school; I lived only 400 meters away". It should also be noted that as the population increased more competitions have been held, more schools have been built, which has probably led to a possible shortening of the distances walked or run by many students to school.

Narrow Range of Alternative Sport and Recreation Activities

Secondly, the rural environment where most elite runners grew up with not as many alternative sports as in developed nations have been attributed to be the maintenance of the Kenyan dominance in running (Manners, 2007; Bale; 2007; Mayes, 2005). Moreover, “years of walking and helping on the farms build immense stamina and core strength that are crucial to running.” This may be true as compared to first world nations where children grow up with multiple alternative activities such as video games, 24 hour access to digital TV, summer camps, shopping malls and all the lofty things that inactivate affluent societies. In Kenya, there were just 18 TV sets 103 radios per 1,000 of the population; 813,100 telephones; railway length of 1,885 miles; 271,000 passenger cars and 75,900 commuter vehicles (WABF, 2003). Additionally, by 2001 only one in every 260 Kenyans owned a TV set (in the USA it is 3 sets per house). Moreover, in Kenya there is 1 passenger car for every 180 people, while in the USA there is a car for every 1.8 people (UNDP,2005). Brother Colm (an Irishman with 30 year coaching experience in Kenya) when comparing Kenyan kids to European children, noted:

“In Europe the young adult has many sports to choose from. Not so here in Kenya! Westerners are not tough as they used to be. Fifty years ago, around the times of the great wars, people had to struggle much more; it was a much hardier breed. Now life is easy, but for Kenyans the struggle continues. There are very few distractions here in the Rift Valley. It is easy to keep a focus on hard training.” (Tanser, 2008,p.157).

Furthermore, most of the Kenyan population still don't use, or can't afford energy-saving appliances such as washers; vacuum cleaners, and so all or most of the house and farm

chores are done by muscular effort and bodily strain. Consequently as a result of this disparity, Kenyans are forced to cover more distance on foot and spend less fattening hours watching TV. It is within this context that Tanser, 2008, p.68 warns:

“To run like a Kenyan, you have to reduce the level of stimulation and spend more time on the things that are needed to be done. We are overindulged here in America. The way this society is set up, you will never get the droves like Kenya, you may get one or two, but we’ll never compete unless there is a dramatic culture change.”

In sum, a variety of arguments have been tabled in order to explain Kenya’s endurance running successes can be conceptualized as follows:

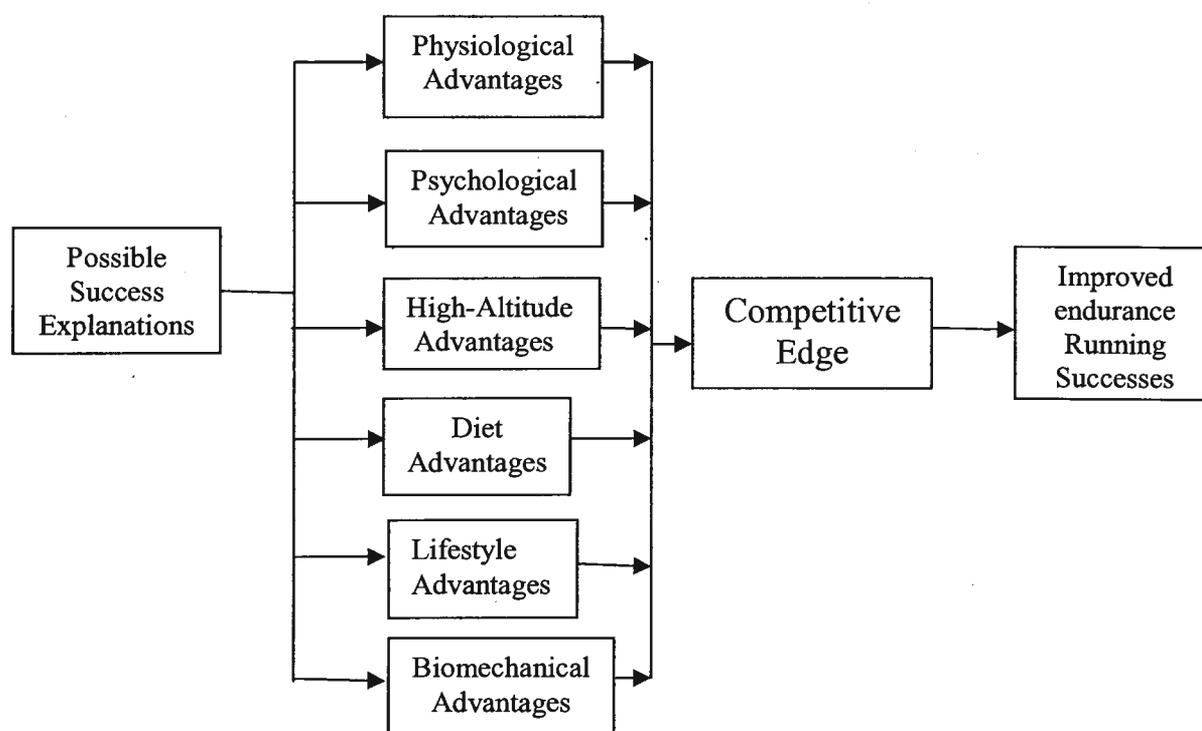


Figure 2.8f: Possible explanations for Kenya’s success in endurance running

Weaknesses and Drawbacks of the Studies on Kenya Running

A detailed review of literature reveals that while various researchers and commentators have made many claims about why Kenya produces so many outstanding endurance runners, their claims are not always supportable. A number of journalists have investigated the possible theories that explain the Kenyan successes, but the results are mixed (Tanser, 2008, 2001; Wirz, 2006; Mayer, 2005; Bale & Sang, 2003). The Kenyan successes question is quite a complex one (Pitsialis et al., 2006). Furthermore, evidence put forth by many commentators is often quite scant, simplistic, ambiguous, and too weak to give it credibility. Since the studies on Kenyan running is still at its infancy these recent studies have gone a long way in pioneering contributions to the understanding of Kenyan running (Pitsialis et al., 2007). “While the theories remain just that, offering only sceptical suggestions rather than firm facts...” (Collings & Skykes, 2004, p.160). These studies can therefore be criticized on the following grounds:

First, the studies overlook the possible influence of the broader political environment, and how changes in the Kenyan political and policy landscape may have set the scene for a boost in endurance running at the international athletics stage. In particular they fail to accommodate, or take into account, the resource accumulation which took place, especially after the 1990 Kenya Government’s liberalization policy

Secondly, significant attention has been given to general physiological, psychological and lifestyles; however, the problem with these factors as explanations is that they remained relatively unchanged during the time that Kenyan running performances improved exponentially from 1990 onwards. Furthermore the studies have used micro-level analytical frameworks (i.e. genetics and diet) to explain the success thereby advancing the role of the individual factors that contribute to success as opposed to the macro level factors like national sports policy initiatives.

Thirdly, some of the studies (such as those of Manners, 1997) suffer from racially-loaded preconceived ideas of Africans in general and Kenyans in particular as being backward, barbaric, savage and uncivilized. The derogatory reasoning that cattle raiding and circumcision actually ‘caused’ Kenya’s endurance running success have all totally failed rigorous empirical research with the leading runners denying such links (Collings & Skykes, 2004). Regardless of the intentions of the journalists, the choice of language perpetuates racial stereotypes. It is very unfortunate that most of the writers have been journalists whose main aim has been to reinforce false anecdotal and derogatory claims about Kenyan runners. It is unfortunate that even in the new millennium it is still common to encounter mass media stories with false, un-objective commentary with no empirical evidence for claiming that customs like cattle raiding and circumcision actually “cause” success! Collings & Sykes (2004) warns the ‘racial scholars’ that: “... repression and prejudice cannot succeed against talent and self-belief.”

Fourthly, because the writings were mainly by journalists (who were out to tell a “fascinating” story rather than undertake serious research), their choice of language was to create a sense of drama and excitement, and not systematically address the outcomes or achievements of Kenyan runners. Such an approach greatly limits objectivity and reliability of these explanations. Additionally, although most of the journalists refer to the factors explaining Kenyan success as theories, this is not methodologically correct as a theory has to be empirically proven repeatedly over to be objectively and reliably called a theory (Ketchen, 2007; Crosswell, 2003). Unfortunately most of the theories about Kenyan running do not meet this stringent but simple methodological rule.

Lastly, the authors of these explanations do not articulate their methodologies at all thereby making the findings un-reproducible and too hard to confirm.

Thus, the results of these commentators should not be considered definitive but rather hopefully be turned into a positive so as to inspire future research. In contrast to the oft-repeated false claims about Kenya's endurance running, this study (for the first time) offers an alternative new view with credible Resource-Based View and empirical evidence that such falsities can no longer be defended.

Summary

What, then, has been learned from previous studies on Kenyan successes? The results are mixed. All, and yet not entirely any, of these factors may offer a conclusive explanation of Kenya's endurance running success. In short, no one 'answer' is sufficient when it comes to explaining Kenya's' success. The limitations of most of the above explanations for Kenyan endurance running suggest that there are research gaps to be filled, and opportunities for future research. Kenya's endurance running success has no secrets, and no-short cuts, and clearly there are a multiple and complex factors that if properly imperially investigated, may add to the long equation. Moreover, the studies discussed above fail to take a holistic view of Kenya's endurance running development. In this context, it is surprising to find that there is little research that addresses the influence of facilities, training programs, and support systems on athletic achievement. In other words, it is possible that there is some additional and quite tangible factors in the structure and operation on Kenya sports that may help explain its endurance running successes.

CHAPTER 3

RESOURCE-BASED VIEW

Resource-Based View or RBV as it is now commonly known is a strategic management theory used to explain the role of resources in determining firm performance (Barney & Hesterly, 2009; Barney & Clark, 2007). The historical growth and development of RBV can be placed into two main stages: The developmental stage (1937-1981 period) and can be traced back to works of Coase (1937), Selznick (1957), Penrose (1959), Stigler (1961), Chandler (1962), Williamson (1975), and Nelson & Winter (1982). The maturity stage which covered the period from 1982 to the present - attracted studies which infused industrial with organizational economics. Over this period, the notable influential writings included Wernerfelt (1984) and Barney (1986a, 1986b) who formulated the resources-based framework. Others such as Conner, (1991) and Mahoney & Pandian (1992) emphasized the correlation between resources and firm performance. Newer concepts were later developed and integrated into pre-existing frames and included: uncertainty imitations (Lippman & Rumelt 1982), isolating mechanism (Rumelt, 1984), inimitability and its causes (Dierickx & Cool 1989). All of the concepts were synthesized by Barney & Clark (2007) in their capstone work.

Resource-Based View, when viewed as a theoretical framework, is a strategic management tool used to: (1) determine the resources available to a firm and (2) explain a firm's ability to reach competitive advantage or sustainable competitive advantage when different resources are utilized (Barney & Hesterly, 2009; Mills & Platts, 2003). The fundamental principle of this theory is that the basis of competitive advantage of a firm lies primarily in the application of the bundle of valuable resources at the firm's disposal (Gallo, 2008; Grant, 1998). Moreover, it is based on the assumption that a firm's ability to retain

supremacy above normal profit and competition is determined by the firm's own resource endowments (Harvey, 2004; Hoopes et al., 2003). Varying performance between firms is consequently a result of heterogeneity of assets (Lopez, 2005; Helfat & Peteraf, 2003) and the RBV attempts to explain the factors that cause these differences to prevail based on the ability of the firm to maintain a combination of resources that cannot be easily replicated by competitors (Barney, 2001; Amit & Shoemaker, 1993; Mahoney & Pandian, 1992; Grant, 1991). The transformation from a competitive advantage to a sustainable competitive advantage requires that those resources are heterogeneous in nature and not perfectly mobile (Jugdev, 2003). A sustainable advantage also requires the effective coordination of resources, since this is essential for securing gains in productivity.

The choice of the Resource-Based View was to evaluate the impact of resources which were brought about as a result of the 1990 Kenya Government liberalization policy on Kenya's endurance running successes. It was therefore essential to use a conceptual model that had resource-use front and centre, and examine Kenya's performance in the light of the scale and quality of its resource base. The remainder of this chapter will discuss the key concepts of the Resource-Based View, identify the three resource dimensions of Barney's resource framework, explain the rationale for using the Resource-Based View, and address criticism of the Resource-Based View. The chapter will conclude with a brief analysis of Kenya's endurance running resource base by separately discussing endurance running human resources, endurance running organizational resources, and endurance running physical resources.

Key Concepts of the Resource-Based View

In the Resource-Based View literature, the following terms are frequently used. Their definitions will therefore enhance further explanations of the remaining sections.

Absorptive capacity refers to a company's ability to identify value, assimilate and use new knowledge (Hill et al., 2004; Cohen & Levintahl, 1990).

Causal ambiguity exists when the link between resources and sustainable competitive advantage is not understood or understood only imperfectly (Barney & Clark, 2007).

Competitive advantage is a factor that gives a special advantage to a nation, group or individual when it comes to competing with others (Collins, 2006). It arises when a company is able to outperform its rivals, as commonly measured by the attainment of above-normal profits (Hill et al., 2004). It is obtained if the current strategy is value-creating, and not currently being implemented by present or possible future competitors (Barney, 2007).

Competitive edge refers to an advantage that one company or product has over its rivals in the market (Collins, 2006).

Critical success factors refer to aspects of a business that are considered to be most necessary for it to be able to achieve its aims and continue to operate successfully over time (Collins, 2006).

Distinctive competency refers to the unique strength that allows a company to achieve superior efficiency, quality innovation or responsiveness to customers or the ability to manage resources better than competitors do or the possession of a uniquely valuable resource and the capacity to effectively exploit that resource (Hill et al., 2004).

Human resources refers to the employees which an organization has available. The term also refers to competencies such as knowledge, skills, training, experience, judgment, and intelligence that employees possess (Fitz-enz, 2009; Baron & Armstrong, 2008; Barney & Clark, 2007).

Organizational resources refers to the history, relationships, trust and organizational culture that are attributes of groups of individuals associated with a firm as well as the formal

and informal organizational structure concerning planning, reporting, controlling and coordinating systems (Barney,2007; Das & Teng, 2000).

Physical resources refer to plants, equipment, facilities, and buildings as well as geographical location (Barney, 2007).

Resources refers to assets, capabilities, organizational processes, firm attributes, information, and knowledge controlled by a firm that enables the firm to conceive and implement strategies that improve its efficiency and effectiveness (Barney, 2006; Agan, 2005; Hill et al., 2004).

Resource capabilities refer to a company's ability to productively deploy resources, usually in combination, to bring about desired end (Barney & Hestley, 2009; Hill et al., 2004).

Strategic commitment refers to the level of resources and capabilities that a company commits to a particular strategic decision over a specific objective (Hill et al., 2004; Ghemawat, 1991).

Social complexity refers to when some resources are based on complex social phenomenon such as cultural processes and relationships which can be impossible to replicate or 'engineer' to attain its valuable or similar benefits (Barney, 2007; Hill, 2004).

Sustainable competitive advantage also just referred to as sustainable advantage is the competitive advantage that can be preserved over a long period of time as opposed to the results of a short-term tactical promotion (Collins, 2006). Sustainability of the winning edge is determined when successful firm's strategies cannot be imitated by its competitors.

Time compression and diseconomies refers to the time needed to develop resources through learning, experience, company specific knowledge or trained proficiency in a skill (Hill et al., 2004; Peteraf & Bergan, 2003; Ekeledo, 2000).

The Three Resource Dimensions

Resources are factors that a company owns, controls and uses for the purpose of creating value or to perform its operations or carry out its activities (Newbert, 2005; Ordaz et al., 2003). Categorically, resources are distinctively divided into three main dimensions namely, human, organizational and physical resources (Figure 3.1).

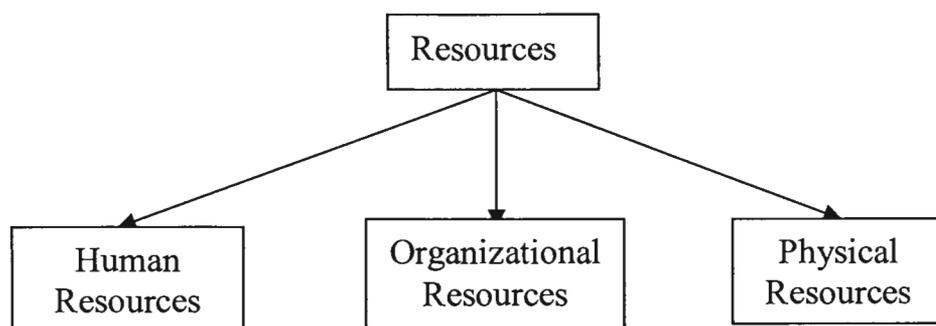


Figure 3.1: The three dimensions of resources

The first dimension human resources, includes knowledge, skills, training, experience, judgment, and intelligence (Fitz-enz, 2009; Baron & Armstrong 2008; Barney & Clark, 2007). The second dimension, organizational resources refers to organizational culture, history, relationships, and trust as well as the formal and informal organizational structure concerning planning, reporting, controlling, and coordinating systems (Nortnagel, 2008; Barney, 2007). The third and last dimension is physical resources which consist of, but are not limited to, plants, equipment, facilities and buildings (Barney & Clark, 2007; Barney, 2006).

Barney's Resource Framework

Barney's resource framework is largely based on Porter's (1985) concept of the value chain, which can be employed to identify those activities that are at the core of the firm's

competitive advantage. A closer critique of the evolution of the RBV clearly indicates that it was and still is designed to distinguish how resource exploitation generates competitive parity, temporary competitive advantage and sustainable competitive advantage. Furthermore, the differences in resource endowments are considered to be causally related to the differences in product attributes and competitive position (Conner, 1991). According to Peteraf (1993, p.180), superior performance is feasible if a firm owns or controls resources which permit it to “produce more economically and/or to better satisfy consumer wants”. In the strategic management research, it is generally agreed in the literature that Barney’s framework is the most solid, thereby enabling other researchers to build on it while making it clear that if firms are to achieve sustainable competitive advantage through select resources and competence-sensitive strategy process is required. This study adopted Barney’s approach.

Researchers have identified four key characteristics of resources .Organizations may use resources which exhibit all, a few, or none of these factors. An organization would ideally want to have access to resources that are: (1) valuable, (2) rare, (3) in-imitable, and (4) non-substitutable. These characteristics go under the acronym of VRIN. Each of these features is discussed in the following section:

Firstly, valuable resources will help a firm to create or implement strategies that improve the company’s efficiency, or improve the value/cost ratio of a product or service, or allow the company to either exploit its opportunities or neutralize threats arising from external environment (Barney, 2007; Barney & Clark, 2007; Hill et al., 2004). Secondly, rare resources involve the possession of a resource by a small number of competitors (current or potential) or, ideally, by only one company (Barney, 2007; Barney & Clark, 2007; Hill et al., 2004). Thirdly, resources are in-imitable to the extent of the degree to which competitors can imitate or replicate them (Barney, 2007; Barney & Clark, 2007; Hill et al., 2004). If competitors are unable to replicate the resource, then it becomes a source of sustainable

competitive advantage (Barney, 2007). Lastly, resources are deemed non-substitutable to the extent to which the resources have an equivalent substitute (Barney, 2007; Barney & Clark, 2007; Hill et al., 2004).

The resource displaying each of these possible characteristics is a possible source of competitive advantage (Barney, 2007). The characteristics mentioned above are only necessary, but not sufficient conditions for gaining sustained competitive advantage (Barney, 2007; Barney & Clark, 2007; Priem & Butler, 2001). To secure the vital edge, firms need to go the extra step of developing the capability and commitment - to take full and efficient advantage of their resources for a possible realization of successes (Barney, 2007; Barney & Clark, 2007; Hill et al., 2004).

