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The effect building projects have on certain aspects of South Africa's economy

Treatise

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The effect building projects have on certain aspects of SA's economy

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In the faculty of Engineering, Built environment and Information Technology

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Declaration by student

I, the undersigned, hereby confirm that the attached treatise in my own work and that any sources are adequately acknowledged in the text and listed in the bibliography

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Signature of acceptance and confirmation by student

Abstract

Title of treatise	**: The effect building projects have on certain aspects of SA's economy**
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Institution	**: Faculty of Engineering, Built Environment and Information Technology**
Date	**: October 2003**

South Africa was most fortunate to host the 2010 FIFA world cup during a world wide economic recession. Most economists and other professionals predicted that South Africa will experience the aftershock of the recession after the 2010 Soccer World cup.

The main objective of this treatise is to identify the effect building projects have on South Africa's economy. If the research is proven to be correct, South Africa can use the building industry to strengthen the economy and in turn survive the aftershock of the world wide recession. Different economical indicators will be investigated and the effect building projects have on it.

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Chapter 1: Introduction

1. Background

Since a few years back South Africa was appointed/elected to host the 2010 Soccer world cup under certain conditions. Building projects increased to satisfy the requirements for the world cup. Then the world wide economic crisis fell into place and SA got the after shock of it. Thus South Africa is still recovering.

South Africa needs to make a change in the economy to make it a more growing one especially in this crisis SA is facing now. Thus, one could do a study if building projects are sufficient and have a positive influence on SA's economy. The importance of this study is to give an indication if it is possible for the government and the public/private sector of investors and investments, regarding building projects, to make a change in certain aspects of SA`s economy.

The need for this study is of importance to all the stakeholders involved in the building industry, so that they know where and when to invest, especially the government. In the last couple of years South Africa had a lot of building projects and a study of the effect it has on certain aspects of the economy for instance interest rates, inflation, the JSE stock exchange, and the effect it has internationally will be made, to see whether or not it has a growing effect.

In addition, a study of government projects versus private projects and its effect it have on the economy, thus which one is more favourable.

To sum this up it is a study to see if it is better to invest in other opportunities than building projects because building projects may not have that big effect on the economy of South Africa. For example: to invest more in other countries, or to invest more in farming.

2. Main problem: Do building projects have an effect on SA's economy and is it more favourable than other opportunities?

As said in the overview a study of the effect building projects have on certain aspects of the economical indicators for example interest rates, inflation, the JSE stock exchange, and the effect it has internationally/nationally will be done, to see whether or not it has a growing/positive effect.

Also if it is more efficient than other opportunities like farming or growing financial investments in Financial institutes and its effect on certain aspects of the economy with regards to chain reactions.

The influences of supply and demand, as well as profits from construction companies' etc., can give an indication on the JSE as a growing or decreasing effect. All of these economic indicators have a chain reaction of some sort and can be analysed and discussed to determine the overall effects it has and possible solutions to improve it.

On the other hand, the crisis SA is facing now SA needs to research if long term investments are the better option at the moment?

2.1 Hypothesis

It is a general rule that it is better to invest in South Africa rather than other countries and building projects is one of the biggest investment forms. Thus building projects most certainly have an immense effect on SA`s economy. Building projects are one of the most efficient investments in this regard.

There are a lot of short-term investments that investors can invest in that could also be the better option to choose but on the long run building projects have the bigger advantage.

3. Sub problem 1: Are Government projects more efficient than private projects with regard to the economy?

Is it better for the government to invest in building projects because the government has a bigger role in certain aspects of the economy, as compared to private investors/projects? What effect do private investors/projects have on certain aspects of the economy and is it a more favourable choice than government projects?

Finally yet important, how does tax/vat favour these two parties and aspects of the economy in turn? Will the people of SA in turn benefit more concerning government's projects in regards to the chain effect it has on the economy?

The people and businesses in SA pay taxes and VAT to the government. So in turn these people and businesses want to benefit from this fact, thus would it be better for the government to invest outside SA or in SA in the

form of building projects? The government also has the effect of huge cost savings on all their projects because it pays itself taxes/VAT.

When the building industry, especially in SA`s current situation, come to a slowdown, what options and possible solutions does the government have to improve the building industry?

Loans to private/public investors, capital for example, influence interest rates and other economical indicators. In times like these, would it be a more efficient choice for private/public investors to do so? If not, are there other options with regards to this?

3.1 Hypothesis

Government projects ensures that the state invest in South Africa and stop them from rather investing in other countries that in turn give SA`s economy a boost as well as job opportunities. Then in turn these projects influence the supply and demand of materials for example a chain reaction then occurs that influence prices for materials and private investors, that in turn start to invest in building projects again. And this type of reaction can be set on course by the government's decisions and possible solutions.

The government projects saves a lot in regard to Tax/VAT and it is most definitely a positive aspect that could set the chain reaction in place. This also insures that SA`s infrastructure are upgraded for example hospitals etc.

Private investors should start investing in smaller short-term investments to make less loans etc. to have a positive effect on certain aspects of the economy in times like these, but only if they do not have the capital and are relying on loans.

4. Sub problem 2: What type of influence does building projects have on the chain reaction of the Reserve Bank's decisions?

Research about the overall effect building projects have on the Reserve bank and the choices of the reserve bank that affects certain aspects of the economy for instance inflation, interest rates and the release of cash in coins/notes and in turn the chain effect and consequences on certain aspects of the economy.

These reactions also determine the Rand value that is in turn an important indicator especially in regards to supply and demand from other countries.

As said previously this decisions set out a chain reaction that influence the economy drastically. The Reserve Bank and its researchers make choices and decisions with regard to interest rates and other factors to improve the economy. Thus the Reserve Bank has the biggest influence on SA's economy. That is why it is important to do research to see whether or not building projects can have an effect on the decisions of the Reserve Bank.

4.1 Hypothesis

It is obvious if there are a lot of projects; investors tend to make more loans and will have an effect on the reserve bank's choices. The effect will set of an immense chain reaction on many aspects such as a rise in inflation etc. It may have a negative effect, and be better for investors to invest in other opportunities to makes these negative effects less, or rather save their capital.

Building projects requires a lot of capital and more projects means more capital. All the financial institutions are connected to the Reserve Bank in some way. Thus projects most certainly affect the Reserve Bank's choices and decisions.

5. Sub problem 3: The Johannesburg Stock exchange can be used as an indicator of success in SA. How do building projects reflect on the JSE?

The Johannesburg Stock exchange is a place where investors buy/sell shares in companies etc. to make a profit. This is not always the case. Losses are also expected. These factors are connected to the profit/loss made by the companies invested in. A lot of construction companies etc. are listed on the JSE and that is why research is important to see the effect of building projects on the JSE.

Will building projects affect the JSE in any way and if so will it in turn have a chain reaction on other stocks etc.? This is also an important study because it attracts investors outside of SA and in turn affects the economy.

5.1 Hypothesis

The JSE is like a big advertisement to the whole world of SA's success with regards to investment and profit/loss. Building projects can most certainly give the JSE a favourable "look" for investors if companies made profits.

Supply and demand can also be seen on the JSE in turn by the decisions and reactions of companies. Building projects also reflect indirectly on the JSE in the form of construction companies listed versus other affected companies listed. For example: a cement selling company. Analysing the JSE can be of great importance to improve and predict certain aspects of the economical indicators.

6. Sub problem 4: How do building projects affect on South Africa's economy contribute internationally and in turn nationally?

If South Africa has more building projects will it affect the supply and demand nationally and internationally? What other opportunities does it bring forth and is it favourable for South Africa and its economy? Does it attract investors to invest in SA and bring about more tourists? Will more building projects bring about more job opportunities and less crime and the chain reaction it has on certain aspects of the economy?

South Africa is dependent on other countries supplies and investors to ensure an ongoing and efficient trading system. This system ensures that SA's economy can compete with the rest of the world and other countries' economies.

IF SA has a demand in regards to construction or materials from other countries, and that demand cannot be satisfied, what effect does it have? And in turn what options and decisions can be made to overcome these problems?