Rationale for Using the Resource-Based View

The RBV strategy theory has become one of the most popular, dominant, powerful tools which have been empirically tested and repeatedly proven to be suitable to explain the level of performance within and between nations, organizations, industries and individual firms over the last three decades (Bower, 2007; Bharadwaj, 2000). It therefore has a positive history, reputation and has a strong theoretical focus and not just a view or a simple explanation.

Secondly, resources are generally thought of as the basis of implementing a firm's strategy (Barney, 2007; Ambrosini, 2003; Hitt et al., 2001). This is notable considering the impact of the Kenyan Government's 1990 liberalization policy which resulted in significant resource accumulation. Additionally, RBV emphasizes the importance of firm-specific resources in influencing performance and it thereby provides a clear understanding as to why some firms outperforms others (Batjargal, 2005; Dhanaraj & Beamish, 2003). Furthermore, it

explains how a firm obtains and uses resources productively to improve performance (Sirmon, et al., 2008; Fahy, 2001).

Third, according to Fahy (2000), the essential elements of the RBV are that the use and application of resources enable managers to make sound strategic choices by identifying, developing and deploying key resources so as to maximize returns and sustain performance. RBV explains how a firms' stock of resources may be translated to strategic resources which may affect subsequent performance (Rosaaen, 2002; Noda & Collins, 2001). Additionally, it has been shown in professional sport, the strategic application of valued resources enables managers to make sound strategic decisions to sustain sporting successes (Won, 2004; Smart & Wolf, 2004).

In sum, Heinila (1984) drew attention to the fact that the success of a nation's athletics was no longer a 'a matter of individual effort and the resources of the participant but instead a matter of the effectiveness emanating from human resources, knowledge of sport science, and the efficiency of organizations and of training. The application of RBV is closely linked to this view about sport and successful performance.

Resource-Based View Applications

It seems plausible to apply RVB to sport practices as a means of securing a better understanding of how it might explain variations in professional sport performance. However, in view of sport special features, and the peculiarities of Kenya's sport system, it would be prudent to work through Kenya's sport structures before proceeding with any further RBV commentary. The following section consequently covers the application of RBV's three categories of resources to organizational practices in general, and Kenyan sport structures and systems in particular.

Human Resources Applications

Human resources refer to knowledge, skills, training, experience, judgment, and intelligence (Fitz-enz, 2009; Baron & Armstrong, 2008; Barney & Clark, 2007). These resources can be divided into tacit and codified human resources-both of which are regularly used to determine wages and salaries (Chelladurai, 2006; Ambroseni, 2003). Of the two types, tacit resources are the least imitable and it arises from experience and requires practice (Castanias & Helfat, 2001). It is specific to the individual and cannot be passed from one person to another (Berman et al., 2002; Hitt et al., 2001). On the contrary, codified human resources are a type of knowledge resource which can be passed from one person to another. It can also be gained by formalized education. Popular proofs of codified human resources are awards of certifications and degrees (Fitz-enz, 2009; Baron & Armstrong, 2008). The expectations under this category are that a person with a more specialized and higher level of training such as graduate degree may possess greater human capital investments and a broader knowledge-base than their counterparts lacking such education and training (Castanias & Helfat, 2001).

In general, a greater investment in human resources by staff and top management can enhance career opportunities and a firm's competitive advantage over its rivals (Kiessling, 2005; Barnes, 2003). That is, a firm whose top management team, as a whole, has greater educational attainment, more industry experience, and/ or greater skills than its competitor is thought to also perform better than the opposing firms (Barney & Hesterley, 2009; Denziz- & De-saa, 2003). Research attests to support the association between the positive relationship between a firm's human resources and its performance (Dhanaraj & Beamish, 2003; Bharadwaj, 2000; Elchols, 2000). How, then, might a human resources approach help to explain Kenya's endurance running successes?

Specific to elite sports performances, one of the most important decisions club managers have to make is the hiring of talent as more talents increases the possible winning record and season revenues (Kesene, 2007; Berman et al., 2002; Doherty, 1998). Clubs who want to maximize profits, will therefore hire talents that maximize the difference between season revenue and season cost (Brady & Sywester, 2004; Dawnward & Dawson, 2000).

The rationale for investigating Kenya's endurance running performance from a human resources perspective was that the Kenya Governments' 1990 liberalization policy which may have improved Kenya's human resource capability in the following ways. Firstly, there was the possible attraction of a greater number of experienced skilled, qualified sports personnel and experts (Wirtz, 2006). Secondly, pay incentives offered by private sector sponsors may have attracted local and foreign sports personnel who were previously banned from training Kenyan athletes (Tanser, 2008; Wirz, 2006). Thirdly, better recruitment strategies (due to qualified staff) may have led to a larger pool of talented runners (Weiz, 2005) who when trained well, may further enhance success (Mayes, 2005; Bale & Sang, 2003). Fourthly, the coaches and agents who secured entry into Kenya may have been more capable of formulating winning drills and tactics thereby producing faster, quicker and stronger athletes (Pitsiladis et al., 2007; Kikuyu & Kimani, 1991). Finally, managers and agents who are knowledgeable, dedicated and passionate may be better strategists and more effective at motivating staff than less knowledgeable people (Mayes, 2005; Wirz, 2005).

Organizational Resources Applications

Organizational resources include the history, relationships, trust and organizational culture that are attributes of groups of individuals associated with a firm as well as the formal and informal organizational structure concerning planning, reporting, controlling and coordinating systems (Barney, 2007; Das & Teng, 2000). Organizational culture comprise of

shared values, beliefs, and traditions that exist among individuals in organizations (Barney & Clark, 2007; Kent & Weese, 2000). It is this culture that establishes workplace norms of appropriate behaviour specifies what is wrong or right and defines roles and expectations that employees and management have for each other (Nier, 2009).

In general, abundant organizational resources can help build a strong organizational capacity which may be defined as Kenya's capability to organize and participate in athletic competitions, both internally and externally. Organizational capacity has been shown to enhance overall performance in commercial firms (Street, 2006; Haaga, 2002), high school (Poe, 2007; Lee, 2006; Rocco, 2004; Mannarino, 2003), universities (Dude, 2007), hospitals (Torrence, 2005; McGuire, 2002) sports businesses (Fahy, 2000), and non-profit community programs (Schuh, 2004; Han, 2003; Danks, 2000; Germ-Ann, 2000). The thrust of organizational capacity is that it improves strategy and policy implementation (Malone, 2007; McLaughlin, 1999), transfer of learning (William-Gray, 2009; Dude, 2007; Judge & Elenkov, 2005) and also enhances the efficient use of resources (McGuire, 2002). However, no single established organizational culture can best lead to success (Northnagel, 2008; Ojode, 2000) as certain types of cultural characteristics are appropriate to certain type of organization. For an organization to be effective there must be a fit between strategy, environment, technology, and culture (Slack & Parent, 2006). This, of course, begs the question as to whether or not organizational resources might assist in explaining Kenya's endurance running successes.

The rationale for exploration of the role of organizational resources in the Kenyan case is that the 1990 Kenya Government's liberalization policy may have improved Kenya's ability to assemble a closely knit with strong appropriate relations and trust leading to corporate stability (Duffy et al., 2001; Kruger, 1984). Secondly, majority of the runners and administrators originate from a common ethnic group (Mayes, 2005; Bale & Sang, 2003), which may strengthen bonds, shared experiences and values (Gibbons et al., 2003; Greenleaf

et al., 2001) traits that may enhanced positive relationships (Putler & Wolf, 2000). Top management teams such as coaching staff can be the central determinant of an organization's performance (Greenleaf et al., 2003; Gibbons et al., 2003; Smart & Wolf, 2000) as they enable the organization to infuse values and norms which may promote positive corporation, coordination and team work (Cunningham & Sagas, 2004; Papadimitriou & Taylor, 2000).

Physical Resources Applications

Physical resources consist of stadiums, training facilities, equipment, and sports technology such as information management systems for recruiting, training, monitoring and evaluating athletes (Smart & Wolf, 2003). These resources may be viewed as a product that also encompasses sport finance, sport sponsorship, and event management (Won, 2004). This is so because cash for elite sport may be sourced from sports events themselves, or from sponsorships or directly from government and private financiers (Stewart et al., 2004).

In general, sports policies that lead to the provision of dedicated training facilities and equipment enable athletes to train in high quality environment and therefore provide a link between participation and excellence (De Bosscher, et al., 2008; Green, 2008; McGovern, 1998). For example, the over 1,800 training facilities and stadiums in the USA have been attributed to the combined public and private partnerships constructions and renovations- a key resource value factor in the U.S. and is unmatched anywhere else. Several studies have also demonstrated that availability of facilities in schools, parks and communities is associated with physical activity which can be advantageous to talent development (Huston et al., 2003; Humpel et al., 2002; Kahn et al., 2002). The mere availability of facilities may therefore reinforce the proliferation of talent growth and development.

Particular to Kenya, physical resources may have contributed to endurance running successes for a number of reasons; Firstly, the Kenya Government's 1990 liberalization

policy could have contributed to additional specialized training facilities (Tanser, 2008). Secondly, adequate equipment and technology (brought in by private owners) may have had a supportive role in recruitment, training and evaluation of athletes (Hudson, 1998; Sedlacek et al., 1994; Somotiuk et al., 1990 in De Bosscher et al., 2008). Thirdly, the liberalization policy may have led to increased financing of particular athletic programs, the operation of individual running teams, and organize athletic events (Won, 2004; Van Bottenburg, 2000; Wells, 1991). Finally, physical resources may also have added value by enabling the athletes to exploit opportunities, neutralize threats and improve performance (Gobbons et al., 2003; De Bosscher & De Knop, 2004, 2002).

Summary

The chapter covered concepts such as human, organizational and physical resources while linking and rationalizing their use to Kenya's endurance running successes. This highlights the idea that there might indeed be a direct relationship between Kenya's running success and the stock of resources to support its endurance running structures and system. The next chapter will attempt to answer to the question: What impact did the Kenya Government's 1990 liberalization policy had on Kenya's endurance running successes? The next chapter provides a discussion of the methodology used to assist in answering this question.

CHAPTER 4

METHODOLOGY

This section outlines the methodological procedures used to assess the association between the 1990 Kenya Government's liberalization policy, any subsequent change in stock of resources that supported its endurance running program and Kenya's endurance running successes. The chapter sequentially discusses the research design, archival data, the 1990 liberalization policy, sampling procedures, study variables, construct validity, reliability analysis, archival data collection procedures and data analysis.

Research Design

Types of Research

In general, research can be broadly categorized into quantitative and qualitative designs (Berg & Latin, 2008; Borden & Abbott, 2008; Barbie, 2007; Bryman & Bell, 2007; Cooper & Schindler, 2006). Qualitative research aims to identify themes, links and relationships for an in-depth understanding of the phenomenon of interest. It uses methodological strategies such as cases studies, interviews and participant observations to achieve this goal (Cavana et al., 2001; Fraenkel & Wellen, 2000; Frankfort-Nachmias & Nachmias, 2000). On the other hand, quantitative research is interested in isolating key values with questions such as how much, or how well a cause and effect may apply (Aaker et al., 2005; Miller & Salkind, 2002; Kerlinger & Lee, 2000; Frankel & Wallen, 2000). Quantitative researchers therefore makes inferences based on objective measurement and numerical analysis of statistical data (Arnold et al., 2005; Gratton & Jones, 2005; Thomas et al., 2005). Since the purpose of the current study is to explore the role of endurance running resources in

attaining endurance running successes, this study fits neatly in the quantitative research category.

Quantitative Research

Specific to this study, quantitative research is classified into experimental and non-experimental research (Barbie, 2007; Bryman & Bell, 2007; Cooper & Schindler, 2006). Experimental research permits investigators to manipulate changes in treatment to people, conditions, or the environment to determine the effects of the treatment on the dependent variable (Arnold et al., 2005; Gratton & Jones, 2005; Thomas et al., 2005). Experimental research operates from three basic standpoints: (a) independent variables of interest is/are manipulated; (b) all other remaining variables that might affect the dependent variables are held constant, and (c) the effect of the manipulation of the independent variables on the dependent variables are evaluated (Berg & Latin, 2008; Borden & Abbott, 2008; Ary et al., 2002). Experimental designs are advantageous in demonstrating levels of causation and empirical examination of theoretical models (Miller & Salkind, 2002; Kerlinger & Lee, 2000; Frankel & Wallen, 2000). However, the designs may not be suitable for exploring natural phenomena where no manipulation is warranted.

On the contrary, non-experimental research deals with situations where manipulations regarding the phenomenon of interest have already occurred (Fraenkel & Wellen, 2000; Frankfort-Nachmias & Nachmias, 2000). The difference between the two (experimental and non-experimental research) is that the latter focuses on causal relations with manipulated variables while the former explores or investigates the relationship between the independent variable and the dependent variable (Borden & Abbott, 2008; Barbie, 2007). Due to the purpose of the current research, non-experimental research design was adopted.

Non-experimental Research

Non-experimental research includes correlational analysis, causal-comparative analysis, and surveys designs (Miller & Salkind, 2002; Fraenkel & Wallen, 2000; Frankfort-Nachmias & Nachmias, 2000). Causal-comparative research focuses on determining the cause of difference between two or more populations without manipulating the independent variable/s (Cooper & Schindler, 2006; Miller & Salkind, 2002). However, the results derived from the causal-comparative research should be interpreted with care as the researcher can never fully control for 'other' possible confounding variables (Cavana et al., 2001; Fraenkel & Wellen, 2000). Correlational research (which is also considered a descriptive study) aims to explain or predict the relationship between two or more human behaviours or outcome variables based on coefficient/s (Aaker et al., 2005; Thomas et al., 2005; Miller & Salkind, 2002; Fraenkel & Wallen, 2000). Lastly, survey research design which is useful in collecting large amounts of data is one of the most frequently used in educational and social sciences (Borden & Abbott, 2008; Barbie, 2007; Frankfort-Nachmias & Nachmias, 2000). As compared to associational research, this research does not involve identifying relationships between variables.

In order to conduct the current research, the investigator used correlational design because the relationship being investigated included the correlations between profiles in; (1) endurance running resources and (2) endurance running successes. For the current study, archival data was utilized. The following section provides information of research with archival data.

Archival Data

Archival data refers to existing recorded information. Archival records include public documents, government documents, official records, political records, judicial records,

private documents, mass media, physical, non-verbal materials, and social science data archives as well as private records such as autobiographies, diaries, and letters (Sarah, 2007; Emma, 2008; Miller & Salkind, 2002; Frankfort-Nachmias & Nachmias, 2000; Best, 1999; Bickmn & Rog, 1999; Singleton & Straits, 1999; Elder et al., 1993; Stewart & Kamins, 1993; Jacob, 1984; Hymann, 1972). Archival data as a source of measurement is often used in a variety of field research (Stewart & Kamins, 1993).

Advantages of Archival Data

According to Sarah, 2007; Singleton & Straits, 1999; Bickmn & Rog, 1999; Hymann (1972), the advantages of utilizing archival data include; (a) non-reactive measurement, (b) analysing social structure, (c) studying and understanding the past, (d) understanding social change, (e) studying problems cross-culturally, (f) improving knowledge through replication and increased sample size, and (g) economics of money, time and personnel costs. First, archival data is non-reactive in nature as compared to reactivity which is one of the major problems in social research. Archivists do not confront participants thereby limiting or eliminating the potential of reactive respondents (Bickmn & Rog, 1999; Singleton & Straits, 1999). In this study, it is possible that Kenyan agents, coaches and sports administrators could have provided socially desirable answers (i.e. reactive measurement) if an alternative method such as direct interviews were used. The use of available data rather than subjective data by perceptual judgment may enhance the objectivity of this study in that the current study only utilized objective measures of variables.

Secondly, available data enhances researcher's potential for using larger units of analysis such as a nation instead of a single individual's behaviours. The focus and use of large social units may have better capability of analysing social structure (Sarah, 2007; Frankfort-Nachmias & Nachmias, 2000). In relation to this research, Kenya as a whole was

analysed as opposed to individual athletes. Third, available data allow researchers to go back in time and to examine events in retrospective. In the current research, the period of the study was from 1978 to 2009 or 32 years. Fourth, available data may be helpful in understanding social changes over time in a longitudinal manner (Emma, 2008; Miller & Salkind, 2002; Hymann, 1972). This can be very useful in the study of long term effects of the politically orchestrated policies such as the impact of Kenya's 1990 Kenya Government's liberalization policy on endurance running successes. Fifth, archival data are a good source of cross-national/cultural research because much available data such as national census and ethnographies are applicable and comparable across nations (Best, 1999; Bickman & Rog, 1999; Hymann, 1972). This point is especially important for this study, as Kenya's international endurance running successes may be compared with other nations worldwide at varied events. Sixth, the use of archival data provides researchers with opportunities to deal with larger samples which may positively impact the reliability of the constructs and generalizability of the study (Stewart & Kamins, 1993; Jacob, 1984). In this study, rather than focus on one particular year, the study had a 32 year retrospect of Kenya's successes thus enlarging the sample size. Finally, as per the economics of money, time and personnel archival data is low cost as compared with experiments and surveys (Best, 1999; Bickman & Rog, 1999; Elder et al., 1993). This benefit was realized in this study.

Disadvantages of Archival Data

However, archival data faces the following disadvantages (Emma, 2008; Sarah, 2007; Singleton & Straits, 2005). These include; (a) searching for and procuring available data, (b) measurement of key concepts, (c) evaluation of data quality, and (d) assessment of data completeness. The first constraint to the use of available data relates to data procurement and gaining permission to use the data. The second problem is how perfectly available data fit

with key concepts or variables. This may be so because how data is retrieved or presented may not be suitable for the research objective. The third plausible problem of using available data may be about evaluation of data quality in terms of how, when, and where, and whom the data was collected. Since the researchers do not participate in the process of collecting original data, the researcher must evaluate the validity, reliability, authenticity, and accuracy of the data disadvantages (Emma, 2008; Sarah, 2007; Singleton & Straits, 2005). The final disadvantage is that it is never clear to what extent the available data completely represents characteristics of the designated sample or population. Data with incomplete representations may therefore hurt the research purpose.

Solutions to Archival Data Problems

To overcome these disadvantages, the current study followed guidelines suggested by Singleton & Straits (2005) to enhance the use of available data. In regard to the first issue concerning finding and procuring available data, the research hypothesis posed in this study lead to relevant sources of available data. Given that the current study is interested in endurance running, the researcher used appropriate sources such as websites, documents and data bases publicly available from sports institutions, associations and federations. In addition, related studies of previous investigators were evaluated. For example the annual world lists by IAAF (from 1999-2010) guided the location of both performance and human resources data.

Concerning the second problem of measuring key concepts one can use proximate variables, or proxy indicators or perform a content validity assessment. This study used content validity assessment to isolate and use the most relevant and accurate descriptors of previously tested constructs. The fourth problem of data completeness was tackled by using as many diverse and dependable sources as most sources of sports performance tend to

collect information from their respective international federations. For example data of world athletic events are sourced from International Association of Athletic Federations (IAAF) and those of marathon running events are from the respective marathon organizers such as Boston Athletic Club for Boston Marathon. As stated, the current study paid great attention to avoid any possible problem of available data.

The 1990 Liberalization Policy

As previously noted, the starting point for this research is the year 1990, when the central government of Kenya began to liberalize its sports sector by gradually withdrawing from the direct running of sports organizations (Wirz, 2006). This was part of a broader deregulation plan with a privatization component. This plan to liberalize the Kenyan economy had been on the Central Governments' agenda since the 1980s. As it turned out, the actual shift from a controlled economy to a free market economy occurred between 1992 and 1994 (HDR, 2005). Therefore, the liberalization process which began in 1990 was complete by the end of the 1994/1995 financial year and continued unabated till the present time. The three stages of the liberalization process, which comprised the concurrent implementation of deregulation and privatization programs, can be illustrated in the following way (Figure 4.1):

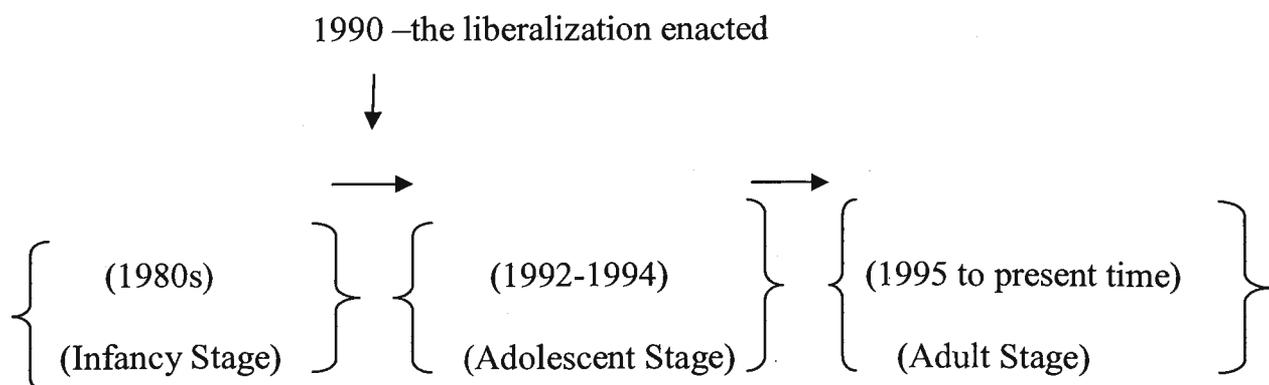


Figure 4.1: The evolution of the liberalization policy

Stages of the Liberalization Policy

As shown, in figure 4.1, the policy shift can be categorized into three main ascending stages: (a) the infancy stage, (b) the adolescent stage, and (c) the adult stage. The infancy stages was the period where the Central government began consulting on how to go about the de-regulation and privatization strategies which was a relatively new concept to many young African nations, Kenya included. The adolescent stage was the beginning of actual privatization where Kenya's Central government sought buyers for government businesses such as Post Office, Rail Services and Electricity Services among others. It is this stage that the sports sector was also liberalized. The adult stage was when the privatization had reached its peak as more than half of all major government businesses had been privatized with many more listed for sale. The economy was also de-regulated, and as a result both financial and human resources were able to flow more freely both in and out of the nation. (IMF; 2006; HDR, 2005).

The Liberalization Policy and Endurance Running

As far as endurance running programs are concerned, the liberalization of the economy lifted restrictions on athletes' international travels, the hiring of foreign coaches, and building of privately owned running camps (Tanser, 2008; Wirz, 2006). The significance of these developments was initially unclear, but in retrospect, it was obvious that many changes had taken place in the ways that endurance athletes were coached, trained, and managed. It is within this context that the research was undertaken.

This study therefore aims to investigate the effect of the 1990 Kenya Government's policy shift on Kenya's endurance running successes at international marathon events which is consistent with the RBV assumption that a change in the stock of resources available to an organization is likely to lead to a change in its performance. In line with the evolution of the

policy shift, the analysis of its effects was divided into pre and post liberalization phases. Pre-Liberalization was 1978 to 1993 and post-Liberalization was 1994 to 2009. The period of analysis was therefore 32 years with 16 time points before-liberalization and 16 after-liberalization which is in agreement with Green & Slaking's (2010) recommendations of repeated measures studies such as this.

Sampling Procedures

Selection of the Marathon Events

The World International governing body-International Association of Athletics Federations (IAAF) categorizes endurance events as any race that begins from 800m to marathon. The sampling was conducted as illustrated in Figure 4.2. In stage one, the researcher identified all the 7 endurance running events namely 800m, 1,500m, 3,000m, 3,000m steeple chase, 5,000m, 10,000m and marathon.

In stage two, the researcher then randomly selected the marathon event as an indicator of Kenya's endurance running performances from the seven listed endurance running events. Randomization can be performed by flipping a coin, using a table of random digits, drawing shuffled cards or discs or dedicated softwares, (Berg & Latin, 2008; Vincent, 2005; Miller & Salkind, 2002). This research used dedicated softwares to arrive at the sample of five marathon events. Specific to marathon running, the reasons for using randomization were three fold. First, it served as a check on conscious or unconscious bias on the part of the researcher (Babbie, 2007). Second, it served to increase the confidence that the findings obtained from the sample are representative of the real values found in the total population (Berg & Latin, 2008; Gravetter & Wallnau, 2007). Thirdly, it ensured that numerous factors are controlled simultaneously even when the researchers are unaware of what they are (Berg

& Latin, 2008). In this way, randomization contributes to the internal validity of the study (Frankfort-Nachmias & Nachmias, 2000).

In stage three, the researcher selected those marathons which were open to any nationality, and which offered prize money as opposed to those which were closed and restricted such as Asian, Arabian or African regional competitions. Since this study is about 'elite' endurance running, it was more justifiable to use open and prize-moneyed marathons (Figure 4.2). Stage four involved randomly selecting 5 world marathon events from the list of top 10 leading World marathon events published by *Runner's World*. As a result of the above sampling method, this study therefore focused its investigation on the impact of endurance running resources on endurance running successes at the selected 5 open marathons-namely Berlin, Boston, Chicago, New York and Stockholm. All these marathon events have been held annually since 1977 or earlier. Therefore for the current study, the 10 open marathons (from *Runner's World*) constitute the population on the basis that they were available for inclusion as the target and accessible populations are identical (Gravetter & Wallnau, 2007; Ary et al., 2002; Frankfort-Nachmias & Nachmias, 2000). The process for selecting the sample of running events is illustrated in Figure 4.2.

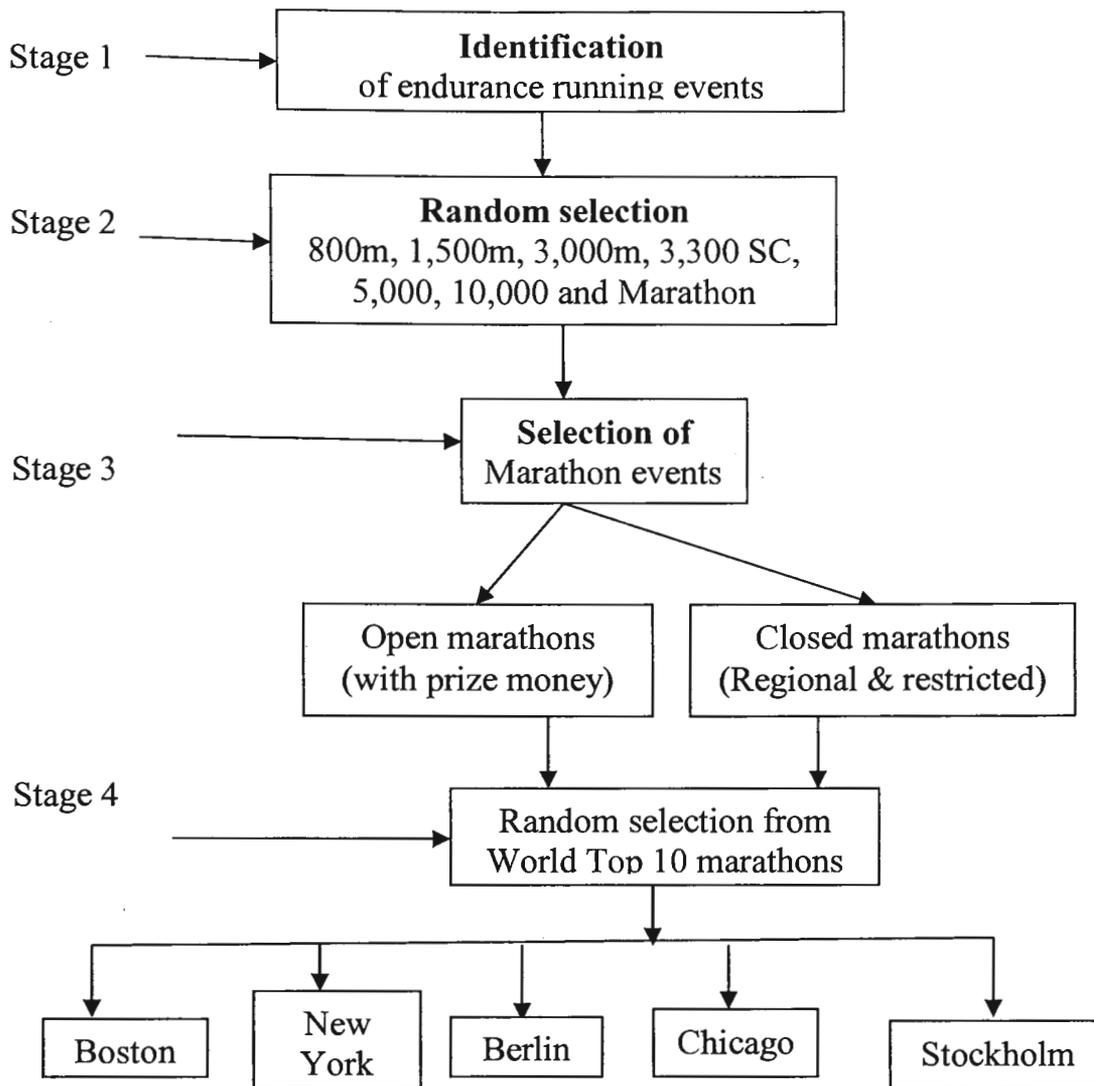


Figure 4.2: Isolating the sample

Sample Size

Since this was an impact study, the sample size is determined by the number of time points concurrent to the period before and after the 1990 Kenya Government's liberalization policy. For example, pre-liberation was from 1978 to 1993 which is 16 time points and post-liberalization is another 16 time points (from 1994 to 2009). An explanation of how the 1990 liberalization policy took place will highlight the rationale behind the selected time points.

This study used the Wilcoxon Sign-rank test which is especially suitable for small sample data (Shelskin, 2007; Lehman, 2006; Bergman et al., 2000; Siegel & Castella, 1988).

There is no clear cut of points of exact sample sizes. To overcome this problem, this study adopted Pagano & Gauvreau's (2000, p.304) description of small sample as $n < 20$. However, as relates to Wilcoxon Sign-rank test Kosller (2005), defined small sample as $n < 30$, moderate sample as $n = 40$ and moderate to large sample as $n \geq 120$. Guided by a variety of specific critical value tables of the Wilcoxon Sign-rank test and verified by the statistical software Gpower[®] (at the customary two-tailed significance levels of $\alpha < .05$ and a power of .80), this study's sample size of $n = 32$ ($n_1 = n_2 = 16$) was deemed ideal as it was above the recommended 29. This study adopted recommendations by Cohen, (1988, p.56) which advocates for a rule of thumb of a power of .80 when researchers have no specific criteria. Furthermore, it is often assumed that for $n > 25$ is quite satisfactory for Wilcoxon Sign-rank test (Corser & Foreman, 2009; Govindarajulu, 2007).

In this study, the actual sample size was determined based on desired statistical power, nature of the population, effect size and statistical requirements of Wilcoxon tests. Power may be defined as the probability that the test will reject the null hypothesis when in fact it is false and should be rejected (Cohen, 1992; Siegel & Castellan, 1988). According to Kerlinger & Lee (2000, p. 453), power is the "fractional value between 0 and 1 that is defined as $1 - \beta$, where β is the probability of committing type II error". It is used to ascertain the probability of failing to reject a false null hypothesis. Thus a statistical test is considered a good one if it has a small probability of rejecting H_0 the null hypothesis when H_0 is true, but a large probability of rejecting H_0 when H_0 is false. In general, the statistical power (commonly referred to as Pittman Efficiency) is therefore critical in detecting statistically significant differences, promotes replication of the study under the same conditions.

Meaningful effects may not be detected if the power level is low and insufficient. A low power can therefore be increased by increasing the sample size (Siegel & Castellan, 1988). The concept of power efficiency is concerned with the amount of increase in sample

size which is necessary to make test B as powerful as is test A with a given sample size. Many nonparametric tests have power-efficiency of around 95 per cent (Siegel & Castellan, 1988). Randomized tests, however has a 100 per cent power-efficiency (Siegel & Castellan, 1988; Wei, 1982).The Wilcoxon procedure also has a power comparable to paired t test when sampling (Siegel & Castellan, 1988).It is also more powerful than the sign and sign rank procedures. Given that this study is consistent with these suggestions and the size of the sample is limited, a sample of 32 time points is needed and acceptable. However, there are considerations other than power which enter into the combined choice of statistical test and sample size. One must consider the nature of the population from which the sample was drawn and the kind of measurements employed in the operational definition of the variables of the research (Siegel & Castellan, 1988).

Study Variables

Independent Variables

In line with the RBV model of competitive advantage, the independent variables used in this study comprised the three categories of resources built into the model, namely they were human resources, organizational resources, and physical resources. The ways in which these categories of resources are operationalized for this study are discussed below.

Endurance Running Human Resources: In this study, the stock of marathon related human resources was operationalized as: (a) number of marathon talents and, (b) number of marathon agents. According to Fitz-enz (2009); Baron & Armstrong (2008); and Barney & Clark, (2007) human resources include knowledge, skills, training, experience, judgment, and intelligence.

Endurance Running Organizational Resources: In the current study, organizational resources related to marathon running was operationalized as: (a) number of domestic

competitions, (b) number of international association memberships and (c) number of domestic running associations. According to Barney (2007), organizational resources refer to organizational culture, history, relationships, and trust as well as the formal and informal organizational structure concerning planning, reporting, controlling, and coordinating systems.

Endurance Running Physical Resources: In this study, the stock of physical resources related to marathon running was operationalized as number of marathon training camps. An organization's physical resources consist of, but are not limited to, plants and equipment, facilities and buildings (Barney, 2007). Specific to sport, physical resources consist of stadiums, training facilities, equipment, and sports technology such as information management systems for recruiting, training, monitoring and evaluating athletes (Smart & Wolf, 2003).

In summary, six indicators were used to measure the stock of the three resource categories relevant to this study. They were:

<u>Resource type</u>	<u>Resource Indicator</u>
1. Human Resources (HR)	a). Number of marathon talents (NMT) b). Number of marathon agents (NMA)
2. Organizational Resources (OR)	a). Number of domestic competitions (NDC) b). Number of international sporting association memberships (NISAM) c). Number of domestic running associations (NDRA)
3. Physical Resources (PR)	a). Number of marathon training camp (NMTC)

Dependent Variables

Marathon Running Successes: Selected marathon events were isolated as indicators of endurance running successes. Specifically, the number of top ten Kenyan marathon finishers at Berlin marathon, Boston marathon, Chicago marathon, New York marathon and Stockholm marathons were used as an indicator of Kenya's successes in endurance running. Each position was ranked in such a way that position 1 was awarded 10 points, position 2 nine points, position 3 eight points etc. As previously explained, the marathon events were randomly selected from the 2002 *Runner's World* a leading running Magazine which rates top global marathon competitions. In summary, the indicators used to measure the Marathon Running Successes (MRS) were:

- a). Berlin marathon successes (BEMS)
- b). Boston marathon successes (BMS)
- c). Chicago marathon successes (CMS)
- d). New York marathon successes (NYMS)
- e). Stockholm marathon successes (SMS)

Construct Validity

Construct validity is the ability of a measurement instrument to accurately assess the true scores of a variable or measure a concept or hypothetical construct (Aaker et al., 2005; Thomas et al., 2005). Construct validity is therefore achieved when a logical argument is advanced to defend a particular measure based on existing theory (Cooper & Schindler, 2003; Crosswell, 2005). Furthermore, Aaker et al. (2005), advises that it is usually necessary to use evidence from all other forms to provide strong support for the validity of scores of a particular instrument and use of its results. In achieving construct validity, agreement is

sought on the 'operationalized' forms of a construct, clarifying what we mean when we use the construct (Cohen et al., 2007). In sum, the main question in construct validity is usually:

“...is the researcher's understanding of this construct similar to that which is generally acceptable to be the construct?” (Cohen et al., 2007, p.138).

The next section addresses construct validity of each of the six resource indicators and the dependent variable being studied.

Rationale for Using Number of Marathon Talents

The number of marathon talents (NMT) was one of two measures of human resources. In this study, the number of World class Kenyan marathon runners appearing annually in the IAAF World list and Track and Field's All-Time World Rankings was used as an indicator of human resource (HR). In general, talent refers to an individual's special aptitude or above-average ability for a specific function or a range of functions (Kent, 2005). A firm which possesses more talent than its competitor is thought to have a greater competitive advantage (Barney, 2007; Castanias & Helfat, 2001; Schinke, 1995; Hambrick & Mason, 1984). Other advantages of talent are that it enhances creativity, learning and general organizational success (Colvin, 2008; Kim, 2008; Garrow & Hirsh, 2006; Morgan, 2006; Reilly, 2006).

Specific to this study, the number of world class Kenyan marathon runners was used as an indicator of HCR based on the assumption that the larger the number of talents, the greater the possibility of the emergence of higher performers (Coyle & Farrell, 2009; Mahman, 2003; Brown, 2001). This is so because the talent of Kenyan marathon runners has been and continues to be a crucial part of the nation's endurance running dominance (Pitsiladis et al., 2007). Furthermore, talent is commonly used as an important indicator that

reflects HCR as it is the essential, but rare HR input and commodity for elite teams (Eschenfelder & Li, 2007; Andreff & Szymanski, 2006; Sandy et al., 2006; Zimbalist, 2001).

For example, similar constructs (number of athletes, athletic talent, talent pool) has been used by Green, 2007; Green & Houlihan, 2005; Won, 2004; Digel, 2001; Duffy et al., 2001; Papadimitriou, 2001; Clumpner, 1994; Riordan, 1991; Wells, 1991; Broom, 1986; Buggel, 1986; Kruger, 1984; Grimbel, 1976) as an indicator of HR in sport. Particularly, Won (2004) used the number of athletes to evaluate the HR in intercollegiate sporting teams while Green & Houlihan (2005) used the indicator, 'the emergence of full-time athletes' to evaluate the talent pool and sources in Australia, Britain, Canada and USA. All the above studies reiterated the same message – the player talent is common indicator of HR in sport.

Rationale for Using Number of Marathon Agents

In this study, the number of marathon agents (NMA) was one of the two measures of human resources. A sports agent is a person or company acting on behalf of a player or sporting entity in a business such as finding him/her employment, endorsements, or just additional sources of income (Shropshire & Davis, 2008). In sum, the role of an elite sports agent include but not limited to; advice regarding financial matters as tax, investment, insurance, & money management (Shropshire & Davis, 2008), obtaining & negotiating endorsement contracts (Hruby, 1999), legal (including criminal) consultation (Rubin & Sander, 1988), post playing career counselling (Garbarino, 1994), counselling players regarding their particular sport (Brown, 1994), counselling players regarding their media image (Champion, 1997), athletic training (Closius, 1999), medical consultations (Were, 1989), and counselling players on matters pertaining to everyday life (Hruby, 1999).

The number of experienced agents capable of doing most or all of the above can therefore go a long way in enhancing performance. Experience is a form of tacit knowledge

which arises from learning by doing that develops through practice (Berman et al., 2002; Castanias & Helfat, 2001; Hitt et al., 2001; Fiol 1991). Such knowledge is gained through actual industry experience and is specific to the individual and cannot be passed from one person to another making it more likely to lead to sustainable competitive advantage (Pringle & Kroll (1997). Experience is therefore a form of knowledge-based resources (Dussauge et al., 2000; Kale; Tsoukas, 1996), which can also enhance organizational learning (Muthusamy & White, 2005; Hall, 1992).