6.1 Hypothesis

More investors mean a stronger Rand and a promising future for SA's economy. Thus SA has to impress the outside world and investors and building projects can contribute to this. For building projects to stay efficient in SA the trading with other countries should also be effective.

If there are supply and demand problems in the building industry it could cause a massive negative chain reaction, especially economical wise. Tourism in turn can improve if SA's economy is a favourable one to the rest of the world. Building projects in SA most certainly attract tourists.

7. Methodology

According to Holt (1996:11, 13, 83) there are two types of research namely: Applied research and Pure or basic research. Pure basic research is going to be used in the form of books, articles and if possible journals, a more

academic approach. Applied research is going to be incorporated if possible for example better ways to invest by using tables and graphs. Resources will consist of books, articles, the Internet and journals.

According to Holt (1996:83), there are also two types of methodologies namely: Qualitative approach and Quantitative methodologies. If possible a few interviews will be done where necessary.

An overview of some economical indicators will be given and research on them to see all the affects and to back the research done.

7.1 Delimitations

This research is done concentrating mainly on SA. 2004 is chosen as a starting date to the research because SA began to prepare for the 2010 soccer world cup and to compare 2004 with the ongoing years. This research will mainly concentrate on the 2010 soccer world cup as an example for the building purposes.

Only some of the most important economical indicators will be researched. Buildings and building developments are the main focus and not construction as a whole. Short overview of some of the economical theories would be discussed to explain the effects.

7.2 Importance

This research is important because it can be used to do forward planning especially after the world wide economical crisis. It can be used to see the influence the building industry has on the economy and how SA and its government can use it to their advantage to boost the economy.

Chapter 2: Are Government projects more efficient than private projects with regard to the economy?

1. Introduction

1.1 Background

To determine whether or not SA`s economy is growing or declining, certain important indicators needs to be assessed to assist in the forthcoming research. The following are of importance:

- **Gross Domestic Product (GDP)**
- **Gross National product (GNP)**
- **Inflation**
- **Interest rates**
- **Exchange rates etc.**

Inflation and interest rates will be discussed in a later chapter and how all of these indicators link to one another and the influence it has in the economical cycle. In this chapter GDP and GNP will be used to determine the influence of government and private/public projects in the economy.

"In any economy construction is a key activity. It influences the final flow of goods and services produced in the economy- the gross national product-and in turn influenced by the size of that gross national product. It is therefore

valuable to analyse the contribution which construction makes to the total output of the UK economy (Briscoe 1991: 3).”

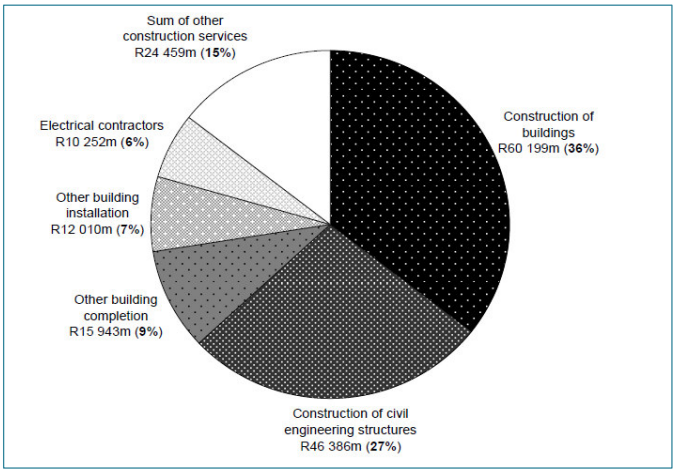
This is a book published in the UK where a comparison can be made to SA and its economy and also the effect construction and in turn building projects has thus where the word construction is used there must be kept in mind the attribute building projects have in construction.
According to STATSSA (Release P5001 2004) and a comparison between the construction industries of 2004 – 2009, construction of buildings is the biggest aspect of construction as a whole in term of the following aspects:

- **Income R33 117 million (33,0%), 2004**
- **Expenditure R32 037 million (33,2%), 2004**
- **Net profit income by type of service R1 083 million (27,3%) 2004**
- **Employment 126 000 employees (31,3%) 2004**

These percentages remained more or less the same throughout to 2009 and the conclusion that can be made is that construction of buildings is the biggest contributor to the construction industry.

The following graph is an example to the percentages in relation to other aspects in construction.

Figure 1 – Breakdown of income by type of service in the construction industry, 2007 (Statistics South Africa 2007: 9)



1.2 Overview

According to Briscoe (1991: 3), the construction sector itself has a significant effect on the demand for products from other parts of the economy for example the material supplies sector. Thus changes in the level of construction activity leads to further changes in the supplying industries and services.

This cycle influences the overall level of national output greatly. There should always be kept in mind the fluctuations in the construction industry. The economy itself influences the construction also in turn.

2. Gross National Product (GNP)

"Effective management of any economy begins with the measurement of the amount of activity occurring in that economy and an understanding of the

main components which constitute such activity. The GNP is a measure of the total goods and services produced in an economy for a given time period. It is usual to approach the measurement of GNP and it`s key components by reference to the circular flow of the income model (Briscoe 1991: 21).”

2.1 Circular flow of income in the simple economy

This flow is illustrated in figure 2 and it includes only firms and households. According to Briscoe (1991: 21), the real output and factors of production flow in one direction while income and financial expenditure flow in the other direction. Firms are provided with labour, land and capital factors for income from households that in turn, receive income in the form of wages, rent and interest from firms. These factors are combined by firms to produce a marketable output of goods and services.

Figure 2- Circular flow in a simple economy (Briscoe 1991:22)

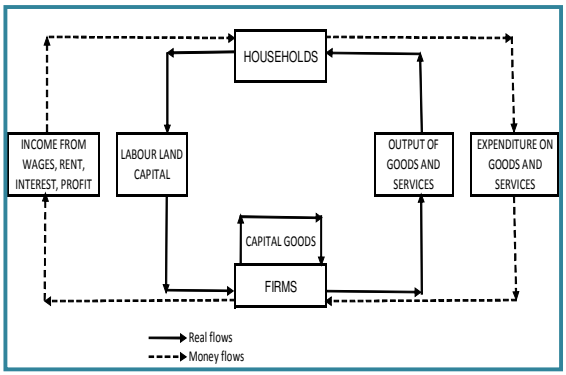
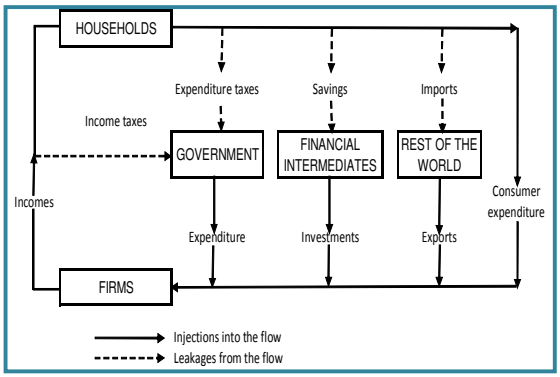


Figure 3- Circular flow incl. government, financial intermediates and the rest of the world (Briscoe 1991:23)



A certain portion of the output is sold/purchased by other firms, producing goods and services for the consumer market. The conclusion is that output is sold to the household sector, paid for out of their income received, by selling

of factors of production. The income cycle is then complete. There are three ways to measure economic activity as stated by Briscoe (1991: 23):

- **Income**
- **Expenditure**
- **Output of goods and services**

It does not matter which measurement is used because each correspond to GNP of the system. The conclusion can also be made that if economic activity occurred it must be true that:

National Income = National Expenditure = National output

2.2 Circular flow in the full economy

Figure 2 illustrates circular flow of an open economy with a government and financial sector present. "This figure shows how leakages from the basic flow (dotted lines) and injections into (solid line) the economy occur. The measurement of GNP requires that once an economic activity has already happened, the sum of the total leakages must exactly be equal to the sum of the injections. This is the basic principle of GNP and ensures that the three measurement approaches to GNP are consistent (Briscoe 1991: 23)."