Similar indicators such as number of experience of players or coaches or professional staff have previously been used as HR indicators in a variety of disciplines such as; tennis (Williams et al., 2002; Goulet et al, 1988, 1989) football (WABF, 2003), baseball (Paul & Glencross, 1997), cricket, squash, and badminton (Abernethy & Russell, 1984; Arbernethy, 1988, 1990), basketball (Jozsa, 2001), soccer (Savelsburgh et al., 2002), volleyball (Starkes et al,1995) and running (von Allmen, 2006).

Rationale for Using Number of Domestic Competitions

In this study, the number of domestic running competitions (NDC) (which involve marathon events) within the school system was used as one of the three measures of organizational capital resources (OR). In general, Kenya's organizational ability as demonstrated by the number marathon competitions in the school system may improve strategy and policy implementation (Malone, 2007; McLaughlin, 1999), transfer of learning (William-Gray, 2009; Dude, 2007; Goodkind, 1997) and also enhances the efficient use of resources (McGuire, 2002; Wexler, 1996). Moreover, research demonstrates that an efficient organizational structure may enhance overall performance in commercial firms (Street, 2006; Haaga, 2002), high schools (Poe, 2007; Lee, 2006; Rocco, 2004; Mannarino, 2003),

universities (Dude, 2007), hospitals (Torrence, 2005; McGuire, 2002) and non-profit community programs (Schuh, 2004; Han, 2003; Danks, 2000; GermAnn, 2000).

Although this study focused on marathon running, the Kenya school competitions are traditionally organized in a combined format-both field and track events taking place simultaneously (Weiz, 2006; Bale and Sang, 2005; Abymayr, 1981). This combination of events follows the custom of the leading international competitions such as the Olympics, Commonwealth and All-African games with both track and field events (marathon running included) normally taking place over a set period of days (IOC, 2010; CGF, 2010).

Specific to Kenya, the number of competitions at the school level can serve as an opportunity for incubation and nurturing talent (Green & Houlihan, 2005). The use of domestic competitions as an indicator demonstrates the internal organizational structure and capability concerning the planning, reporting and controlling of the internal sporting system of Kenya. Internal athletic competitions which range from a low of 50 to a high of 150 competitions a year (depending on the season), may therefore demonstrate Kenya's internal organizational ability. Moreover, the use of the indicator also attempts to demonstrate the implementation of talent strategy and development which comprise the number of competitions. Furthermore, the local competitions may also demonstrate how capable the sport delivery system is in utilizing the resources at their disposal through prudent planning, coordination and implementation (Semotiuk, 1990; Douyin, 1988; Heinemann, 1988).

Similar indicators (number of competitions, number of championships, number of tournaments, number of games etc) have been used by De Bosscher & De Knop, 2002; Duffy et al., 2001; Sedlacek et al., 1994; Semotiuk, 1990; Douyin, 1988; Heinemann, 1988; Buggel, 1986; Broom, 1986, 1991; Riodan, 1989; 1991; Douyin, 1988; Kruger, 1984). Specifically, Green & Houlihan (2005) used the number of competitions in the sports systems which included schools as an indicator of OR. De Bosscher et al, 2008; and Oakley & Green, 2001

used the term 'the number of structured competitions within the country' which also included schools, clubs and local tournaments as an indicator of OR. Similarly, the number of school competitions have been also used by Allison & Monnington (2005) to explain the evolution of British sport policy. Other studies that applied such indicators include Van Bottember & Van Sterkenburg, (2005) and Van Bottember (2003).

Rationale for Using the Number of International Sporting Associations Memberships

In this study, the number of international sporting association memberships Kenya is affiliated with was used as one of the three measures of organizational capital resources (OR). International sporting associations are sometimes referred to as international sporting federations. A federation may be defined as an organization formed by merging several parties together (www.thefreedictionary.com). While an association may be defined as an organized body of people who have an interest, activity, or purpose in common (www.thefreedictionary.com). Secondly, the intention of applying this indicator to Kenyan sport system is to attempt to stress the change in Kenya's sporting culture and relations with international sporting associations for the following reasons.

First, the increased engagement as judged by the number of international associations Kenyan has become a member of over the years can therefore be viewed as a positive cultural shift towards athletics in general and marathon running in particular. Positive relations within and between organizations may lead to cumulative mutual trust, respect, friendships and corporation (Capello & Faggian, 2010; Kale et al., 2000; Whitener et al., 1998; Clark et al., 1989; Williamson & Clarke, 1989). Moreover, international sporting associations can be used to cement positive international relations or protest international issues such as the cases of the 1980 and 1984 USA and USSR led Olympic boycotts as well as the African boycott over apartheid rule (Hornes & Manzeneiter, 2006; Tomilson & Young, 2006; Allison, 2005;

Allison & Monnington, 2005). Second, being a membership of an international sporting association enhances the spread of knowledge of that particular sport (Desbordes, 2007; Foster, 2004). Third, even at the Commonwealth and Olympic Games mass sport is usually encouraged through national affiliations on the basis of fostering goodwill and friendships between nations as well as going as far as furthering the cause of peace (Allison & Monnington, 2005; Sudgen & Tomlinson, 1999). Additionally, since the 1990 Kenya Government's liberalization policy, the sport delivery system increasingly became professionalized and commercialized with the new private owners and investors opting to seek their profits by engaging more with international competitions - which meant first being affiliated with international federations or formal race registration. Lastly, affiliation to sporting federations may help spread sporting cultures from one nation to another as a result of greater engagement between nation and the sporting federations (Schirato, 2007; Spickard et al, 2006). Examples include the spread of football through FIFA and the Olympism through IOC.

Similar indicators to measure relationships between nations and international sporting associations have been used by Jackson et al., 2009; Jozsa, 2009; Nixon, 2008; Hornes & Manzeneiter, 2006; Tomilson & Young, 2006; Allison, 2005; Foster, 2004; Lovermore, et al., 2004; Galily & Sheard, 2002; Stokvis, 2000). Specifically, Allison (2005) and Lovermore, et al, (2004) used the number of nations affiliated to international sporting federations to measure the growth of international relations amongst nations. On the reverse, Jackson et al., (2009) used the number of nations affiliated to international sporting federations to study change in global foreign policies amongst nations. Finally, Tomlison & Young (2006) and Lenskyj (2000) used the number of nations affiliated to IOC to measure the relationships between IOC and other nations while Foster (2004) and Desbordes (2007) used the same indicator to measure the relationship between FIFA and World Cup nations.

On the other hand, similar indicators to measure the sporting culture have been used by Eicher, 2009; Quinn, 2009; Schirato, 2007; Spickard et al, 2006; Nys et al., 2002; Cashmore, 2000; van Bottenburg, 2000; Larose & Haggerty, 1996; Kruger, 1984. van Bottenburg (2000) for example, measured OR as (sporting culture). Larose & Haggerty (1996) and Kruger (1984) used 'elite sports culture' to measure the OR of leading nations at the Olympic Games.

Rationale for Using the Number of Domestic Running Associations

In this study, the number of domestic running association (NDRA) within the Kenyan sport delivery system was one of the three measures of organizational resources. The number of domestic running associations (with marathon running roles) demonstrates the organizational maturity of the sports delivery system in general, and marathon running in particular. Applying this indicator to the Kenyan case, may be a sign of the growth and spread of marathon running across the nation. Also, the spread of running associations across the nation may further demonstrate the national association/federations organizational ability and the people's cultural change towards embracing marathon running as part of the day-to-day sporting activities; alternative to soccer which is the most popular national sport (Bale & Sang, 2003). Furthermore, positive relations within and between national federation (AK) and the local association can lead to cumulative mutual trust, respect, friendships and corporation (Capello & Faggian, 2010; Kale et al., 2000; Whitener et al., 1998; Clark et al., 1989; Williamson & Clarke, 1989) which can enhance Kenya's OR. Additionally, the spread of domestic running associations may also be viewed as an indicator of the government's withdrawal from the day-to-day running of domestic sport.

Similar indicators to measure OR have been used by De Bosscher & De Knop, 2004; Dufy et al., 2001; Oakley & Green, 2001; Green & Oakley, 2001; Smart & Wolfe, 2000;

Clumpner, 1994). Specifically, De Boscher et al., 2004; De Bosscher & De Knop (2004) used the number of local governing bodies as an indicator of OR of sporting associations in Belgium. Similarly Gibbons et al (2003) used the number of domestic associations affiliated to the USA Olympic federation as an indicator of OR.

Rationale for Using Number of Marathon Training Camps

In this study, the number of marathon training camps (NMTC) was used as the sole measure of physical capital resources (PR). In the sporting literature, the number of training camps is commonly referred to as a form of specialized training facilities. The availability of camps as specialized training facilities, possess many advantages. First and foremost, runners can focus and commit to one thing only during the time at camp away from the interference for family and every day chores. David Kemei (a 1,500m runner) attests to this when he said: "I moved away from my village to Iten because I could not train with all the jobs at home." The freedom from house chores is especially more important for Kenyan women runners because the traditional culture require them to do most the daily house chores such as cooking, cleaning etc (Tanser, 2008, p.118). Second, camps also enhance positive team bonding as the runners eat, live, struggle, and train together over extended periods of time. Third, at the camps, there are usually the advantages of personnel such as cooks, other runners, coaches, and doctors etc who are dedicated to the success of the athletes (Tanser (2008). In closing, because most of the successful training camps are sponsored by cashed corporate bodies such as Nike, they can easily afford the financial weight of expensive organizational endeavours such as travel, accommodation and international competitions.

Notable recent studies that have used the indicator (specialized training facilities) as an indicator of PR include; Green & Houlihan, 2005; De Bosscher et al., 2004; De Knop et al., 2004; van Bottenburg, 2003; Gibbons et al., 2003; De Bosscher & De Knop, 2002; Nys

et al., 2002; Dufy et al., 2001; Green & Oakley, 2001; Oakley & Green, 2001). Specifically, the number of training facilities as an indicator of PR capacity has been used by Knop et al., (2004) for Flanders, Gibbons et al., (2003) for the USA and Duffy et al., (2001) for Ireland. Green & Houlihan (2005) further demonstrated that PR (measured as the number of specialized elite-level facilities) was an instrumental indicator of physical facilities in their study. Oakley & Green (2001) used the number of well developed and specific facilities with priority access for elite athletes as an indicator of PR capability in Australia, Canada and UK.

Rationale for Using Marathon Running Successes

The number of top ten Kenyan marathon finishers at the selected marathons was used as the indicator of Kenya's endurance running successes in this study. The indicator, number of top finishers in marathon events is a common and popular indicator at international marathon competitions. It is currently used by the organizers of Chicago and New York marathon events to highlight international rankings. Additionally, the number of top finishers is a common indicator of performance in mega events such as at the Olympic and Commonwealth Games (De Bosscher et al., 2006; Green & Houlihan, 2005; Stewart et al., 2004; Greenleaf et al., 2001). For instance, at the Olympic and Commonwealth Games, nations attaining the top three positions (gold, silver and bronze) are generally deemed the top performers (SPLISS, 2004; SIRC, 2002). Top finishers have been used by Boston, Chicago, New York and other leading marathon events as a basis of evaluating the capacity to attract elite performers and to award appearance fee (Nerurkar, 2008; Switzler, 2007; Henderson, 2004; Collins & Sykes, 2004; Quercetani, 2002).

In applying this indicator to sport, similar indicators such as the number of top finisher as indicated by medal count has been used by Shibli et al. (2007); Johnson & Ali, (2004); Bernard & Burse (2004); Tcha (2003); Hoffman et al., (2002a); Morton, (2002);

Condon et al. (1999); Clumpner (1994); Baimbridge (1998); Den Butter (1995); Gartner, 1989; Colwell, 1981; Sappanen, 1981; Gillis, 1980; Kiviaho et al., 1978; Shaw & Pooley, 1976; Levine, 1974; Ball, 1972 and Novikov (1972) to evaluate performance in both summer and winter Olympic Games respectively. Others such as Smart & Wolf, 2000 have used the indicator 'winning percentage' to measure the performance of Penn State University. In sum, the number of top ten finishers at a marathon event is an essential indicator of elite performance and therefore a valid indicator of the level of success.

In sum, and based on clear logical arguments and construct validity guidelines, the selected indicators are especially suitable measures that represent human, organizational and physical resources as well as performance. Specifically, these indicators were chosen because; (a) they possess a strong theoretical foundation as suggested by Aaker et al. (2005); (b) a large number of previous studies have used either one or some of the indicators (De Boscher, 2008; Green & Haulihan, 2006) and (c) these indicators have traditionally been widely used and therefore accepted in the field of sports research. All the three factors considered above, these constructs together with their selected indicators satisfy the logic of construct validity as advocated by Cohen et al., 2007 and Thomas et al., (2005). Taken together, these four constructs provide an accurate assessment of Kenya's endurance running resources and endurance running successes.

Reliability Analysis

Reliability refers to the degree to which measures consistently yield the same results on other replication studies (Creswell, 2005). This study used Cronbach's α which is a measure of internal consistency (Kinnear & Gray, 2010; Stern, 2010). The value of α gives the degree to which items measure the same construct (Green & Salkind, 2005).

The rationale for selecting Cronbach's Alpha as an analytical tool, was as follows; one, it is a generalized reliability coefficient that is more versatile than other methods (Kinnear & Gray, 2010; Thomas et al., 2005), two, it can also be used with items that have various point values (Green & Salkind, 2005; Thomas et al., 2005), and three, it is one of the most commonly used method of estimating reliability for standard tests (Thomas et al., 2005; Coakes & Steed, 2003; Cronk, 1999).

Cronbach's Alpha reliability test guidelines and procedures as advanced and advocated by Kinnear & Gray, 2010, Coakes & Steed, 2003 and Cronk, (1999) were employed. In interpreting Alpha scores, a number close to 1.00 is considered very high, a value of .70 is considered desirable, those less than .30 are weak and should be removed (Coakes & Steed, 2003; Francis, 2001). However, the rule of thumb is a threshold value of .70 (Nunnally & Bernstein, 1994) and is widely accepted in the social sciences (Gravetter & Wallnau, 2007).

Overall, the reliabilities of the constructs were as follows, OR ($\alpha = .897$), HR ($\alpha = .714$), and MRS ($\alpha = .870$) respectively (Table 4.1). Therefore, the reliabilities of the measures were above the recommended .70 cut-off value by Nunnally & Bernstein (1994).

	Cronbach's α
Human resources (2 items)	.714
Organizational resources (3 items)	.897
Marathon running successes (5 items)	.870

Table 4.1: Reliability analysis

Archival Data Collection Procedures

This study utilized archival data, also defined as existing recorded information. Archival data include but is not limited to public and private documents, official records, mass media, physical, nonverbal materials and social science data archives (Emma, 2008; Sarah, 2007; Singleton & Straits, 2005).

Specifically the following were the main sources of data which met the inclusion criteria based on two guidelines. The first was by Singleton & Straits, 2005, p.357-364 entitled “general methodological issues in available-data research” and the second by Elder et al., 1993, p.23-49 entitled “recasting the archive.”

1. Marathon Running Successes data was collected from the official websites of Berlin marathon (www.real-berlin.com), Boston marathon (www.bostonmarathon.org), Chicago marathon (www.chicagomarathon.com), New York marathon (www.ingnymarathon.org), and Stockholm marathon (www.stockholmmarathon.se). Where gaps or doubts occurred clarifications and verifications were sought from the respective marathon officials.
2. Human Resources:
 - a) Data for the number of Kenya world class endurance runners was collected from top lists available at www.iaaf.org and corroborated by data from Track and Field News and www.arrs.net .Where inconsistencies were met, verifications were sought from respective officials.
 - b) Data for the number of agents was collected from various newspaper sources such as Standard Newspaper, Daily Nation, Running Times etc as well as from local Kenyan sport officials

3. Organizational Resources:

- a) Data for the number of domestic Kenya competitions conducted per year was collected from official Government of Kenya (GOK) reports from 1964-2010 and verified by Kenyan local coaches and Physical Education teachers who organized these competitions.
- b) Data for the number of international marathon competitions was sourced from www.iaaf.org and www.arrs.net

4. Physical Resources:

- a) Number of marathon training camps data was collected from Kenyan newspaper sources and other leading international newspaper sources such as Runners World, Running Times Magazine, and Marathonguide.com then verified by local coaches, Physical Education teachers and current Kenya sport journalists.

It is important to note that where doubts were cast, the author sought confirmation via e-mail or telephone communication from the relevant website hosts or sports officials.

Data Analysis

The purpose of this section is to describe the procedures and criteria concerning data analysis. In line with the aims and objectives of this study the researcher used nonparametric statistical analysis such as Wilcoxon Test, Kendell's Tau, and Friedman's tests. The statistical analysis was performed using PASW[®], JMP[®] and SAS[®] softwares.

Rationale for Using Nonparametric Statistics

The choice of nonparametric statistics over parametric test is usually justified under the following reasons; (a) when there is a lack of homogeneity of variance in the data (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007; Lehmann, 2006; Hardle et al., 2004;

Higgins, 2004; Artkitas & Polis, 2003; Brunner et al., 2001). Specific to this study, the data characteristics clearly demonstrated a lack of homogeneity thus warranting the use of nonparametric tests procedures, (b) when the distribution appears to be skewed (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007; Lehmann, 2006; Hardle et al., 2004; Artkitas & Polis, 2003; Daniel, 2000). From the data characteristics, the data of this study are heavily skewed thereby justifying the use of non parametric tests, (c) when the sample sizes is small ≤ 30 (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007; Lehmann, 2006; Hardle et al., 2004; Higgins, 2004; Artkitas & Polis, 2003; Daniel, 2000). As illustrated in the descriptive statistics (Table 4.2), the sample size of this study is small at 32 which justifies the use of nonparametric tests, and (d) when the data is nominal or ordinal (Shelskin, 2007).

Nonparametric Data Characteristics

This section focused on the nonparametric nature of the data based on the skewness and kurtosis. Skewness is “the degree to which a distribution lacks symmetry” (Stern, 2010, p. 118). In relation to skewness, the rule of thumb is that; a skewness value of 0 = symmetric; positive values = positively skewed and a negative values = negatively skewed. When the skewed value is divided by its standard error, values ≤ 1 are not greatly skewed; values between 1 and 2 are very skewed; values ≥ 2 are extremely skewed. Whereas, Kurtosis is “The degree to which symmetric, unimodal distributions scores are concentrated in tails, centre, or both (Stern, 2010, p. 118). A value of 0 = normal distribution; positive values = too many scores in the tails, centre or both compared to normal distribution; negative values = too many scores in the tails, centre or both compared to normal distribution. When the Kurtosis value is divided by its standard error, values ≤ 1 are not greatly different than normal; values between 1 and 2 = becoming very different than normal; values ≥ 2 =

extremely different than normal. Specific to this study, the symmetry of the data shown in Table 4.2 below, indicate the suitability of this data for nonparametric tests.

Symmetry of human resources which was indicated as the number of marathon talents (NMT) and the number of agents (NMA) had a skewness, and kurtosis 0.980, -.632 and, .331, -1.451 respectively. Symmetry of organizational resources which was indicated as the number of domestic competitions (NDC) had a skewness and kurtosis of 2.745 and 6.303. Similarly number of domestic running associations (NDRA) had 2.727 and 6.273 skewness and kurtosis. Lastly, number of international sporting association memberships (NISAM) had .840 and -.723 respectively. Symmetry of physical resources which was solely indicated as the number of marathon training camps (NMTC) had a skewness, and kurtosis of, .441 and- 1.057 (Table 4.2).