Biscoe (1991: 23) also said that the three main types of leakages from the circular flow are due to savings, government taxation and imports, whereas injections are attributable to investment, government expenditure and exports.

According to this information one could make the assumption that the government has a massive role and impact on the activities in the economy of SA and thus in turn an impact on the growth of the economy. It is also necessary to understand the background and basics to make conclusions, assumptions and improvements in the economic growth and government role in the whole cycle.

Biscoe (1991: 23) also claim that if the private/public sector take their income and invest it in savings in banks it would be a withdrawal out of the circular flow.

Government also withdraws in a similar manner from spending from the income flow by taxing both incomes and goods and services on which expenditure were made. In turn, financial intermediaries take savings they receive and invest it into expenditure that in turn increase the spending flow.

The last statement is important to investigate the effect on the economy if private/public investors save or invest in financial intermediaries. "National income accounting requires total leakage to be the same as total injections so that:

"Saving + Government revenue + Imports = Investment + Government Expenditure + Exports" (Briscoe 1991: 26).

This equation is of great importance to see if public/private sector`s actions can be more positive to the economy/GNP or government actions. This information states that the government plays the most important role because taxation is applied to all parties involved and in turn controls the

decisions of the private/public investors in construction to build or not to build by their actions/activities in the economy.

3. The multiplier process

Warren (1993: 151) describes it as the process that magnifies the Net impact of an alteration in the economy. It can work both upward manner and downward (negative) manner. An example is where an increase of an 'injection' into the economy, such as increase in government expenditure. The multiplier process will be positive and increase incomes by a greater amount than the initial value of the injection.

Conversely, if there is an increase in the 'leakage' or outflow from the economy, such as expenditure on importing foreign goods. The multiplier will be negative and tend to create a downwardly spiralling effect of declining income

3.1 Positive and negative multiplier

According to Warren (1993: 152), an injection by the government in the form of expenditure, increase in the level of investment and an increase in the level of export orders is a positive multiplier.

"For example, if the government were to increase its expenditure on the repair and maintenance of a public building, the mechanisms behind the multiplier process would suggest that the overall impact on the economy would be far greater than the initial rise in government expenditure.

The following sequence of events explains: More money is spent on public buildings by the government and therefore construction firms are employed to carry out the work. These firms order material from firms in the supply industry that also take on more workers to cope with the order increase (Warren 1993:152). "

Thus more people employed in both the construction and the material supply industry means more to spend in the shops as more goods and services are purchased. This in turn sets of the retail sector that orders more supplies and increases their workforce to make provision for the increase in sales. Warren claimed that consumer prosperity could lead to prosperity in both retail property market and industrial property market.

This concludes that an injection of money into the economy in the form of building projects by the government, could lead to far greater level of income due to the chain reaction of the 'injection' set off (Warren 1993:152). "

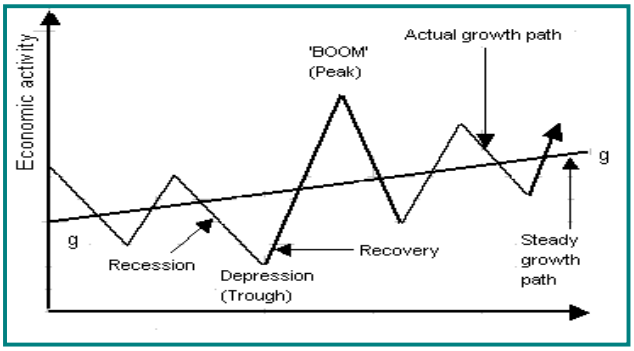
The negative multiplier is the complete opposite of the positive one in the way of withdrawal or 'leakage' whereby spending power is taken out of the home economy. Thus the consumer demand decreases and has the complete opposite effect of an 'injection' which in turn means the GNP/GDP decreases.

4. The government's economic policy regarding the built environment

SA is at the point in time of recovering from recession and growth is low and unemployment high. According to Warren (1993: 162) recovery leads to escalating inflation and rise in imports and then the economy "overheats".

This process is an ongoing one in the economy. Figure 4 indicates recession and recovery in the economy. SA is at the stage between depression and recovery.

Figure 4- The economy's cyclic growth path (Warren 1993: 162)



"The government has a variety of economic management tools at disposal to attempt to reduce both frequency and amplitude of such cycles. By managing the economy, the government would hope to promote a strong confident economic environment. Such intervention in the macro economy by the government can be via the use of 'demand management' policies and/or supply side policies. Demand management is where the government tries to manipulate the level of aggregate demand in the economy (Warren 1993: 163)".

The two main policies available are:

1. **Fiscal policy**
2. **Monetary policy**

Warren (1993: 163) also claims that by making use of fiscal policy the government can directly intervene in the activity of the economy by using instruments of changing government expenditure and/or level of taxation. The announcement in the budget can back these tools for example higher expenditure on maintenance of public buildings etc. or decreasing expenditure when the economy reach a 'boom'/peak if necessary. SA's government made provision for massive housing infrastructure according to the budget and therefore an injection in the economy.

5. Conclusion

As seen in the introduction the construction of buildings forms the greater portion of construction and construction in SA in turn has a massive impact on the economy.

The government in SA manages and controls the decisions of the private/public investors through decisions the government make. If the government wants the private/public investors to invest more in SA, it would be as easy as to decrease taxes or provision for expenditure in the budget for projects. In turn, the government makes the market for projects more favourable to invest in.

Government building projects is expenditure and it is good for SA's economy as seen concerning the multiplier process. When the government reduce taxes, the household market has more income to spend that in turn means more private/public projects. Investors will find the property market very favourable and opportunities to invest in for example shopping malls and

apartment blocks. It was very clear that private investments grew in the construction concerning the world cup preparations for example maintenance and upgrades on apartment blocks etc.

Less private investors will invest in the construction industry if it is a negative environment and would rather save their income, which will have a downward effect on the economy. The investors could also decide to invest their income/capital in financial institutions when the interest rates are more favourable and less risk. On the other hand, interest rates could be unfavourable and again the investors will tend to save rather to invest.

When the government invest in a building project, its savings are much higher than that of private investors because the contractor and all the subcontractors and people involved in the project, pays taxes and VAT on their profit and income. The government then in turn receives income from all the people involved in the project through their monthly expenditure on goods and services ass well.

This has the effect that the government can spend more with their savings with regard to these factors, in turn increases the multiplier, and therefore boosts the economic growth.

6. Testing of Hypothesis

6.1 Hypothesis

Government projects ensures that the state invest in South Africa and stop them from rather investing in other countries that in turn give SA`s economy

a boost as well as job opportunities. Then in turn these projects influence the supply and demand of materials for example: a chain reaction then occurs that influence prices for materials and private investors, that in turn start to invest in building projects again. And this type of reaction can be set on course by the government's decisions and possible solutions.

The government projects saves a lot in regard to Tax/VAT and it is most definitely a positive aspect that could set the chain reaction in place. This also insures that SA`s infrastructure are upgraded for example hospitals etc.

Private investors should start investing in smaller short-term investments to make less loans etc. to have a positive effect on certain aspects of the economy in times like these, but only if they do not have the capital and are relying on loans.

6.2 Test:

In the conclusion, it was already stated that the government has the ability to steer the economy into the direction it want to with the reference to the circular flow of income in the economy and the multiplier process. It does not matter whether or not Private/Public investors invest in building projects or not because it all depends on the decisions of the government to steer these investors to invest in projects or not to invest.

On the other hand, the multiplier process stated that government building projects; or rather, expenditure gives the economy an 'injection' and in turn economic growth. It was also clear that to save money, especially the private/public sector has a negative effect on the economy. Then for the

private/ public investors to invest capital in Financial Institutions makes it possible for other investors to invest again in turn in building projects.

In the end for the government to invest in building projects sets off a chain reaction in the economy and has the most influence regarding this aspect thus the hypothesis was correct.

Chapter 3: What type of influence does building projects have on the chain reaction of the Reserve Bank's decisions?

1. Introduction

1.1 Background

According to Fourie (2009:349) the monetary policy and fiscal policy are the two main components of the macroeconomic policy and monetary events and variables (especially interest rates) are critically important for the business sector and for the state of the economy.

"Monetary policy is the responsibility of the Reserve bank (Monetary authority) and can be defined as all the deliberate steps of the monetary authority to affect the money supply, availability of credit, and interest rates in order to influence monetary demand, expenditure, production, income, the inflation rate, the exchange rate and the balance of payments (Fourie 2009:349)."

"The economy comprises millions of individuals, workers and families, thousands of businesses, as well as labour unions and other organisations, all engaged in millions of activities and transactions (Fourie 2009:9)."

All of the above includes construction companies, suppliers of material for big construction projects (buildings) as well as the government. These

institutions all have one thing in common and that would be to make a profit. With this in mind, financial institutions, such as banks, also have the primary goal of making a profit.

Fourie (2009:349) states that the Reserve Bank is independent and not part of government but close cooperation exists between the Reserve Bank and the fiscal authorities. "The government also appoints 7 of the 14 directors of the Reserve Bank (Fourie 2009:349)."

This corresponds with the previous chapter and it is important to realise that the government can still intervene in the decisions of Reserve Bank. Stated by Fourie (2009:350) is that in the last instance the government is also responsible for the monetary policy and in this sense, the Reserve Bank is the trustee of the monetary sphere. This means that any independence that the Reserve Bank enjoys is always relative and provisional. "If things really go awry, the government will have no choice but to intervene and assert its ultimate authority (Fourie 2009:350)".

1.2 Overview

Other functions of the Reserve bank:

- **Supervision and regulation of banks and financial institutions**
- **Issue notes and coins**
- **Sole supervision and control over marketing of gold and all trade in foreign currency**

These functions and authority of the Reserve Bank gives it the power to see to it that financial transactions occur without irregularities and that banks

apply sound financial management, and it keeps an eye on the operation and development of money, capital etc.

This is important to indicate the chain reaction the Reserve Bank's choices have when influenced by the construction of building projects. The current economic situation regarding inflation, interest rates and the World cup's duration (from preparation to finish) may be used, as an example, to identify and prove the influence that these projects had on these economic factors.

2. Interest Rates

2.1 Repo- and prime overdraft rate

The preparation for the 2010 World cup included the building and refurbishment of stadiums. These 10 stadiums were one of the biggest expenditure regarding the preparation of the WC.

"The previous amount committed to the stadiums was R8, 4-billion, and cost increases caused the National Treasury to assign an additional R1, 2-billion, it said in its 2008 Budget Review (Matthew Hill: 2008)". The allocation to transport was merely R 9-billion and the total allocation in the budget in 2008 was R19, 4-billion for the WC.

Table 1: Breakdown of costs for hosting 2010 FIFA World Cup (Source Business Unity South Africa: 2006).

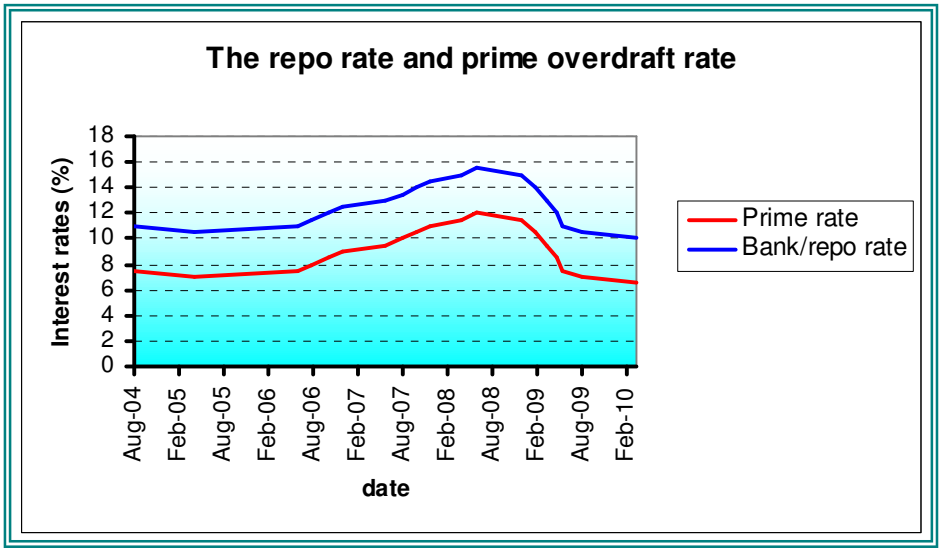
Project Cost	
Stadia	R8.4billion
Transport	R9.0billion
Broadcasting	R400million
ICT	R2.5billion
Safety and Security	R666million
FIFA	R3.1billion
Ports of Entry	R1.573billion
Training of Volunteers	R25million
Community Mobilization	R17million
Legacy Projects	R337million
Arts and Culture	R150million
Organizing Committee	R3.2billion+

The conclusion out of table 1 is that building projects was the biggest expenditure for the WC. This in turn means that construction companies, subcontractors and other institutions related needed capital to finance these projects for the supply of material and services, to be able to undertake these projects. This concludes a massive increase in a demand for capital from financial institutes.

"This cyclic process will commence with an increase in the 'loans extended to bank' on the asset side of the SARB. Simultaneously, the excess reserves that banks hold with the SARB will also increase. As banks then start landing out the money that they borrowed from the SARB, the 'loans and advances ' on the asset side and the 'deposits' on the liability side of the bank balance sheet start to increase. Because of the higher levels of deposits and thus the increase in the amount of cash reserves required, the excess reserves of the

banks will decrease and be converted into required reserves (Fourie 2009: 81)".

Figure 5: The repo (bank) rate and the prime overdraft rate (www.reservebank.co.za)



"Increase in the repo rate discourages commercial banks from borrowing from the Reserve Bank, encourage banks to hold larger excess reserves as a buffer, and accordingly restrain their ability to create credit/money. Therefore, a repo rate increase curtails the money supply. Since this is likely to push up interest rates and discourage investment, the impact on real income is likely to be contractionary (Fourie 2009:352)."

In figure 5, the repo rate and the prime rate of banks are shown from 2004 until 2010. This graph shows that the Reserve Bank lowered the interest rate just before the start of the 2010 WC preparations, increased it to a maximum during the construction phases and after completion lowered it again.

After the projects of the WC finished, many companies etc. had no new projects, thus no need for capital/loans from financial institutions. The Reserve bank dropped the interest rates again to inspire the companies/individuals etc. to borrow capital from the institutions. During the high interest rate period, these companies/individuals etc. also invested more and thus saving. This in turn also meant that the financial institutions had more capital to loan to companies/individuals etc. for the 2010 WC.

2.2 Inflation

"Inflation targeting is an economic policy in which a central bank estimates and makes public a projected, or "target", inflation rate and then attempts to steer actual inflation towards the target through the use of interest rate changes and other monetary tools (Wikipedia :2010)".

According to Wikipedia (2010), interest rates and the inflation rate are linked to one another indirectly. The decisions of the central bank to increase or decrease interest rates become more transparent under the policy of inflation targeting. Examples:

- **If inflation appears to be above the target, the bank is likely to *raise* interest rates. This usually (but not always) has the effect over time of cooling the economy and bringing down inflation.**

- **If inflation appears to be below the target, the bank is likely to *lower* interest rates. This usually (again, not always) has the effect over time of accelerating the economy and raising inflation.**

Wikipedia also states that according to policy, investors know what the central bank considers the target inflation rate to be and therefore may more

easily factor in likely interest rate changes in their investment choices. Inflation targeters/marketers view it as leading to increased economic stability.