Resource Indicator	n	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
NMT	32	.980	.414	-.632	.809
NMA	32	.331	.414	-1.451	.809
NDC	32	2.745	.414	6.303	.809
NDRA	32	2.727	.414	6.273	.809
NISAM	32	.840	.414	-.723	.809
NMTC	32	.441	.441	-1.057	.809
Valid n List wise	32				

Table 4.2: Symmetry of endurance running resource indicators

Symmetry of marathon running successes (MRS) which was indicated as: Berlin marathon successes (BEMS) had a skewness and kurtosis of .641 and -.983. Boston marathon successes (BMS) had a skewness and kurtosis of .411 and -.983. Chicago marathon successes (CMS) had a skewness and kurtosis of .289 and -.689. New York marathon successes

(NYMS) had a skewness and kurtosis of .617 and -1.950. Lastly, Stockholm marathon successes (SMS) had a skewness and kurtosis of 1.393 and 2.067 (Table 4.3).

MRS Indicators	n	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
BEMS	32	.641	.414	-.983	.809
BMS	32	.411	.414	-1.239	.809
CMS	32	.858	.414	-.689	.809
NYMS	32	.617	.414	-.950	.809
SMS	32	1.393	.414	2.067	.809
Valid n (list wise)	32				

Table 4.3: Symmetry of marathon running successes

From Table 4.2 and 4.3, it can therefore be concluded that the measures were largely fitted for nonparametric testing as they met the rationale for the use of nonparametric procedures as explained by Sheskin (2007).

Advantages of Nonparametric Tests

Nonparametric tests have many advantages over parametric tests. First, they are suitable for both small and large sample sizes (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007; Lehmann, 2006; Hardle et al., 2004; Higgins, 2004; Daniel, 2000). Siegel & Castellan (1988, p.35) goes further to confirm the advantage:

“If the sample size is very small, there may be no alternative to using a nonparametric statistic test unless the nature of the population distribution is known exactly.”

Second, nonparametric tests make fewer assumptions therefore allowing them to be applied to a greater number of research situations as opposed to parametric tests, where the many assumptions typically delimit its application and use in many research situations and settings (Corder & Foreman, 2009; Govindarajulu, 2007; Lehmann, 2006; Hardle et al., 2004; Higgins, 2004; Brunner et al., 2001; Daniel, 2000). Siegel & Castellan (1988, p.35) adds:

“Nonparametric tests typically make fewer assumptions about the data and may be more relevant to a particular situation. In addition, the hypothesis tested by the nonparametric test may be more appropriate for the research investigation.”

This distribution-free advantage can be further utilized to analyse data which are inherently in ranks as well as data which can be converted to ranks (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007). Siegel & Castellan (1988, p.35) emphasizes:

“If the data are inherently in ranks, or even if they can be categorized only as plus or minus (more or less, better or worse), they can be treated by nonparametric methods, whereas they cannot be treated by parametric methods unless precarious, and perhaps, unrealistic assumptions are made about the underlying distributions.”

Closely linked to the few assumptions of distribution-free nature of nonparametric tests as compared to parametric tests, nonparametric tests can be applied to the use of classificatory data (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007; Lehmann, 2006; Hardle et al., 2004; Daniel, 2000). Siegel & Castellan (1988, p.35) adds that:

“Nonparametric methods are available to treat data which are simply classificatory or categorical i.e. are measured in a nominal scale. No parametric technique applies to such data.”

Third, nonparametric tests have wider applications and suitability (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007; Lehmann, 2006; Hardle et al., 2004; Daniel, 2000). For example, Siegel & Castellan (1988, p.35) reiterates:

“There are suitable nonparametric statistical tests for treating samples made up of observations from several different populations. Parametric tests often cannot handle such data without requiring us to make seemingly unrealistic assumptions or requiring cumbersome computations.”

Finally, for some population distributions a non-parametric statistical test is clearly superior in power to a parametric one and therefore have high asymptomatic relative efficiencies (Corder & Foreman, 2009; Govindarajulu, 2007; Nigel, 2007; Lehmann, 2006; Hollander, 1999).

Wilcoxon Matched-Pairs Signed-Rank Test Analysis

This study used the Wilcoxon test to evaluate the impact of the 1990 Kenya Government’s liberalization policy on Kenya’s endurance running resources and Kenya’s stocks of endurance running successes. The test is the most popular for marched groups or paired scores (Howell, 2007). This test is also referred to as Wilcoxon-t-test, the Wilcoxon matched-pairs test, or the Wilcoxon signed-rank test (Coakes et al., 2008; Colman & Pulfold, 2008; Stephens, 2006). In this study it is simply called the Wilcoxon test.

The use and applications of Wilcoxon tests have increased exponentially in educational research (Colman & Pulford, 2008; Gravetter & Wallnau, 2007), social research (Siegel & Castellan, 1988), business research (Green & Salkind, 2008) and biomedical research (Daniel, 2005; Pagano & Gauvreau, 2000; Ludbrook & Dudley, 1998). The test is a distribution-free procedure that is analogous to t-test for paired samples and can be applied to paired or matched scores (Stern, 2010; Coakes et al., 2008). It involves only one sample with each individual in the sample being measured twice-pre and post such that $n_1 + n_2 = N$ (Colman & Pulford, 2008; Green & Salkind, 2008).

The Wilcoxon test is designed to evaluate the difference between two conditions using data from repeated-measures (Coakes et al., 2008; Gravetter & Wallnau, 2007; Pagano & Gauvreau, 2000). The goal of this test is to determine whether participants changed significantly across occasions or conditions (Green & Salkind, 2008; Allen & Bennett, 2008). Put simply, it is used to test whether or not two related samples are from the same distribution (Howell, 2007; Cronk, 1999).

As with any other analytical tool, the Wilcoxon test has several advantages. One, it has a good Pitman efficiencies-a method that does not introduce additional structures into estimation problems and makes minimal assumptions about underlying populations (Shieh et al., 2006; Pagano & Gauvreau, 2000). Moreover, conclusions based on non-parametric tests do not carry stringent qualifiers, as does conclusions based on a parametric test (Pagano & Gauvreau, 2000; Hollander & Wolfe, 1999). Furthermore, this test is also suitable for treating samples made up of observations from several different populations as parametric tests are unsuitable for such data (Shelskin, 2007). Being distribution-free, the Wilcoxon test can handle a variety of measures. Additionally, the Wilcoxon test is also not as sensitive to outliers as compared to similar test such as the t-test (Zimmerman & Zumbo, 1990). The test accepts the use of small samples, which can be an advantage in pilot testing and in research

involving rare occurrences and in research whose nature precludes the use of large samples (Shelskin, 2007; Pagano & Gauvreau, 2000). Kenyan endurance running successes is such rare occurrence considering the huge economic, political and social problems it faces yet it continues to dominate global endurance running. In all, the tests do not incorporate all the underlying restrictive assumptions characteristic of parametric tests.

Just as any other distribution-free tests, the Wilcoxon test has very few underlying assumptions as it does not assume normal distribution (Stern, 2010; Gravetter & Wallnau, 2007). Instead, the distributions are assumed to be continuous and nominal or ordinal (Stern, 2010; Allen & Bennett, 2008). Green & Salking (2008) also advises that a sample of 16 pairs of non-tied scores is desirable for accurate p values.

Since the Wilcoxon test, aims at evaluating effects, interventions or impacts, the hypothesis statements are of predictive intensity (Stern, 2010; Howell, 2007).

In this study, the following hypotheses were tested:

*H*₁: The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running human resources.

*H*₂: The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running organizational resources.

*H*₃: The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running physical resources.

*H*₄: The 1990 Kenya Government's liberalization policy had a positive impact on the marathon running successes.

In line with the conventions, the Wilcoxon data will be reported and interpreted based on significance levels and effect sizes. When reporting the significance levels from Wilcoxon statistical tables, a small T value (near zero) provides evidence for real difference between the two conditions. According to Gravetter & Wallnau (2007) and Pagano & Gauvreau (2000, p. 308) whenever sample data produce a T that is less than or equal to the critical value, one fails to accept the null hypothesis. On the other hand, effect size can be calculated using the formulae by Clark-Carter (2004, p. 549-550 and Howell, 2007, p. 694-697 for critical z scores, converted to r, such that:

$$r = z/\sqrt{n}$$

Where r is the effect size, z is the critical z scores and n is the total sample size excluding ties. The result is then interpreted using Cohen's (1988) conventions where r = .1 is a small effect, r = .3 is a medium effect and r = .5 is a large effect.

Kendall's Tau Analysis

Developed by Kendall (1938), tau is one of a number of nonparametric bivariate measures of correlation/association (Shelkin, 2007; Kendall & Gibbons, 1990). Kendall's Tau has two main uses. It evaluates whether a monotonic relationship exists between two sets of relations (Shelkin, 2007; Siegel & Castellan, 1988) and with extensions, it is also used to evaluate the degree of agreement between judges (Shelkin, 2007; Linderman et al., 1980). As it is a distribution-free statistic, Kendall's Tau assumptions are that both variables should be at least ordinal (Allen & Bennett, 2008; Shelkin, 2007; Kendall & Gibbons, 1990).

When reporting and interpreting results, the range of possible values Kendall's tau are defined by limits -1 to +1 (i.e., $-1 \leq \tau \leq +1$) (Spent & Smeeton, 2000; Kendall & Gibbons, 1990). Where + 1 is a perfect positive correlation, with 0 indicating that two variables are uncorrelated. The important degrees of associations between the D.V. (marathon running

successes) and I.V. (the endurance running resources) were within the recommendations of Rockwell (1975), who suggested a threshold of .80 for bivariate correlations in parametric sociological research while Klinne's (1998) suggested a cut-off correlation of .85 or higher for multicollinearity in structural equation modelling. Unfortunately, there is still no such a rule of thumb when it comes to bivariate nonparametric correlations (Shelskin, 2007; Daniel, 2000; Conover, 1999). Moreover, distribution-free procedures (such as this study) employs ranks which measures the degree of association between two sets of ranks with respect to the ordering of all possible pairs of subject/objects (Kendell & Gibbons, 1990; Siegel & Castellan, 1988). Thus, even though the correlations between HR and OR and PR successes were high and bordering on creating issues of multocollinearity and possible design suitability nonparametric designs are distribution-free and therefore not grossly affected (Marascuilo & McSweeney, 1977). Therefore, the use of these indicators for a repeated measures nonparametric design was reasonable.

When using Kendal Tau, the common hypothesis is usually the correlation between the X and Y which is further evaluated through the use of tables of critical τ . (Shelkin, 2007):

In this study, the following hypotheses were tested:

- H₅*: There is a high correlation between Kenya's stock of endurance running human resources and marathon running successes.
- H₆*: There is a high correlation between Kenya's stock of endurance running organizational resources and marathon running successes.
- H₇*: There is a high correlation between Kenya's stock of endurance running physical resources and marathon running successes.

It is important to note that values of correlations by Kendall's tau are not inferential statistical tests, but are instead statistical measures which represent the degree of relationship between two or more variables (Howell, 2007; Hollander & Wolfe, 1999). A significant correlation, therefore, does not prove cause and effect as many intervening factors may have been involved (Spent & Smeeton, 2000; Kendell & Gibbons, 1990). The consistency of the relationships revealed by the Kendall's Tau is therefore very important theoretically for the justification of an existing theory (Siegel & Castellan, 1988). Large correlations may also have major practical implications in that small effects may accumulate over time (Daniel, 2000; Prentice & Miller, 1992). In this study, the Kenyan case which was an excellent example of abrupt but consistent upward improvements from 1990 liberalization policy to present.

In conclusion, the advantages of using the Kendall's *tau* over *rho* are: It is an unbiased estimate of the population parameter ρ , whereas the value computed for r_s is not an unbiased estimate of the population parameter ρ_s (Howell, 2007; Shelkin, 2007). Allen & Bennett (2008, p. 273) adds: "Kendall's tau-b is generally preferred over Spearman's rho, as it tends to provide a better estimate of the true population correlation, and is not artificially inflated by multiple tied ranks." According to Linderman et al., (1980), another advantage of tau over rho is that the sampling distribution of tau approaches normality very quickly. Because of this, the normality distribution provides a good approximation of exact sampling distribution of tau for small sample sizes (Shelkin, 2007, p. 1372). Lastly, the power efficiency of Kendall's tau relative to the Pearson product moment correlation coefficient is approximately .91 (when assumptions underlying the later test are met) (Shelkin, 2007; Daniel, 2000; Siegel & Castellan, 1988).

Friedman Test Analysis

The Friedman test is a nonparametric test equivalent to the one-way repeated measures ANOVA or within subjects ANOVA (Coakes et al., 2008; Gravetter & Wallnau, 2007). The test is used to evaluate the differences between three or more conditions using data from a repeated measured design (Gravetter & Wallnau, 2007; Daniel, 2005). It is sometimes called the Friedman two-way ANOVA (Allen & Bennett, 2008) or the Friedman's Rank Test for K Correlated Samples (Howell, 2007). Being a distribution-free statistic, the Friedman test requires only one sample with each individual participating in all of the different treatment conditions (Gravetter & Wallnau, 2007). For example, Kenya as a single sample being influenced by human, organizational and physical resources conditions.

In relation to sample size requirements, the Chi-square value of the Friedman test yields relatively accurate results to the extent that the sample is large. Green & Salkind (2008, p.408) advises that: "The results for the test should be fairly accurate if the sample size is greater than 30." Furthermore, the Friedman test has an advantage of having tables of exact probabilities for very small samples (Siegel & Castellan, 1988, p. 188).

In general terms, the null hypothesis for the Friedman test states that there are no differences among the treatment conditions being compared (Gravetter & Wallnau, 2007) or that the scores from each treatment were drawn from identical populations (Howell, 2007; Daniel, 2005). In this study, the following hypothesis was evaluated:

H₈: The stock of endurance running resources had a positive effect on marathon running successes.

There is no standard format for reporting the results from a Friedman test but the values for *df*, *n*, and *p* value are usually quoted (Gravetter & Wallnau, 2007). For effect size,

Kendell's coefficient of concordance (Kendell's W), a strength-of-relationship index which ranges from 0 to 1 will be used. Here, higher values indicating a stronger relationship (Marascuilo & Serlin, 1988 in Green & Salkind, 2008). Alternatively, Vergha & Delaney (2000), propose a measure of stochastic heterogeneity for measuring the effect size. Furthermore, pair wise comparisons can be used to identify sources of significance by converting the z values to r using the formula by Allen & Bennett (2008):

$$r = z\sqrt{n}$$

Where r is the effect size, z is the statistical table score and n is the sample size excluding ties. Following the recommendations of Cohen, (1988), an effect size of r = .1 is small, r = .3 is medium and r = .5 is a large effect.

Summary

This chapter makes clear that the researcher adopted the use of repeated measures designed to evaluate the impact of the 1990 Kenya Government's liberalization policy shift on its stock of endurance running resources and the consequent endurance running successes at selected marathon events.

CHAPTER 5

RESULTS

The overall goal of this research was to explain the successes of Kenyan endurance running using the Resource-Based View (RBV). Specifically, the aims of the research were: (a) to evaluate the impact of the Kenyan Government's 1990 liberalization policy on the nation's athlete development infrastructure and, more specifically, its endurance running human, organizational and physical resources, and (b) to investigate the correlation between the stocks of Kenya's endurance running resources and the nation's endurance running successes. The rest of this chapter covers results pertaining to, (1) impact analysis, (2) correlation analysis and (3) prediction analysis. For general clarity and statistical consistency, the constructs and their respective indicators were abbreviated as follows: (Table 5.1), unless otherwise stated.

<u>Construct</u>	<u>Indicators</u>
Human Resources (HR)	a). Number of marathon agents (NMA). b). Number of marathon talents (NMT).
Organizational Resources (OR)	a). Number of domestic competitions (NDC). b). Number of international sporting association memberships (NISAM). c). Number of domestic running associations (NDRA).
Physical Resources (PR)	a). Number of marathon training camp (NMTC).
Marathon Running Successes (MRS)	a). Berlin marathon successes (BEMS). b). Boston marathon successes (BMS). c). Chicago marathon successes (CMS). d). New York marathon successes (NYMS). e). Stockholm marathon successes (SMS).

Table 5.1: Abbreviations of the constructs and indicators

Impact Analysis

The main aim of this study was to evaluate the impact of the 1990 Kenya Government's liberalization policy on endurance running resources and endurance running successes in two periods namely, before (1978-1993) and after (1994-2009). These periods will be subsequently abbreviated to, "before" and "after". Wilcoxon test was used to test the following hypotheses:

- H_1 : The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running human resources.
- H_2 : The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running organizational resources.
- H_3 : The 1990 Kenya Government's liberalization policy had a positive impact on the stock of endurance running physical resources.
- H_4 : The 1990 Kenya Government's liberalization policy had a positive impact on marathon running successes.

The Wilcoxon test is designed to evaluate repeated-measures studies with the goal of determining whether there was a significant change across occasions or conditions (Coakes et al., 2008; Green & Salkind, 2008). Specific to this study, the test was conducted to test whether the 1990 Kenya Government's liberalization policy had an impact on endurance running resources (HR), organizational resources (OR), physical resources (PR) and marathon running successes (MRS).

The Wilcoxon test results indicated that the 1990 liberalization policy had a positive significant impact on endurance running resources and marathon running successes with hypotheses H_1, H_2, H_3 and H_4 being confirmed (Table 5.2).

Indicators	Z	r
HR after < HR before*	-3.516	.62
OR after < OR before*	-3.520	.56
PR after < PR before*	-3.529	.62
MRS after < MRS before*	-3.517	.62
Asymp. Sig.(2-tailed)*		
$p < .05$		
$n_1 = n_2 = 16$		

Table 5.2: Wilcoxon results

Policy Impact on Human Resources

The impact of the 1990 Kenya Government’s liberalization policy on endurance running human resources was significant, $z = -3.516$ (corrected for ties), $p < .05$, two-tailed and an $r = .62$. In this study, endurance running human resources was indicated as number of marathon agents (NMA) and number of marathon running talents (NMT). Over the two periods-before-liberalization (1978-1993) and after-liberalization (1994-2009) NMA rose by 386.7%. Similarly, over these two periods also rose by 1214.7%. (Figure 5.1).

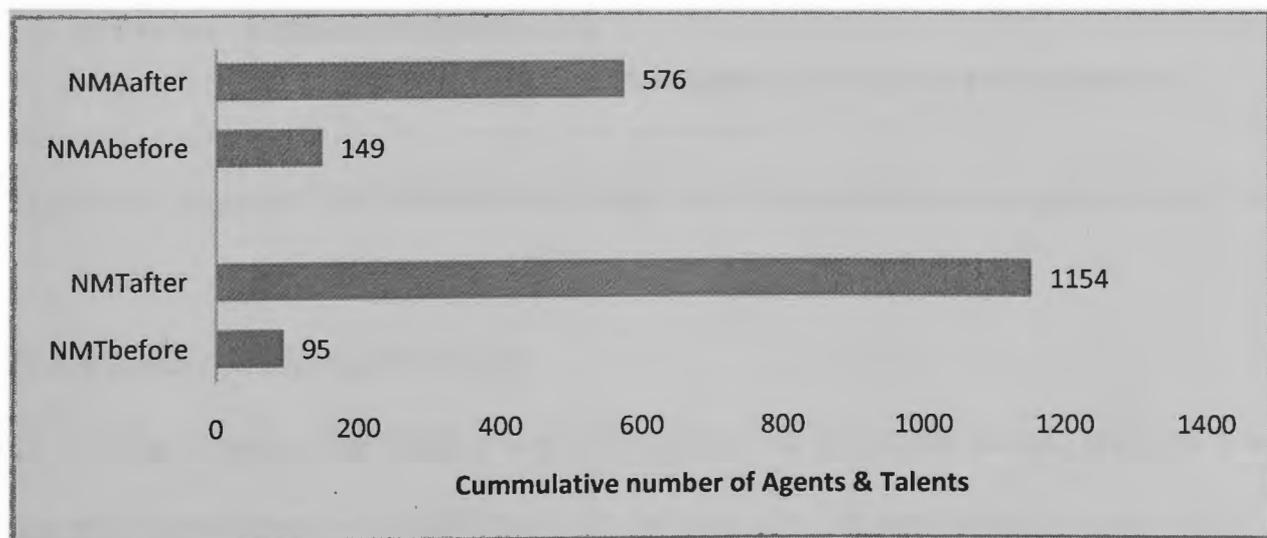


Figure 5.1: Impact of the liberalization on endurance running human resources

Policy Impact on Organizational Resources

Again, the impact of the 1990 liberalization policy on endurance running organizational resources was also significant, $z = -3.520$ (corrected for ties), $p < .05$, two-tailed and an $r = .56$. In this study, endurance running organizational resources was indicated as: (a) number of domestic competitions which increased by 260 %, over the two periods-before-liberalization (1978-1993) and after-liberalization (1994-2009) (b) the indicator number of international sporting association memberships went up by 273.6% also over the two periods-before-liberalization (1978-1993) and after-liberalization (1994-2009), (c) lastly, the number of domestic running associations climbed by 226.6 % over the two periods-before-liberalization (1978-1993) and after-liberalization (1994-2009) (Figure 5.2).