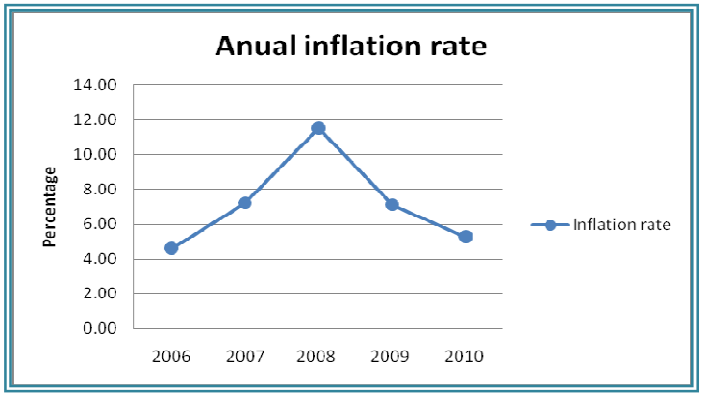
As seen before the cost for the construction of the stadiums was adjusted because of inflation, with the use of escalation adjustments. According to Wikipedia (2010) Cost escalation is defined as changes in the cost or price of specific goods or services in a given economy over a period of time. This is a similar to the concepts of inflation and deflation except that escalation is specific to an item or class of items. Escalation is usually calculated by examining the changes in price index measures for a good or service.

"The Reserve Bank unexpectedly cut its repo rate by 50 basis points to 6,5% on Thursday to help accelerate a recovery from last year's recession and as inflation slows (Mail 7 Guardian online March 2010)".

Figure 6: Annual Inflation

Consumer Price Index: Index numbers and year-on-year rates P0141 (South African Reserve Bank)

Base year: 2008=100



When comparing figure 5 and figure 6 with one another a rough conclusion can be made that when the Reserve Bank increased the repo rate in the period between 2006 and 2010, inflation increased as well. In turn when the Reserve bank decreased the repo rate, inflation decreased as well.

3. Other factors

South Africa hosted the 2010 Fifa World Cup (WC) during a recession period worldwide. It is generally still unclear to most economists as to what the long-term effect would be on South Africa's economy.

According to Ghosh (IBT: 2010) generally speaking, the World Cup is unlikely to provide a significant immediate boost to the nation's economy (aside from a sudden spike in tourism-related businesses and temporary construction jobs). However, given the massive amount of money the government has spent to build Cup-related infrastructure (roads, rails, stadiums, etc.), lasting benefits may accrue – in the form of increased foreign investment and more permanent jobs, among others, -- well beyond the end of the games.

An estimate for the preparation of the stadiums, infrastructure and overall had created in excess of 300,000 jobs since 2006 – a 2.7% contribution to employment figures. The chain reaction of the Reserve Bank's decisions since the start of the WC, improved the life style of people in South Africa.

Fourie (2009:11) stated that one of the standard objectives of macroeconomic policy usually include economic growth and increasing employment as well as stable and low inflation. On the other hand, since the

finishing off of building projects, including the stadiums, Ghosh (IBT: 2010) states that unemployment remains high, having climbed to more than 25% in the first quarter of 2010, with over 800,000 jobs lost since the year-ago period.

Other factors such as petrol prices, tourists, exchange rates etc. for example, cannot be ignored when comparing the growth and decisions made by the Reserve Bank regarding economic growth policy.

4. Conclusion

Fiscal and monetary policies are interrelated with one another. In the end, the government's policy takes higher ranking over the Reserve Bank's policies. As both the fiscal and monetary policies have the aim to improve economic growth, final decisions regarding adjustments of are surely influenced by the government's policies.

The Fifa 2010 World Cup (WC) was used as an example to illustrate the effect that building projects (stadiums) may have had on the decisions of the South African Reserve Bank. These decisions included the increase/decrease of repo rates that clearly influenced other factors such as inflation.

With the increase/decrease of the repo rate, it was seen that the financial institutions, such as banks, also increased/decreased. This in effect made lending from the banks by construction companies, manufacturers, suppliers etc. more favourable or less favourable. A chain event occurs that influence in turn the monetary policy to interfere.

A rough conclusion was made that the increase/decrease of the interest rates also effected inflation in turn. The whole world has been in recession and other factors influenced the monetary policy and decisions. The WC made it possible for South Africa to reduce some of the effect of the recession. Clearly now that the WC has ended, interest rates has decreased and will most definitely have an effect on inflation.

Economists said that South Africa was going to be effected by the worldwide recession after the WC. The WC was a good example to use to indicate the effect on interest rates and in turn inflation. The Reserve Bank and government may make use of this exercise to relieve the aftershock of the recession by continuing to influence the economy. With reduced rates and better living standards, more building projects will occur and in turn help to reduce the effect of the recession as well as monetary policy.

To improve the economy including employment and living standards for the long run after the WC, the Monetary and fiscal policy must be in conjunction with one another. The government for example can increase infrastructure (building projects) to influence monetary policy and in turn, the public/individuals decisions to invest in building projects.

5. Testing of hypothesis

5.1 Hypothesis

It is obvious that if there are many projects, investors make more loans and will have an effect on the reserve bank's choices. The effect will set of an

immense chain reaction on many aspects such as a rise in inflation etc. It may have a negative effect, and be better for investors to invest in other opportunities to makes these negative effects less, or rather save their capital.

Building projects requires a lot of capital and more projects means bigger demand for capital. All the financial institutes are connected to the reserve bank in some way. Thus, projects most certainly affect the Reserve Bank's choices and decisions.

5.2 Test

The influence of the Fifa 2010 World Cup (WC) and the building of the stadiums in comparison with other expenditures during the WC, most certainly had an influence on the Reserve Bank's decisions. It cannot be stated that the WC was the only effect of these decisions because of other factors such as recession and the exchange rates.

The chain reaction clearly influenced interest rates, inflation and in turn other factors such as employment and living standards of the people in South Africa.

Smaller building projects such as housing etc may not even influence the monetary policy at all, but the overall hypothesis was correct.

Chapter 4: The Johannesburg Stock exchange can be used as an indicator of success in SA. How do building projects reflect on the JSE?

1. Introduction

1.1 Overview

According to Wikipedia (2010) the JSE (Johannesburg Stock Exchange) Limited is the largest stock exchange in Africa and the 16th largest stock exchange worldwide.

Wikipedia (2010) also states that the JSE is there to provide a market for securities to be traded freely under a regulated procedure. It channels funds into the economy and provides investors with returns on their investments in the form of dividends.

"The exchange successfully fulfils its main function - the raising of primary capital - by rechannelling cash resources into productive economic activity, thus building the economy while enhancing job opportunities and wealth creation (Wikipedia :2010)".

Wikipedia (2010) explains that the exchange is directed by an honorary committee of 16 people that have full voting rights. The elected stock broking members, that consists of more than 8 people and less than 11, may appoint an executive president and five outside members to the committee.

Policy decisions are made by the committee and carried out by a full-time executive committee headed by the executive president (Wikipedia: 2010)".

"The JSE is governed by its members but through their use of JSE services and facilities, these members are also customers of the Exchange. Although there is only one stock exchange in South Africa, the Stock Exchanges Control Act does allow for the existence and operation of more than one exchange. Each year the JSE must apply to the Minister of Finance for an operating license which vests external control of the exchange in the FSB (Wikipedia :2010)".

Figure 7: Construction versus all share indexes on the JSE (S Radebe: FM 2010)

Many construction companies, manufacturers and suppliers are listed on the JSE and that is why research is important to see the effect of building projects on the JSE. A closer look at the larger construction companies, manufacturers and suppliers involved in the Fifa 2010 World cup (WC) preparation concerning building projects will give an indication of the affect on the JSE.

2. Construction Related Companies

According to "Leads 2 Business" (2010) despite this negative view of market conditions, South Africa's construction industry, as a whole, was resilient during the economic downturn of 2008 and 2009. This was largely owing to its capacity to withstand the impact of the global crisis — a result of the South African government's ongoing significant public infrastructure investment programme, which gained momentum in the run-up to the country's hosting of the 2010 FIFA World Cup. The programme is expected to continue to support the local construction sector for a number of years to come, with R846-billion having been budgeted for public sector infrastructure expenditure over the three years to 2013.

"This significant commitment highlights the potential for the construction industry to serve as an important driver of economic growth in South Africa, owing to its ability to develop the infrastructure necessary for economic activity (Leads 2 Business: 2010)".

Thus, the competition between construction companies, manufacturers and suppliers are fiercer than before the ending of the preparation of the 2010 FIFA World Cup. The JSE can give an indication of the effect all of these factors including profits made by these companies regarding building projects. The more favourable the construction related companies are on the JSE regarding growth; the more likely it would attract foreign investors to buy shares from these companies. Capital from other countries invested in South Africa in turn boosts the economy.

2.1 Aveng (Grinaker-LTA)

"Grinaker-LTA is a multidisciplinary construction and engineering group, anchored in South Africa and focused on selected infrastructure, energy and mining operations. Grinaker-LTA is owned by Aveng (75%), with the remaining shares being held by the Qakazana black economic-empowerment (BEE) consortium (Leads 2 Business: 2010)".

According to "Leads 2 Business" (2010), major projects in which Grinaker-LTA has recently been involved include the Soccer City and Nelson Mandela stadiums. The group has also been awarded a R350-million contract to build the Mitchell's Plain Hospital, in the Western Cape, as well as a joint venture contract to build the chimneys and silos for the Medupi power station and in March 2010, it was reported that Grinaker-LTA had R9, 9-billion-worth of work on hand.

Radebe (FM 2010) stated that Aveng's construction and engineering segment, made up of Grinaker-LTA, E+PC, Engineering & Projects Company and McConnell Dowell, recorded a 3% increase in revenue to R11, 9bn and operating profits increased 4% to R518m. This picture forms part of a turnaround story. Aveng's construction and engineering segment nearly missed the infrastructure development boom due to preoccupation with housekeeping activities. This was largely an overhang of an acquisitive strategy of the early 2000s, which left the group with the difficult job of bedding down mergers and acquisitions. These included the merger between the former LTA and Grinaker into a single unit.

"But then the group shows a remarkable overall performance for the past five years as reflected in the 2010 Financial Mail Top Companies survey. Moving from a low base, it beats M&R on internal rate of return rankings. It also posted a 51,7% return on assets over five years compared with Marray & Robert's 15,2%. Aveng's share price, which was sitting around R36/share at the time of writing, has come a long way. Aveng shares were quoted at levels below R20/share in 2006 and flirted with R70/share in 2008 (*S Radebe: FM 2010)*".

Figure 8: JSE Performance and Market Stats for Aveng (Sanlam Itrade: 2010)

According to Van Dyk (QS Director Grinaker-LTA: 2010), the building department of Grinaker-LTA was up until after the end of the 2010 Fifa World cup, the biggest generator of profits for the company. Figure 8 shows the average decline of the shares on the JSE from 2009. At the moment the wheels are turning and the other departments of Aveng are taking the lead in generating profits and this will have an incline effect of Aveng shares as shown on the JSE.

A project like Soccer City boosts the profit of a company like Aveng tremendously. This leads to more investors buying shares in the company, which in turn shows an increase on the JSE. When it is making less profit, less investors are interested in investing in the company and a decline on the JSE will follow.

Aveng is one of the Top 100 listed companies on the JSE and one of the top five construction companies in SA. Aveng and its subsidiaries are members of many industry bodies and participate in industry associations worldwide.

2.2 Pretoria Portland cement (PPC)

"The construction sector of the JSE also boasts various construction and building materials players. Cement manufacturing giant PPC, which showed market capitalization of about R18bn at the time of writing, features prominently in this category. PPC has shown some resilience despite a marked decline in the demand for cement within the local market (*S Radebe: FM 2010)"*.

Radebe (FM 2010) also said that cement producers and general building materials suppliers are feeling a dearth of activity in the residential and commercial building market. PPC's revenue has shown a steady increase over the past few years to R6, 7bn last year, while headline earnings per share declined from R282, 60 to R256, 80. Interim results for the six months ended December show headline earnings improving by 10%.

"The group says, "economic indicators are currently mixed and economic recovery in the [Southern African] region appears fragile and uncertain". PPC

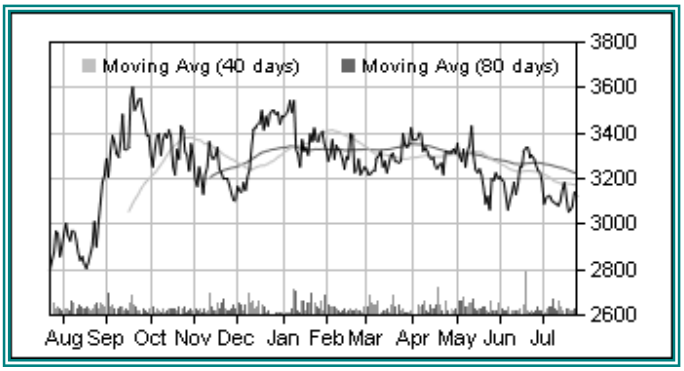
says that SA's cement demand is likely to be lower this year. In light of this it will focus on operational efficiencies and in the long term is pursuing a strategy to diversify its geographical exposure (*S Radebe: FM 2010)*".

Figure 9: Soccer City (Aveng Annual report: 2009)

Construction of Soccer City, Johannesburg (Joint venture with Interbeton bv)	
Project description:	Construction of the flagship soccer stadium in the style of a calabash, or African pot, that will automatically be associated with the African continent. It has a seating capacity of 94 000.
Volume of concrete:	65 000 m^3
Structural steel:	7 100 tons
Number of bricks:	8 500 000
Contract duration:	33 months
Total employment created:	4 600 jobs

As seen above in figure 9 Soccer city alone used 65000 m^3 of concrete. PPC was one of the biggest cement suppliers regarding this project. This company's profits increased as well and were shown on the JSE.

Figure 10: JSE Performance and Market Stats for PPC (Sanlam Itrade: 2010)



PPC not only supply cement for building projects, but also for the civil engineering and other sectors. Figure 10 shows a slight decrease in the average market for PPC cement with the end of the 2010 Fifa World cup because of its involvement in the whole infrastructure including buildings (concrete etc).

2.3 Highveld Steel and Vanadium Corporation Limited

"South Africa's second-largest steel producer Highveld Steel & Vanadium reported a sharp drop in revenue and earnings for its year to end December 31, 2009. Nevertheless, it also said on Tuesday that domestic sales volumes had risen by 19% in the fourth quarter when compared to the third quarter, mostly on the back of restocking (Creamer: 2010 Engineering news)".

"Group revenue for 2009 slumped 47%, from R8-billion in 2008 to R4, 25-billion, while profit from continuing operations was R163-million, compared with R2,6-billion in 2008. Headline earnings a share decreased from 2 594,1 cents/share to 168,1 cents/share (Creamer: 2010 Engineering news)".

Figure 11: JSE Performance and Market Stats for Highveld (Sanlam Itrade: 2010)

According to Creamer (2010 Engineering news), Highveld also warned that the South African steel markets remained volatile, with only a slow recovery in prices and demand. "After some decline in the start of the year, steel prices appear to be stabilizing at present (Highveld Annual report: 2009)".

Figure 11 shows a decline in the market for Highveld during December and January because of the builder's holiday and other factors. In contrast with the Aveng and PPC, Highveld shows a slight average increase.

3. Current market regarding the JSE

According to Creamer (Mining weekly: 2010), mining in South Africa has the biggest effect on the trading company JSE. The more sober reality is that South Africa, as a whole, needs to play a far more effective collective role in advancing this country's only stock market from its current status, which can justifiably be described as being 'good', to the new, far more ambitious, status that would qualify it for the label of 'great'.

Figure 12: JSE Performance and Market Stats for JSE (Sanlam Itrade: 2010)

The JSE is used as an advertisement to the rest of the world of South Africa's current market situations. The more favourable it is, the more foreign investors will invest in shares listed in the different tradable instruments on the JSE.

As seen in figure 12 the JSE has an average increase. This increase is indirectly linked to all of the other shares listed on the JSE.

4. Conclusion

The JSE channels funds into the economy and provides investors with returns on their investments. South Africa is reaching a period of recession and the JSE can be used as an advertisement tool for foreign investors. It also shows a relative forecast of each company's relative averages as well as the JSE itself.

A lot of Construction companies, manufacturers and suppliers are listed on the JSE. When big building projects are underway, it reflects on the JSE via the profits the companies make. This in turn attracts investors to buy shares into the company and again increases the market of the different companies.