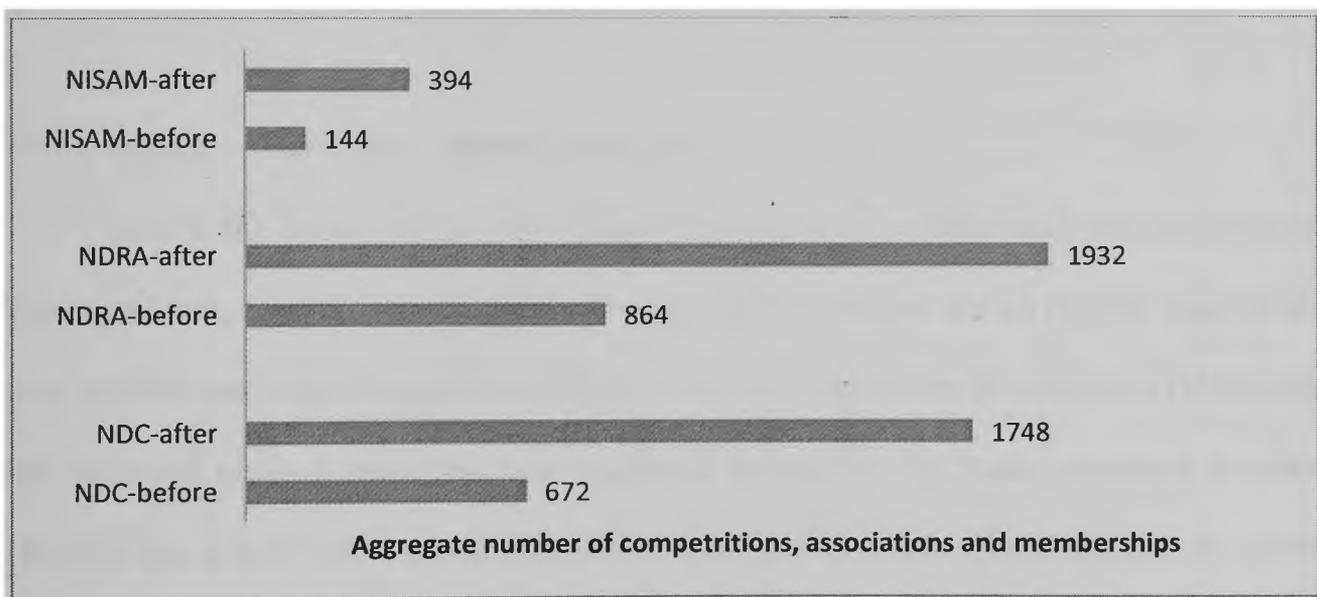


Figure 5.2: Impact of the liberalization impact on endurance running organizational resources

Policy Impact on Physical Resources

The impact of the 1990 liberalization policy on endurance running physical resources was also significant, $z = -3.529$ (corrected for ties), $p < .05$, two-tailed and an $r = .623$. In the current study, endurance running physical resources, solely indicated as number of marathon

training camps (NMTTC), which over the two periods-before-liberalization (1978-1993) and after-liberalization (1994-2009) went up from 26 to 58 (Figure 5.3).

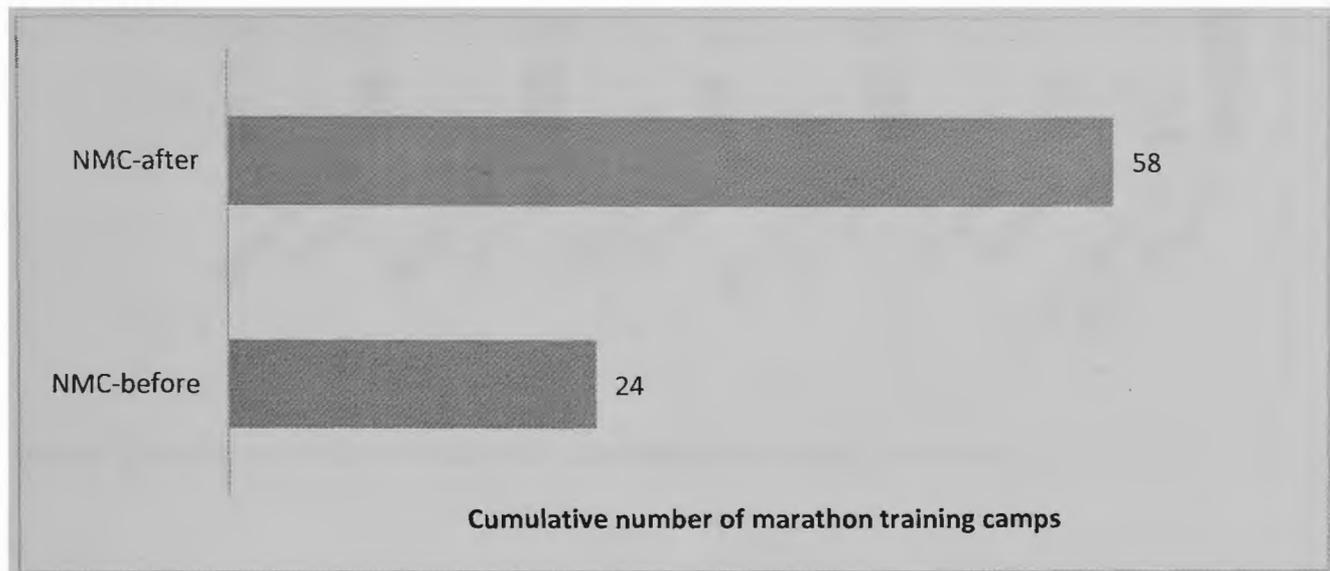


Figure 5.3: Impact of the liberalization on endurance running physical resources

Policy Impact on Endurance Running Successes

Lastly, the impact of the 1990 liberalization policy on endurance running successes was significant, $z = -3.517$ (corrected for ties), $p < .05$, two-tailed and an $r = .621$. Specifically, over the two periods-before-liberalization (1978-1993) and after-liberalization (1994-2009) the marathon running successes were impacted as follows: (a) Berlin marathon successes (BEMS) had a 2833.33 % ascent, (b) Boston marathon successes (BMS) swelled by 1200%, (c) Chicago marathon successes (CMS) advanced from a zero before the liberalization to 87, (d) New York Marathon successes (NYMS) up-surged by 1529% , and lastly, Stockholm marathon successes (SMS) climbed from zero to 35. When all the marathon running successes (MRS) were combined and compared over the two periods-before-liberalization (1978-1993) and after-liberalization (1994-2009) the successes improved from a paltry 17 to a high of 412 which was a 2424% upward spring (Figure 5.4).

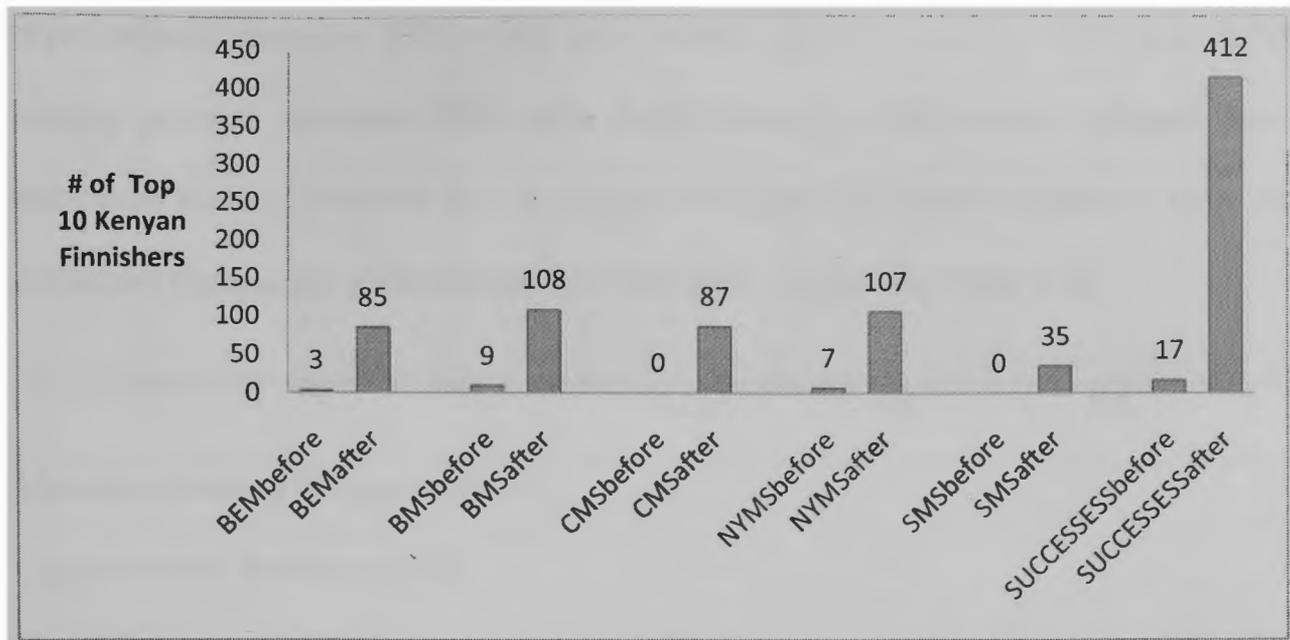


Figure 5.4: Impact of the liberalization on marathon running successes

Correlation Analysis

The other aim of the study was to determine if a correlation existed between Kenya's endurance running resources and its endurance running successes. To realize this aim, Kendall's Tau test of correlations was used to test the following hypotheses:

- H_5 : There is a high correlation between Kenya's stock of endurance running human resources and marathon running successes.
- H_6 : There is a high correlation between Kenya's stock of endurance running organizational resources and marathon running successes.
- H_7 : There is a high correlation between Kenya's stock of endurance running physical resources and marathon running successes.

Kendall's Tau is used to evaluate relationship between two variables (Shelkin, 2007; Siegel & Castellan, 1988). Specific to this study, the relationships between the dependent variable marathon running successes (MRS) and the independent variables endurance running

organizational resources (OR), endurance running human resources (HR), and endurance running physical resources (PR) were tested. Kendall's Tau results indicated that each endurance running resource had a high-positive and significant correlation with Kenya's endurance running successes thereby confirming H_5 , H_6 and H_7 (Table 5.3).

	MRS	OR	HR	PR
Marathon Running Successes (MRS)	1			
Organizational Resources (OR)	.773**	1		
Human Resources (HR)	.785**	.913**	1	
Physical Resources (PR)	.763**	.953**	.888**	1

** $p < 0.01$ (2-tailed)

Table 5.3: Kendall Tau results

Human Resources and Endurance Running Successes

Kendall's Tau Correlation coefficient was calculated for the relationship between the stock of Kenya's endurance running human resources and Kenya's marathon running successes. A strong positive correlation was found ($\tau = .785$, $p < .001$, two-tailed, $N = 32$) indicating a significant relationship between the two variables (Table 5.3). Endurance running human resources tend to contribute towards Kenya's marathon running successes. As indicated in Figure 5.5, there is a direct positive relationship between the stock of human resources and endurance running successes. Furthermore, the linear forecast trend line confirms that such a relationship may likely continue.

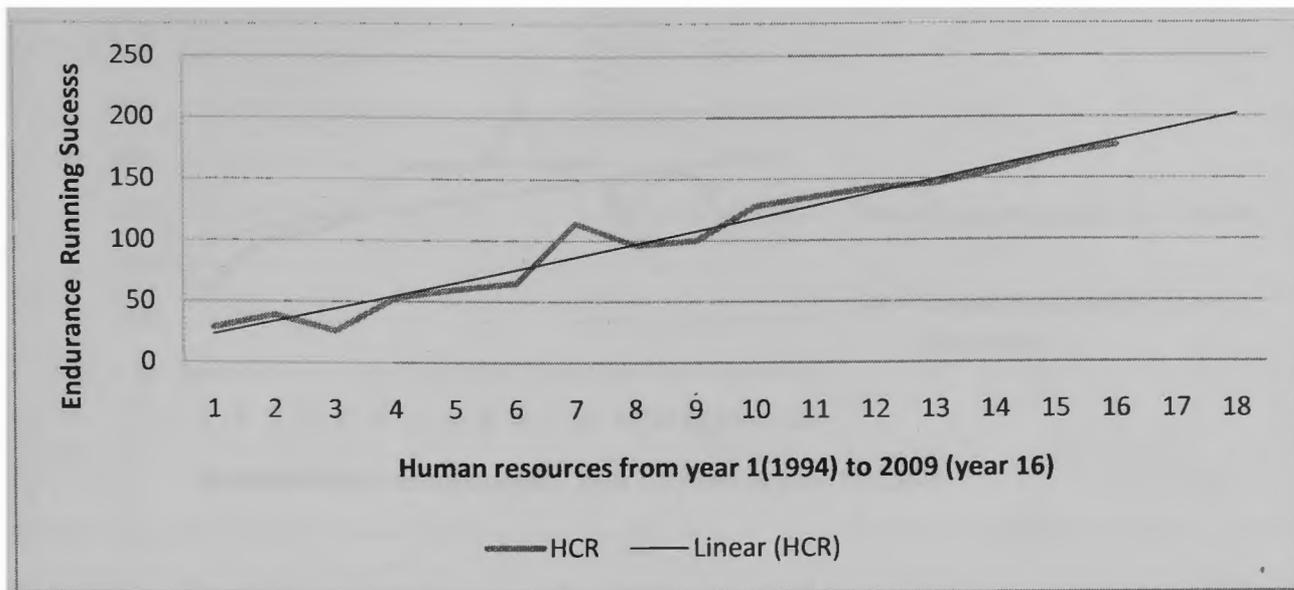


Figure 5.5: Correlation between marathon successes and human resources from 1994-2009

Organizational Resources and Endurance Running Successes

Kendall's Tau Correlation coefficient was calculated for the relationship between the stock of Kenya's endurance running organizational resources and Kenya's marathon running successes. A strong positive correlation was found ($\tau = .773$, $p < .001$, two-tailed, $n = 32$) indicating a significant relationship between the two variables. Endurance running organizational resources tends to contribute towards Kenya's marathon running successes. As indicated in Figure 5.6, there is a direct positive relationship between the stock of organizational resources and endurance running successes particularly between the years 1994 and 2000. There is a noticeable decline in the correlation between OR and endurance running successes between the years 2000 and 2009. In line with the scope of this study, the reasons for the decline were not investigated.

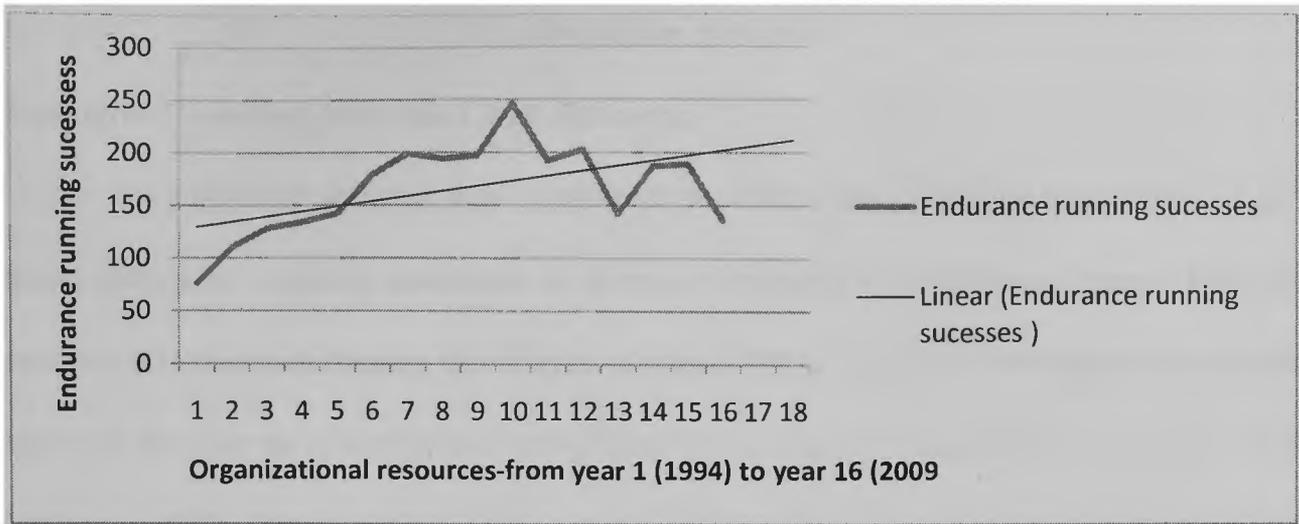


Figure 5.6: Correlation between marathon successes and organizational resources, 1994-2009

Physical Resources and Endurance Running Successes

Kendall's Tau Correlation coefficient was calculated for the relationship between the stock of Kenya's endurance running organizational resources and Kenya's marathon running successes. A strong positive correlation was found ($\tau = .763$, $p < .001$, two-tailed, $n = 32$) indicating a significant relationship between the two variables. Endurance running physical resources tends to contribute towards Kenya's marathon running successes. As shown in Figure 5.7, there is a direct relationship between the stock of organizational resources and endurance running successes.

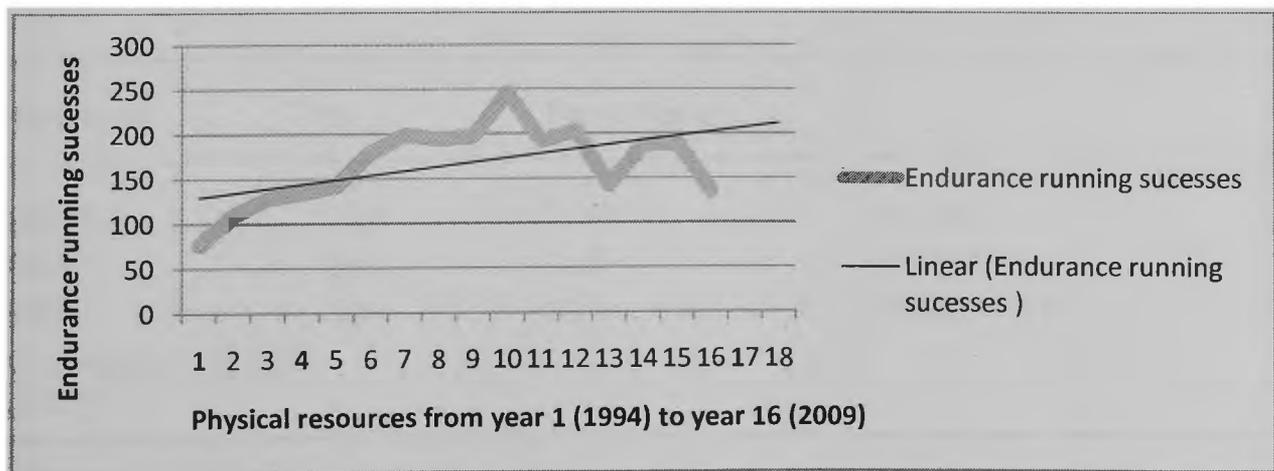


Figure 5.7: Correlation between marathon successes and physical resources, 1994-2009

Prediction Analysis

Predictive Contributions of the Three Resources

An additional analysis was conducted to validate the combined importance of all the three endurance running resources to Kenya’s endurance running successes. This added analysis was conducted using the Friedman’s test. The test is used to evaluate the differences between three or more conditions using data from a repeated measured design (Gravetter & Wallnau, 2007; Daniel, 2005). In this study, the conditions were endurance running human resources, endurance running organizational resources and endurance running physical resources. To attain this goal, the following hypothesis was tested:

H₈: The stock of endurance running resources had a positive effect on marathon running successes.