Despite the negative views on SA's market conditions, the construction industry managed to survive through the infrastructure development of the WC. "This significant commitment highlights the potential for the construction industry to serve as an important driver of economic growth in South Africa, owing to its ability to develop the infrastructure necessary for economic activity (Leads 2 Business: 2010)".

The government and the Reserve bank also play a vital role in the performance of the JSE. Inflation, interest rates, tax and exchange rates may have the biggest influence and the Reserve bank and government should attend to this.

By increasing government building projects, companies on the JSE will be affected as shown in this chapter. Construction of a big building project normally involves a lot of concrete (cement) and steel. The affect are indicated on the JSE with an increase in the cement and steel companies market on the JSE. Other building materials such as bricks, thus brick manufacturing companies, will have an affect as well.

Unfortunately, not only construction affects the JSE. Other factors such as fuel prices and technology may have a substantial influence.

In the end mining and mining minerals influences the JSE the most of all the other sectors.

5. Testing of hypothesis

5.1 Hypothesis

The JSE is like a big advertisement to the whole world of SA's success concerning investment and profit/loss. Building projects can most certainly give the JSE a favourable "look" for investors if companies made profits.

Supply and demand can also be seen on the JSE in turn by the decisions and reactions of companies. Building projects also reflect indirectly on the JSE in the form of construction companies listed versus other affected companies listed. For example: a cement selling company. Analysing the JSE can be of great importance to improve and predict certain aspects of the economical indicators.

5.2 Test

Big Building projects for example Soccer city stadium, most certainly reflect on the JSE. Smaller building projects may not even affect the JSE at all. The JSE is the only share trade association in South Africa, thus the only link to foreign countries to see the achievements of SA's market.

When a big building project causes an increase in the JSE as seen in this chapter, it has a positive effect on the JSE and in turn make SA' economy more favourable thus the hypothesis was proven to be correct.

Chapter 5: How does building projects' affect on South Africa's economy contribute internationally and in turn nationally?

1. Introduction

1.1 Overview

South Africa is an excellent trader between other countries. "Foreign trade is an important component of the South African economy, as illustrated by the ratio of exports and imports to gross domestic product (GDP)" (South Africa's foreign trade 2007:1).

Import on its own and export on its own has different effects on the economy. It also depends on the type of products imported and exported during the 2010 WC (world cup) preparation regarding infrastructure and building projects (Stadiums). The demand for building materials increased most certainly. Some of these materials and products need to be imported from other countries as SA has a shortage or do no manufacture these materials or products.

Other imported material needed for construction of building may also have an effect on the economy for example the oil price (fuel etc.). To be able to see the effect of SA's economy on the rest of the world, certain factors need to be addressed. These factors are supply and demand (Import and export) and foreign exchange rates.

In turn these factors would make it favourable for other countries to import and export and also invest in SA.

2. Background

2.1 Supply and demand

"The Law of supply and demand describes how prices are related to the number of things made available (supply), and the number of things people want (demand) (Wikipedia: 2010)".

"If the demand goes up (people want more) or the supply goes down (sellers have less of something) then the price will go up. This happens because the suppliers will raise the price when running out of items to earn as much money as possible since people are willing to pay more (Wikipedia : 2010)".

"If the demand goes down (people want less) or the supply goes up (suppliers have more of something) then the price will go down. This happens because the suppliers would rather lower the price than have many unsold items. Usually there are multiple suppliers of the same item. The buyers will buy more from the supplier with the lowest price. The suppliers will lower the price so people will buy from them instead of from another supplier (Wikipedia: 2010)".

It is important to understand the theory of supply and demand to investigate the effect internationally when importing and exporting goods especially building material and supplies. According to Wikipedia (2010) International trade is in principle not different from domestic trade as the motivation and

the behavior of parties involved in a trade do not change fundamentally regardless of whether trade is across a border or not. The main difference is that international trade is typically more costly than domestic trade.

This in turn has an effect on the South African Rand exchange value between other countries, which is an important factor when discussing international trade.

2.2 Exchange rate

"In finance, the exchange rates (also known as the foreign-exchange rate, forex rate or FX rate) between two currencies specifies how much one currency is worth in terms of the other. It is the value of a foreign nation's currency in terms of the home nation's currency (Wikipedia: 2010)".

Wikipedia (2010) also states that effective exchange rate is a weighted average of a basket of foreign currencies, and it can be viewed as an overall measure of the country's external competitiveness. Therefore, when the effective exchange rate of the Rand is high against other countries the cost of imported building materials rises as the demand for these materials go up. In turn, the demand will reduce because of its higher costs.

"A market based exchange rate will change whenever the values of either of the two component currencies change. A currency will tend to become more valuable whenever demand for it is greater than the available supply. It will become less valuable whenever demand is less than available supply (this does not mean people no longer want money, it just means they prefer holding their wealth in some other form, possibly another currency) (Wikipedia : 2010)".

"Increased demand for a currency is due to either an increased transaction demand for money, or an increased speculative demand for money. The transaction demand for money is highly correlated to the country's level of business activity, gross domestic product (GDP), and employment levels. The more people there are unemployed, the less the public as a whole will spend on goods and services. Central banks typically have little difficulty adjusting the available money supply to accommodate changes in the demand for money due to business transactions (Wikipedia: 2010)".

According to Wikipedia (2010) an investor may choose to buy a currency if the return (that is the interest rate) is high enough. The higher a country's interest rates, the greater the demand for that currency.

Table 2: Sectoral advantages and disadvantages – SWOT analysis (Van Wyk(Std Bank) 2010: 63)

Sector	Opportunities	Threats
Manufacturing	Global inventory replenishment. Low factory gate prices support input costs. Rising new domestic orders. Finalisation of the Automotive Invest-ment Scheme as part of the Automotive Production Development Programme. Heightened demand for petroleum – World Cup, new transport infrastructure.	Rand strength and volatility. Global excess capacity and insufficient demand. Durability of upturn in new export orders. Rising raw material costs.
Construction	Bottoming of residential property market. Government infrastructure maintenance. Building cost deflation near -5% in 2009, lowest since 1962.	Tendering competition very keen. New building activity scarce, especially in private sector. Slow repayment by municipalities.
Utilities	Depleted infrastructure/maintenance continuity. Development opportunities in water, gas and solar energy. Significant opportunities for independent producers.	Costly access to finance – Eskom. Barriers to entry for independent producers – price level too low.
Trade	Revival in household demand supporting volumes. Tourism influx to plug low seasonal sales. Scope for margin recuperation. Tourism influx, prolonged school holidays. Government-led rural development programmes. Improvement in real estate and residential interest.	Wholesale trade in consumer markets cannibalises retail market share – consumers' search for cost savings.
Finance and business	Funding conditions improving. General revival in economy. Wealth base improving, restoring investment opportunities.	Debt overhang, high unemployment imply limited demand. Currency fluctuations. Micro-loan enterprises snapping up unbanked market share, and providing a haven for distressed borrowers.

In the previous chapter it was stated that building projects affected the Reserve Bank's decision regarding interest rates. The interest rates went up during the preparation of the 2010 WC, thus making the demand for a South African Rand greater for other countries to invest in.

The preparation of the 2010 WC span from about 2007 to mid 2010 and in table 3 it illustrates the effect on the exchange rates as well as inflation. The Rand value weakened during the preparation of the 2010 WC infrastructure and after the preparation strengthened again. Bear in mind the global economic crisis as well when comparing these figures.