The Friedman test results indicated that of the predictive contributions of endurance running resources to marathon running successes varied significantly across the three endurance running resources, $X^2_f = 52.929$ (corrected for ties), $df = 2$, $N = 32$, $p = .001$ to confirm *H₈* (Figure 5.4). These results confirm that, overall the three endurance running resources had a positive and significant effect on Kenya’s marathon running successes.

Treatment	n	Mean Rank	r
HR**	32	1.77	(HR-PR = .88)
OR**	32	3.00	(OR-HR=.87)
PR**	32	1.23	(PR-OR = .72)
Chi-square = 52.929			
df = 2			

Table 5.4: Friedman test results

Predictive Contributions of Each Resource

On evaluating the predictive contributions of each resource, endurance running organizational resources appeared to contribute most to Kenya's marathon running successes, followed by endurance running human resources, and endurance running physical resources. Follow-up pair wise comparisons with Wilcoxon Signed Rank Test and Benferroni adjusted α of .17 indicated that endurance running organizational resources (*Mean Rank* = 3.00) was perceived as significantly more of a predictor of Kenya's marathon running successes than the endurance running human resources (*Mean Rank* = 1.77), and endurance running physical resources (*Mean Rank* = 1.23).

The contributory differences between the endurance running organizational resources and endurance running human resources was significant ($p = .001$, $r = .87$), whereas the contributory differences between endurance running physical resources and endurance running human resources was also significant ($p = .001$, $r = .72$), finally, the difference between endurance running physical resources and endurance running organizational resources was also significant ($p = .001$, $r = .88$).

Summary

This chapter has navigated through all the results based on the Wilcoxon test, Friedman test and Kendall's Tau statistical techniques. They all indicate that the Kenya Government's 1990 liberalization policy had a positive and significant impact on both endurance running resources and endurance running successes. Endurance running organizational resources was found to be the most valuable contributor to Kenya's marathon running successes when contrasted with endurance running human resources and endurance running physical resources.

CHAPTER 6

DISCUSSIONS

The results of this study suggest that Kenya's endurance running successes may be explained by the radical shift in the 1990 Kenya government's liberalization policy. This government policy involved the liberalization of the economy, which impacted directly on the nation's sports delivery system. This policy shift led to the accumulation of human, organizational and physical resources which secured Kenya's athletes a competitive advantage. These resources were derived, not from government but from the private sector. A subsequent inflow of capital which resulted from the deregulation and privatization programs implemented after 1990 further strengthened the organizational capacity of the Kenya sports delivery system. This chapter has these findings as a foundation for analysis of Kenya's sustainable competitive advantage and its capacity and capability for continued successes. This chapter also addresses the theoretical and managerial implications as well as the limitations and recommendations.

Conceptual Framework of the Discussion

From a Resource-Based View perspective, Kenya's endurance running successes can be conceptually categorized into three stages (Figure 6.1). Stage X involved Kenya's accumulation of valuable and rare marathon running resources. Stage Y, involved the move to sustainable competitive advantage which encompasses possessing inimitable and non-substitutable marathon running resources. Lastly, stage Z, is the ability to transform valuable, rare, inimitable and non-substitutable resources to desired objectives-in this cases marathon running successes. The stages supplement one another in that a firm may have specific competitive advantages but lack the capability to transform the resources into success (Acedo et al., 2006; Smart & Wolfe, 2000; Aaker, 1989).

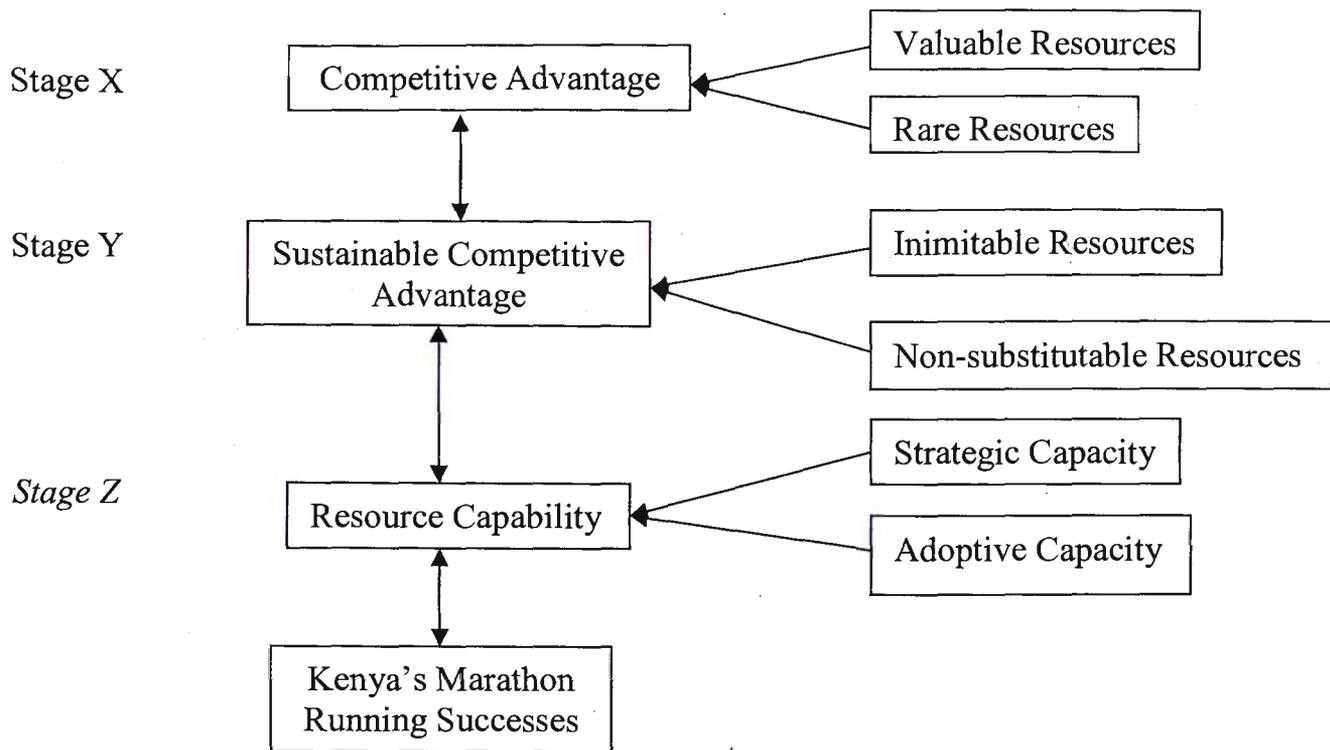


Figure 6.1: Conceptual frame of discussions

Sources of Kenya's Competitive Advantage

According to Barney & Hesterly (2009) and Barney (2007), competitive advantage may be gained by strategic use of valuable and rare resources while sustainable competitive advantage could be realized if these valuable and rare resources become inimitable and non-substitutable. Moreover, even after a firm can realize all the four attributes, to ensure success, the firm will still have to develop the capabilities to successfully manage the advantages over competitors (Hill et al., 2004; Adner & Helfat, 2003; Hooley et al., 1998).

As part of the resource based-view, this study was geared toward evaluating if Kenya's stock of endurance running resources were both sources of competitive advantage and sustainable competitive advantages. Each resource was evaluated based on the VRIN criteria recommended by Barney (2007) after which Kenya's resource capacity was evaluated.

Valuable Resources

Resources that are valuable allow a company to create or implement strategies that improve the company's efficiency, improve the value/cost ratio of a product or service, or allow the company to either exploit its opportunities or neutralize threats arising from the external environment (Barney, 2007; Agan, 2005; Fahy, 2000; Arker, 1989). The resource value is important in achieving a competitive advantage in that:

“The bundle of resources a company accumulates or acquires to execute a given market strategy must be more valuable, relative to resources of competitors in the market, for the firm to enjoy a competitive advantage and superior performance.”

(Hill, Gareth & Galvin, 2004, p. 131).

Based on the results from the Friedman test which indicated that rankings of Kenya's endurance running resources varied significantly across the three resource types, $X^2 = 52.929$ (corrected for ties), $df = 2$, $n = 32$, $p < .001$, endurance running organizational resources appear to influence Kenya's marathon running successes more than the other two resource types. Of the three predictors, endurance running organizational resources appears to explain Kenya's endurance running successes and can be considered the most valuable resource relative to the others. This study therefore concurs with an increasing number of studies which confirm that adequate organizational resources are fundamental to the success of corporations (Street, 2006; Gerrard, 2005; Yoo, 2002; Branch, 1999; Koski, 1995; Frisby, 1986).

Rare Resources

Resources may be deemed rare if they are possessed by a small number of competitors (current or potential) or, ideally, by only one company (Barney, 2007; Levitas & Chi, 2002). Resource rareness is a matter of degree as is it a function of the number of other companies with the same resource compared with the overall number in the industry (Runyan, 2003; Peteraf & Barney, 2003). Hill et al., 2004, p. 131) adds:

“If a large number of companies in the industry have the same specific resource (even if it is valuable), then the resource’s ability to generate a competitive advantage for any one company is diminished. If the number of companies possessing a particularly valuable resource is small, then that resource is generally considered rare and has a potential to generate a competitive advantage”.

In the business sector, companies with rare talents tend to enhance the competitive nature of the company against its rivals (Sheen, 2009; Hoster, 2005; Harvey, 2004; Boxall & Steeneveld, 1999; Bloodgood, 1997). Rare human resources in sports can make a big difference in achieving success (Cunningham, 2003; Cunningham & Sagas, 2004).

In the Kenyan case the numbers of running talents were deemed rare. Kenya as compared to the rest of the world has had the very rare ability of producing world class talent per capita. Even a nation as large as Brazil, India, China or USA cannot match the rate at which it produces world class marathon talents (Pitsiladis et al., 2007; Mayes, 2005; Bale & Sang, 2003). Although Kenya’ produced some world class marathon talents prior to the 1990 Kenya Government’s liberalization policy, the intensity and rate of these talents increased from 95 to 1154 after the policy implementation. Furthermore these world class talents were

able to improve their marathon successes by 2424% or from 17 to 412 after the 1990 policy shift, thereby stressing the role of endurance running talents.

However, rare and valuable resources may contribute to gaining competitive advantage, but not always a sustainable competitive advantage. The transition from competitive advantage to sustainable competitive advantage involves the ability to transform the rare and valuable resources to become both non-substitutable and inimitable resources (Barney, 2007; Smart & Wolf, 2003). In line with this reasoning - which Kenya endurance running resources are sources of sustainable competitive advantage?

Sources of Kenya's Sustainable Competitive Advantage

Resource Inimitability

Resource inimitability refers to the degree competitors can imitate or replicate a resource (Barney, 2007; Hill et al., 2004; Carrolis, 2003; Aaker, 1989). This replication can be achieved through buying the resources, making them a new, or copying them – but all depend on whether the resources are actually available (Barney & Hestly, 2009; Barney & Clark, 2007). Resources such as buildings, equipment, and personnel are generally readily available or can be bought or even transferred from one company to another. However some resources are not so mobile as they are highly context specific or depreciate on transfer or may not, despite considerable effort, offer same benefits to the acquiring company or new place or location.

In the Kenyan case, resources that can be replicated include building of running camps, hiring sports agents, and or buying of talents through immigration. However, what cannot be imitated are the organizational and cultural resources such as relationships which are evident in the way the nation organizes its domestic competitions and its local associations amongst Kenyan teams, endurance running camps, and administrators. Kenya's

culture of “harambee spirit” which is based on virtuous shared corporation, assistance to the needy and close relationships amongst groups cannot be imitated. Resource inimitability largely results from the following five factors-namely causal ambiguity, history, legal property rights, social complexity, and time compression and diseconomies:

Causal ambiguity: Causal ambiguity exists when the link between resources and sustainable competitive advantage is not understood or understood only imperfectly (Barney, 1991 in Barney, 2007). Companies attempting to imitate successful companies’ resources causal ambiguity may limit their understanding of exactly what makes successful companies successful because capabilities and distinctive competencies are deeply embedded within the company to the extent that outsiders may have difficulties understanding why successful companies are actually successful (Hill et al., 2004). Specific to Kenya, many nations have attempted to reproduce Kenya’s marathon successes but with little or no tangible results (Wirz, 2006; Mayes, 2005; Bale & Sang, 2003). Over the last five years, many western nations continue to send their runners to Kenya, with the belief that they may “copy” their success secrets. For example richer nations such as Australia and Canada with specific programs of elite marathon training complete with exercise physiologies, the latest technology and specialized camps have not been able to match Kenya’s marathon successes.

History: Resource inimitability may result from path dependencies such as historical events or unique historical circumstances (Barney, 2007; Hill et al., 2004). Companies can gain inimitability advantages through the historical acquisition of a physical location. Specific to Kenya, the uniqueness of the Rift Valley where the high altitude camps are located can be viewed as a historical event which arose due to colonial geographic demarcations. A more detailed discussion is in chapter 2. The uniqueness of the high altitude marathon training camps cannot be replicated in another country as it is region specific.

Legal property rights: Competitors may (in some cases) identify and understand a resource but the legal system of property rights such as patents, trademarks and copyrights restrictions may prevent them from imitating the resource (Hill et al., 2004; Baharadwaj, 2000). In relation to marathon successes, the 1990 Kenya Government's liberalization policy which gave private investors the right to own and run marathon camps is one example of this. For the first time, private individuals were given legal rights to own training camps and operate as agents (Wirz, 2006; Mayes, 2005). This legal rights to private ownership has enabled the growth of capital investments in sports related infrastructure such as camps.

Social complexity: Some resources are based on complex social phenomenon such as cultural processes and relationships which can be impossible to replicate or 'engineer' to attain its valuable or similar benefits (Barney, 2007; Hill, 2004). Tanser, 2008, p.68 warns:

"To run like a Kenyan, you have to reduce the level of stimulation and spend more time on the things that are needed to be done. We are overindulged here in America. The way this society is set up, you will never get the droves like Kenya, you may get one or two, but we'll never compete unless there is a dramatic culture change."

Furthermore, Kenya's culture of hard work, resilience and co-operation due to the 'harambee spirit' is exceptionally rare as it sustains the unique domestic relationships needed for organizing competitions, recruiting and assisting one another in hard times. This type of culture is inimitable.

Time compression and diseconomies: Time is needed to develop resources through learning, experience, company specific knowledge or trained proficiency in a skill (Hill et al., 2004; Peteraf & Bergan, 2003; Ekeledo, 2000). A rival company that wants to imitate a

successful company may therefore need to spend years or decades just to build such a capacity. To build a capacity, years of development time, learning and considerable capital investment is a requirement (Hill et al., 2004; Porter, 2004). In relation to Kenya, it has taken decades for the nation to develop and accumulate the necessary resources for marathon success. For instance, if a rival nation such as New Zealand or Iceland may want to imitate Kenya's marathon successes, they may be ready to take the required time of developing specific marathon running resources. From the results of this study, it is clear that tangible resources such as the building and construction of marathon training camps took many years and are still developing. Other resources such as coaches, talents and agents are also taken over a decade to attract and accumulate in the right quality and quality to match the required talent production.

Resource Non-substitutability

The final test of a resource's ability to sustain a competitive advantage is its degree of non-substitutability. Non-substitutability is the degree to which a resource has an equivalent substitute (Suter, 2008; Barney, 2007; Ross-Donroche, 2000). For a resource to be a source of sustainable competitive advantage, it must have no equivalent (Barney & Clark, 2007; Hill et al., 2004; Harris, 2000; Aaker, 1989). Non-substitutability is a matter of degree as a perfect substitute could undermine the rent-generating capacity of another resource (Mahoney, 2001; Makodak, 2001; Fahy, 2000; Grant, 1998). As such, the rent-generating capacity of a given resource is lessened only to the extent that an alternative resource can provide strategically equivalent benefits (Hill et al., 2004; Makodak, 2001; Amis et al., 1997).

If two resources are of equivalent benefits and provide the same strategic benefits, but are also rare, then they can still afford both companies' rent-generating capacity (Hill et al., 2004; Makodak, 2001). One resource may be an equivalent substitute for another resource,

but if both resources are rare, so they can still be sources of sustainable competitive advantage. In this sense, similar to the rareness condition, non-substitutability has a degree of difference.

A growing number of studies attest to the value of culture in sports success (Yean-Sum & Cromartie, 2001; Colyer, 2000; Kent & Weese, 2000). Similarly, the combined interaction of Kenya's organizational resource such as its unique culture and its unique ability to produce world class talents are non-substitutable. A number of studies attest to the importance of culture as a source of sustainable competitive advantage (Nier, 2009; Singh, 2004; Apfelthaler et al., 2002; Ashkanasy et al., 2000; Colyer, 2000; Cooper et al., 2000; De Witte & Van Muijen, 1999). Collings & Skykes, 2004, p.158-159 adds:

“The long-term culture seen in the inhabitants of the Rift Valley is often touted as a reason for their impressive success on the world marathon stage.”

To date, no country has matched Kenya's ability to produce world class endurance talents (Wirz, 2006; Mayes, 2005; Bale & Sang, 2003). Additionally, the Kenyan culture and unique ways of perceiving and doing things cannot be transferred 100% or reproduced elsewhere.

Kenya's Resource Capabilities

When a company succeeds in achieving a competitive advantage and proceeds to achieving a sustainable competitive advantage, it can be due to the company's strategic commitment and absorptive capacity (Barney & Hostelry, 2009; Starber & Sydow, 2002; Hill et al., 2004). The firm therefore commits to enhancing its competencies in the areas that it can outperform its rivals (Coates & McDemott, 2002; King & Zeithaml, 2001; Norton, 1998).

Strategic Commitment to Marathon Training Camps

Strategic commitment is the level of resources and capabilities that a company commits to a particular strategic decision or a particular way of doing business (Ghemawat, 1991). This is so because once companies make or have had long established strategic commitments to a particular way of doing business, they may find it difficult to break the commitment and therefore may be slow to imitate an innovative company's competitive advantage (Barney & Hostelry, 2009; Stephens, 2009; Gallo, 2008; Arya & Lin, 2007; Das & Teng, 2000). A brief example from the motor vehicle industry offers one such illustration. According to Hill et al., (2004, p.134), from 1945 to 1975, the US motor industry was dominated by the stable oligopoly of GM, Ford and Chrysler all of which geared their production to large cars. When the markets shifted from large to small cars with fuel efficiency being the key selling point, these US companies found themselves lacking in the resources and capabilities required to produce the demanded cars. Their commitments had built the wrong kind of skills for the new competitive environment which further made them unable to react quickly.

In relation to Kenya, the central government since the 1990 Kenya Government's liberalization policy shift has continued to commit to the growth of marathon training camps as the key strategic commitment to fostering and sustaining marathon successes. Relative to other economic sectors, the central government of Kenya is still committed to decentralizing, privatizing and deregulating its national asserts while the sport sector has had full government support since its inception. Since 1990, Kenya as compared to other nations (which have not liberalized their economies) have accumulated substantial resources and capabilities required to produce successful marathon runners. How then can the strategic commitment to the growth and development of marathon training camps explain Kenya's marathon running successes?

Strategic Commitment to Marathon Training Camps

The framework below illustrates the five key advantages of specialized training facilities such as marathon training camps situated in Kenya.

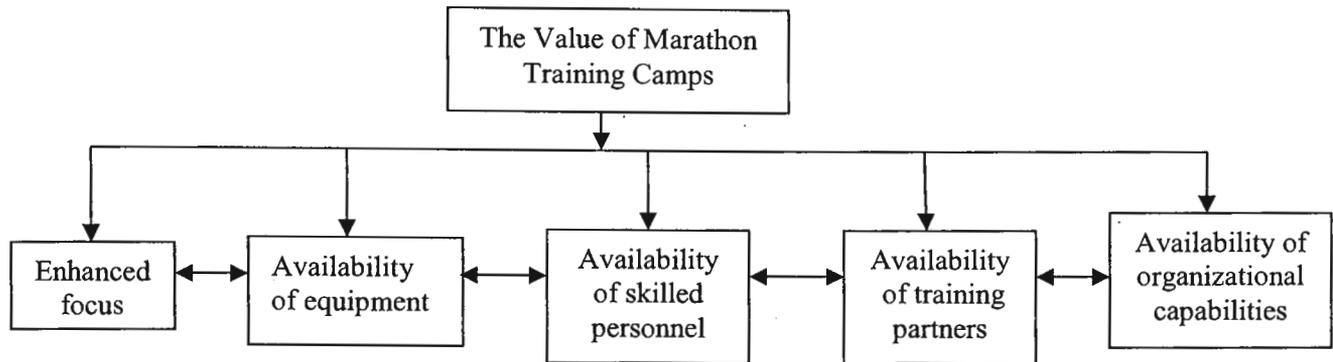


Figure 6.2: Commitment advantages of marathon training camps

Enhanced focus: The main advantages of marathon training camps is that the runners can focus and commit fully to training without external interferences from family, and other related interests. This factor is prevalent even to other successful nations such as Australia, Canada and UK which have specialized training facilities for various elite sports (Green & Houlihan, 2005; Green & Oakley, 2001; Oakley & Green, 2001). In the Kenyan situation, the potential need for a specialized training camp (in light of domestic interferences) is best summed by David Kemei (a 1,500m runner):

“I moved away from my village to Iten because I could not train with all the jobs at home.”

The ability of camps to guarantee freedom from house chores is especially more important for Kenyan women because the traditional cultural practices that require

women to do most the daily house chores such as child care, cooking and cleaning.

Brother Colm who coaches many Kenyan junior women adds:

“This especially affects women runners in Kenya. Often they run well in school and then on returning to the family farm they are faced with all the house hold work; there is no time and energy left to train.”

The results of this study demonstrate that since the 1990 Kenya Government’s liberalization policy which allowed for the private ownership of marathon training camps, the number of world class women marathon runners has increased steadily.

Availability of training partners: The availability of adequate training partners has double advantage. First is the ability to bond and form strong teams over extended periods of time can create positive team synergy (Cunningham & Sagas, 2004). Team synergy building by the use of training camps is popularly used by many national teams before important international matches (Miller, 2009; Jemsey, 2002). Comments by Chemeiyo (an elite Kenyan endurance runner) strengthens this view:

“When we live, struggle, and work together, a victory by one of us is for all of us (Tanser, 2001).”

Furthermore, the coaches also prefer the bonding advantage of camping as Navy Coach Albert Masai points out: “We are able to understand the athlete much better when we live in constant contact. How else can a coach really get to know his athletes?” Team work (developed in camps) can therefore help in rallying other team members towards the common goal of winning. Secondly, since elite camps have the best possible concentration of top

talent, runners are able to find equally talented training partners who they can positively challenge and learn from to better their quality of training (Kryzewski & Spatola, 2010). The Kenyan Coach Kosgei sums the advantages of group training:

“I like to have juniors training with seniors and women with the men. It keeps the group alert. The juniors learn much from being with the seniors. They also learn self belief from training along with the world’s best runners. They develop much quicker with this environment (Tanser, 2008).”

Thirdly, the younger runners can also train and live with their role models thereby motivating them more as illustrated by Daniel Komen (Tanser, (2008, 125): “When you are tired, there is always another man pushing and letting you rest. Even if you are at full speed, you can always be pushed a little faster.”

Availability of trained personnel: A review of the sports literature indicate that in Australia (Green & Houlihan, 2005), USA (Gibbons et al., 2003) and the UK (Duffy et al., 2001) specialized training facilities frequently tend to have the best possible sports training personnel such as coaches, biomechanics, sport psychologist and sports physiologists. In the Kenyan case, for example, the Armed forces training camp at Ngong is usually reputed to have the highest concentration of sports personnel. Other private camps also do have the services of “expatriate” personnel such as Dr. Rosa an Italian physician who trains and owns a number of marathon training camps (Wirz, 2006).

Organizational capability: In general, firms with efficient organizational capacities are better at developing more superior competitive advantages than their rivals (Dude, 2007; Tang, 2007; Wang & Ahmed, 2007; Eising, 2004; Tylor, 2001; Eisenhardt & Martin, 2000; Germann, 2000; Grant, 1996). Specific to Kenya, specialized training camps do have all the

necessary infrastructure for success such as personnel, equipment, finances, accommodation, medical facilities etc (De Knop et al., 2004; van Bottenburg, 2003). Because the running camps are mainly incorporated by shoe companies “to recruit and nature athletes who will represent their brands”, they invest heavily in organizing prized meets, transport, accommodation and any other finer details that may enhance the success of their runners (Wirz, 2006). They also do have the added advantage of global networks with full time dedicated personnel. For instance the global corporations Nike and Adidas have strong finances and global outreach thereby making them possess an enhanced capability which can also enhance their brands. Moreover, the proliferation of marathon running camps can also be explained by the relative economic advantage of operating such as camp as it does not require major and expensive facilities. However, many parts of Kenya still lack even the basic running facilities. A policy paper released by MYA (2006, p. 10) emphasizes the establishment the need for more sporting facility;

“Establish and improve accessibility to recreation and sporting facilities in schools, communities and villages. These facilities should have trained personnel to assist in identifying and developing young people’s talents.”

In conclusion to the advantages of committing to marathon training camps, are also corroborated by other studies which attest to the role of specialized training facilities in attaining elite sporting successes such as: (Green & Houlihan, 2005; De Bosscher et al., 2004; De Knop et al., 2004; van Bottenburg, 2003; Gibbons et al., 2003; De Bosscher & De Knop, 2002; Nys et al., 2002; Dufy et al., 2001; Green & Oakley, 2001; Oakley & Green , 2001). It is worth noting that privately run marathon training camps were allowed to open and operate in Kenya only after the 1990 liberalization policy.

Absorptive Capacity of Sports Agents

Another determinant of the ability of competitors to respond to a company's competitive advantage is their absorptive capacity. Absorptive capacity is the ability of an enterprise to identify value, assimilate and use new knowledge (Dhanaraj & Beamish, 2003; Deniz & De Saa, 2003; Itwin, 1994; Cohen & Levinthal, 1990). Capabilities also involve the firm's ability to nurture strategic alliances and collaborations (Judge & Elenkov, 2005; Lambel & Shamsie, 2003; Ireland et al., 2002; Kruse, 2001; Ojode, 2000; Wong, 1999; Lambe, 1998). This capability is also a function of having capable staff and the right tools to accomplish required tasks successfully (Knott, 2008; Malone, 2007; Agan, 2005; Yap, 2004; Adner & Helfat, 2003; Wright, 2001; Bharadwaj, 2000; Juga, 1999). In relation to adoptive commitment, Hill et al. (2004, p. 134) comments:

“Taken together, factors such as existing strategic commitments and slow absorptive capacity limit the ability of established competitors to imitate the competitive advantages of a rival, particularly when that competitive advantage derives from innovative products or processes. This is why, when innovations reshape the rules of competition in an industry, value often migrates away from established competitors and towards new enterprises that are operating with new business models”.

In the Kenyan context, the results demonstrate that Kenya developed the capability to identify, value, assimilate and use of new knowledge derived from commercial sports agents, coaches and athletes themselves. It is important to note that commercial sports agents were neither recognized nor licensed before the 1990 liberalization policy. To date, the agents have been assimilated into the Kenyan marathon delivery system as they work closely and

collaboratively with the existing marathon running camps as well as the athletes and sport administrators locally and internationally. Kenya has been a quick adopter to identify and value foreign sports agents. It has also been able to assimilate (by allowing foreign investors such as agents and camp owners) to transact their businesses with Kenyan partners and athletes. The nation has therefore been able to use the new knowledge of the foreign agents and camp owners as well as the expertise of runners who have gained international experiences as a direct result of the 1990 liberalization policy shift due to exposure to international competitions. How then is Kenya benefiting from the absorptive capacity through the use of foreign sports agents? This question can be answered by explaining the role of sports agents to the potential success of athletes.

Figure 6.3 illustrates the multiple roles modern sports agents have. As shown, the sports agent (depending on their qualification and experience) may choose to perform all the listed roles below.

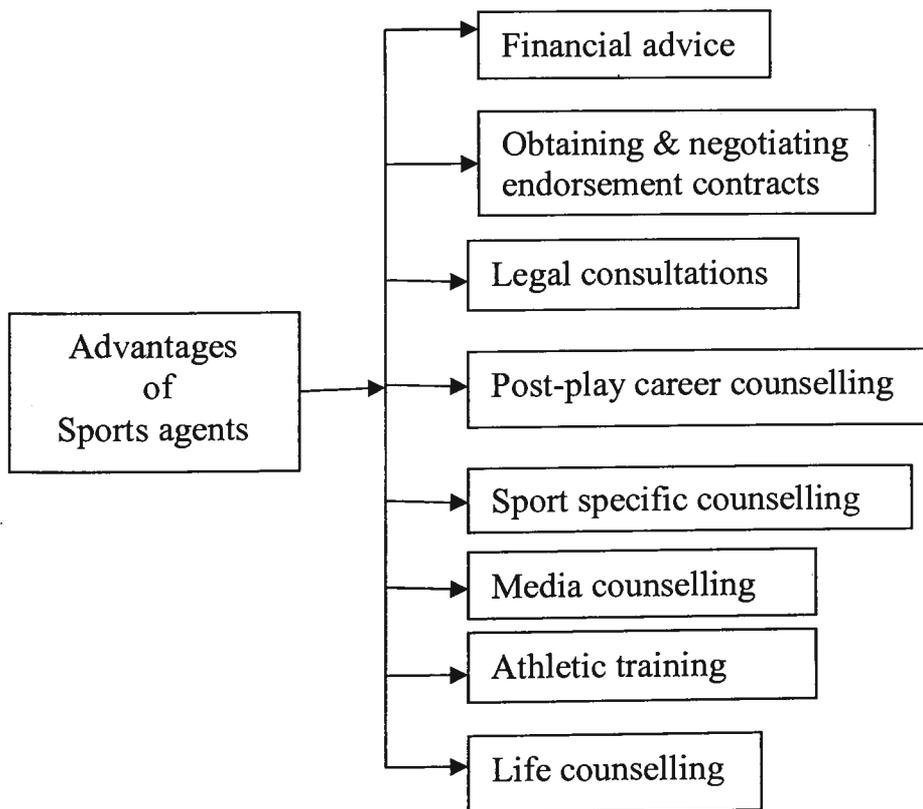


Figure 6.3: The role of Kenyan marathon agents

A review of the literature on the advantages of sports agents indicate that in general, the role of sports agents include, but not limited to; (a) advice elite sportsmen and women regarding financial matters as tax, investment, insurance, & money management (Shropshire & Davis, 2008), (b) obtaining & negotiating endorsement contracts with or on behalf of elite athletes (Hruby, 1999), (c) offer legal (including criminal) consultation on issues relating to and affecting the athlete (Rubin & Sander, 1988), (d) offer post playing career counselling especially for those athletes who intent to retire or move on to alternative careers (Garbarino, 1994), (e) offer counselling services to players regarding their particular sport (Brown, 1994), they also counselling services to players regarding their media image especially for television and internet videos (Champion, 1997), (f) offer direct athletic training (Closius, 1999), (g) provided medical consultations especially for those who have a medical background (Were, 1989), and lastly counsel players on matters pertaining to everyday life (Hruby, 1999).

Specific to Kenya is the example of Dr. Rosa, an Italian physical therapist who holds multiple roles as an agent, trainer and team doctor for the camps he runs in Kenya. Unfortunately, no studies to date have exclusively looked into the role of agents in the elite Kenyan running scene.

Theoretical and managerial Implication of the Study

Application of Resource-Based View in elite endurance running research: From a managerial standpoint, the use of the RBV is to search for sources of competitive advantage in business (Armstrong & Shimizu, 2007; Foss & Ishikawa, 2006; Balogun et al., 2003; Levitas & Chi, 2002) and in sport (Fletcher, 2006; Gerrard, 2005; Ivey, 2004; Won, 2004; Cunningham, 2003; Berman et al., 2002; Poppo & Weigelt, 2000; McMahon, 1999; Amis et al., 1997) which, and when applied well, may greatly assist teams and nations achieve

remarkable success. Unfortunately in elite endurance running, very few empirical studies have been conducted to show how elite sports personnel may efficiently utilize scarce or abundant resources. Of critical note in this study was the impervious and intertwined nature of resources, such that an increase in one may directly lead to an increase in the other. From a political perspective, the study also reveals that resources can only thrive and flourish in a stable political environment. The 2007 Kenyan election skirmishes demonstrated how a hostile environment forced out foreign agents and top Kenyan athletes. The future challenge for sports economics and management studies will be to develop sports specific and related constructs (as opposed to the business ones currently in use). For example, in business performance may mean profits, sales or returns on shares but it is not clear if sports performance strictly means goals, medals or championships or the business side of sport performance such as number of sponsors, number of attendants, or the profits made from franchises.

The managerial analysis of policy Impacts: Because elite sport is predominantly a result-oriented endeavour (i.e. you win or lose with draws overly viewed as losses), process based analysis as commonly applied in Stages, Institutional, and Multiple Coalition analytical frames which do not fit well into research approaches used in elite sports performance. Furthermore, impact studies such as this one are biased towards actual results-not processes. These process-based analytical frameworks are probably better at mapping political manoeuvrings common in politics of policy formulations. The managerial analysis illustrates well the relationship between strategic policy choices and performance (based on efficiency and effectiveness) which are an integral part of strategic management (Becerra, 2008; Barnes, 2003; Medcof, 2001; Alchols, 2000). A managerial evaluation further isolates the resources most appropriate for success (Brenzei, 2006; Kemmerrer, 2003; Fahy, 2000; Hunt, 1999; Black & Boal, 1994). The RBV does offer a clearer scope on isolating capabilities (Sharpe, 2006; Sheehan,

2006; Ray et al., 2004; Ross-Donroche, 2001). Despite the positive impacts of the 1990 Kenya Government's liberalization policy the biggest constraints to policy fulfilments in Kenya is: "Unclear and uncoordinated youth policies and programs: While a number of Government Ministries and youth organizations have their own programs and sectoral youth policies, a lack of a national youth policy and effective co-ordination mechanisms hamper their effectiveness." (MYA, 2006,p.2).

Contribution of elite endurance running research globally: This study is the first of its kind and has shed light on research on elite Kenya endurance running from a managerial stand point. It highlights the power of strategic choice in that the liberalization policy became the catalyst for accumulation of previously scarce resources. Moreover, the findings also indicate an alternative model of sports funding-that arises from a liberalization policy. Similarly this research also reveals that even a meagre addition of the stock of resources (such as training facilities with substantial regular supplies) can go a long way towards building a competitive advantage.

And even more interestingly, this new model of less government control with more private participation may be a possible way forward for other African nations which are yet to liberalize. Countries such as Morocco, Ethiopia and Algeria have demonstrated a strong running endurance running tradition, and a stock of human resources that can be used as a platform to build a stronger network of organizational and physical resources. As the results of this study shows, it can enable these nations to further strengthen their international endurance running successes if they borrow from the Kenyan model.

In sum, the findings of this study may enhance further research into the combined application of RBV studied from a managerial frame. The RBV as a theoretical model offers a different view from the previously existing explanations of Kenyan endurance running

successes. In contrast to the oft-repeated claims about Kenyan running, this study for the first time has presented credible evidence in support of an alternate explanation of its running successes from a managerial perspective.

Limitations and Recommendations

As with all studies, certain limitations exist. The limitations of the current study were concerned mainly with the data collection procedures and the assumptions of the resource-based view.

First, the RBV emphasizes the importance of intangibles as sources of sustainable competitive advantage (Barney & Hesterly, 2009; Levitas & Chi, 2002) as rival companies find them extremely difficult to imitate or substitute (Barney, 2007; Newbert, 2007; Hill et al., 2004). Therefore, since the theory itself is derived from the importance of intangible resources, it complicates the difficulty to identify and possibly measure the alleged intangible resources (Northnagel, 2008; Newbert, 2007).

Second, there is the problem of data collection and the method of retrieving it. This study employed the use of archival data which posed some limitations. First, it was difficult to directly measure Kenya's endurance running culture in a quantitative fashion. However, the use of a possible proxy-namely the number of international sporting associations was used. Additionally all measures were subjected to construct validity and reliability analysis to ensure that they captured what they were supported to measure. Future studies may need to explore qualitatively other constructs which may be specific to the Kenyan context.

Third, although this study used marathon running events as a special indicator of endurance running successes, future studies may need to explore other endurance running events such as 800m, 1,500m, 3,000m, 5,000m, 10,000m and half marathon as well as other mega events such as the Olympic Games and the IAAF World Championships. The strength

of the current study was that it explored multiple marathon successes in a longitudinal way, thereby making it possible to measure the effect of the resource accumulation over time. Furthermore, the present study did not specifically address how well the resources were utilized- i.e. the 'organizational capability'. Future studies may isolate these organizational capabilities.

Finally, possible future research avenues are suggested as encouraged by Mayes' (2005, p. 6) approximation that: "We have barely scratched the surface of understanding Kenyan runners." In sum, the areas of possible future research may include:

1. The economic impact of elite Kenya marathon running. Since 1986 when IAAF legalized the payment of athletes, Kenya's endurance runners have taken full advantage of this new policy shift especially pertaining to marathon events. The monies earned generally go a long way in the runners immediate and extended family's general wellbeing. However, studies on this area may investigate if and how the earned income contributes to further endurance running resource improvements.
2. The role of Kenya's marathon agents as a human resource capital. Since the sports agency business is a recent phenomenon, both praise and criticism of the current agency system rise. On the positive side, agents "market" Kenya runners so as to increase their value for appearance fee and endorsements, while alleged financial exploitation also continues to taint their image and prospects. Studies on this nature may highlight the real role of sports agents in Kenya.
3. The retirement prospects of Kenyan marathon runners. Since Kenya currently produces the highest number of endurance runners, it could be interesting to investigate what former Kenya elite runners actually do after retirement. Do they go into politics, do they become sports agents, and do they become coaches? Unfortunately to date, no study has looked into this issue. The results of such a study

may be instrumental in furthering the understanding of Kenyan endurance runners after retirement.

4. The link between marathon talent production and talent drain. Researchers such as Bale & Sang, 2003; Lukalo, 2005 reiterated the “loss” of Kenyan runners to non sporting countries such as Qatar. An imperial study which investigates such an area may shed some light between the rate of production of Kenyan runners and their exit and their probable motivations for leaving. The results may further strengthen a closer policy link between talent production and talent retention.

As a result, these are some of the few areas that may be potential research pathways to be taken so as to building on the evidence presented in this study.

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