Table 3: Macro-economic forecast (Van Wyk(Std Bank) 2010: 75)

Growth data	2005a	2006a	2007a	2008a	2009e	2010f	2011f	2012f
Inflation data								
Headline CPI (% y/y) annual average	**3,4**	**4,6**	**7,1**	**11,5**	7,2	6,0	5,6	5,5
PPI (% y/y) annual average	**3,6**	**7,6**	**10,9**	**14,2**	0,1	5,3	6,9	7,2
Prime rates								
Prime (year end)	**10,50**	**12,50**	**14,50**	**15,00**	**10,50**	11,50	12,50	12,50
Prime (average)	**10,60**	**11,20**	**13,08**	**15,13**	**11,81**	10,71	12,35	12,50
Exchange rates								
$/R (average)	**6,33**	**6,77**	**7,05**	**8,22**	**8,42**	7,54	7,63	8,00
£/R (average)	**11,50**	**12,51**	**14,09**	**15,06**	**13,10**	12,33	12,57	13,20
R/¥ (average)	**17,44**	**17,30**	**16,77**	**12,48**	**11,25**	12,15	13,49	13,13
€/R (average)	**7,83**	**8,52**	**9,71**	**12,01**	**11,67**	11,19	10,75	10,80
	a = actual f = forecast e = estimate							

According to Government info (2009) "After strengthening marginally by 0,8% during the first quarter of 2009, the nominal effective exchange rate of the Rand increased by 17,5% from the end of March 2009 to the end of June 2009. Although the weighted average exchange rate of the Rand

strengthened throughout the second quarter of 2009, a particularly sharp increase of 12,8% was recorded during April 2010. The domestic currency benefited mainly from substantial capital inflows into the country, following the improvement in investors' sentiment towards emerging-market assets, an increase in commodity prices, and expectations of an improvement in the country's deficit on current account after the release of better-than-expected foreign trade data".

3. Import and Export

South Africa's exchange rate plays an important role as well as supply and demand in the import and export of construction materials for buildings etc. In table 4 some of the imported and exported materials are highlighted that are used during the construction of building materials.

The year 2008 can be compared to 2009 regarding import and export of goods and materials used. According to Poon (2009:10) it is better for a country to have a positive trade balance than a negative one to sustain a growth in the economy. This means that the imports should not exceed the exports in SA. According to table 4 it is clear that SA's trade balance was positive 2008-2009.

Some of these sections in table 4 have an effect on each other when building projects are constructed. For example when the oil price increase and SA imports oil, then the prices of PVC pipes increased (secondary product of oil) as well as production rates of machinery used in constructing a building.

Table 4: South African Reserve Bank (2009)

TABLE B: PROGRESSIVE FIGURES IN MILLIONS OF RAND ACCORDING TO SECTIONS OF THE HARMONIZED SYSTEM

		IMPORTS		EXPORTS	
SECTION (chapter)	**DESCRIPTION**	**Jan to Dec'08**	**Jan to Dec'09**	**Jan to Dec'08**	**Jan to Dec'09**
I (1-5)	Live animals, animal products	4.23	1.80	446.65	544.78
11 (6-14)	Vegetable products	41.16	11.53	135.83	111.45
III(15)	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal and vegetable waxes	2.49	0.72	8.39	7.00
IV (16-24)	Prepared foodstuffs; beverages,spirits and vinegar; tobacco and manufactured tobacco substitutes	63.30	1.94	1,720.91	1,014.81
V (25-27)	Mineral products	0.24	0.30	186.17	110.02
VI (28-38)	Products of the chemical or allied industries	288.52	319.36	1,899.21	2,868.85
VII (39-40)	Plastics and articles thereof; rubber and articles thereof	11.11	1.98	1.05	4.60
VIII (41-43)	Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travelgoods, handbags and similarcontainers; articles of animalgut (other than silkworm gut)	0.20	0.02	0.59	0.10
IX (44-46)	Wood and articles of wood;wood charcoal; cork and articles of cork; manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork	0.69	0.89	3.15	2.86
X (47-49)	Pulp of wood or of other fibrous cellulosic material; waste and scrap of paper or paperboard; paper and paperboard of paper or paperboard; paper and paperboard and articles thereof	52.42	10.74	268.07	470.78
XI (50-63)	Textiles and textile articles	40.35	3.21	713.77	17.19
XII (64-67)	Footwear, headgear, umbrellas, sun umbrellas, walking sticks, seat-sticks, whips, riding-crops and parts thereof; prepared feathers and articles made therewith; artificial flowers; articles of human hair	1.32	0.04	0.05	0.16
XIII (68-70)	Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware	2.41	6.40	2.20	3.63
XIV (71)	Natural or cultured pearls, precious or semi-preciousstones, precious metals, metals clad with precious metal and articles thereof; imitation jewelery; coin	0.63	0.00	0.76	3.15
XV (72-83)	Base metals and articles of base metal	38.87	1.91	1,882.49	292.72
XVI (84-85)	Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, and parts and accessories of such articles	281.25	198.98	39.41	27.38
XVII (86-89)	Vehicles, aircraft, vessels and associated transport equipment	112.21	0.85	17.27	20.94
XVIII (90-92)	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; clocks and watches; musical instruments; parts and accessories thereof	8.78	21.63	0.46	0.42
XX (94-96)	Miscellaneous manufactured articles	30.22	1.95	59.15	25.59
XXI (97)	Works of art, collector's pieces and antiques	0.09	0.00	0.04	0.54
XXII	Other unclassified goods	1.54	1.67	5.06	6.58
XXIII (98)	Special classification provisions; original equipment components/parts for motor vehicles	0.02	0.00	0.00	0.00
	GRAND TOTAL	**982.05**	**585.92**	**7,390.68**	**5,533.55**

"Some less orthodox SA economists have forcefully argued for the Rand to undergo a managed devaluation that will incentivize producers to export, which can help reduce the trade deficit and create employment. By placing more focus on a competitive exchange rate (as opposed to the inflation rate), these economists believe they are combating SA 'Dutch disease' – a phenomenon where the price of one or several exported commodities of a country rises relative to other commodities and goods, placing pressure on that country's currency for real appreciation, which in turn undermines the external competitiveness of other producers in that country's economy, say, in agricultural and manufacturing sectors (Poon 2009:10)".

"Other detrimental side-effects relate to the disease's pro-cyclical propensity to accumulate large international debt, and for government to grow accustomed to spending its increased tax revenues during the 'good times', which puts upward pressure on interest rates (Poon 2009:10)".

3.1 Shortage of cement

"The South African construction industry is a major player in the Southern African Development Community (SADC) region, contributing between 80 and 90% of total infrastructure spending. It is the major job creator in the economy, and employed over 1 million people at various skills levels during 2009. Between 2006 and 2009, approximately US$ 128 billion was spent on infrastructure, including associated mechanical and engineering equipment and services associated with power generation. This is more than double compared to what was spent over the previous four years (Snyman 2009:2)".

Business news (2007) states that cement has been in short supply with the construction of new soccer stadia for the 2010 Soccer World Cup, that of the Gautrain and a surge in housing and commercial property development.

"The shortage of cement in South Africa is conservatively calculated to be about 5m tons a year. The big four cement companies in SA are currently producing about 13 to 14 million tons a year. According to statistics, total usage is set to be around 20m tons this year (Fin24 2007:1)".

"If we are looking at a 5m ton shortage a year, this is very significant, since SA is only producing 15m tons in total. That means we have about a 30% shortage per annum at this stage (Fin24 2007:1)".

"Robust growth in the construction industry has had many implications for the local cement industry. By 2009, the rapidly growing demand for cement put pressure on supply, and this resulted in all players increasing production capacity. By 2009, production capacity increased by 24% to 17.5 million t. The implications of a cement shortage were severe and unexpected (Snyman 2009:2)".

4. Conclusion:

A lot of factors have a big effect on the exchange rate of SA and import and export. The 201 WC was a good example to use once again to prove that building projects have a chain reaction effect on supply and demand of materials.

Cement was used as an example. Normally SA has enough cement resources to sustain the demand therefore in SA, but with the preparation of the 2010 WC the demand was so high that SA had to import from other countries to meet the demand. This in turn pushed up the price of cement as well as the property market in turn. Not only cement but other factors of building projects also play a big role for example copper for electric cables, PVC pipes for plumbing, machinery, tiles and chemicals. PVC is a secondary product of oil. Corrie Pretorius (ASGISA training: June 2010) stated that on one of his projects the oil price increased so drastically that they made a loss on the PVC for the building (No indices adjustment, less than 6 month project). The Client's budget was also affected drastically.

The law of supply and demand states that when the demand for materials and products are higher the prices for that materials and products will increase. This in turn also increases the demand for loans and capital from banks. In the previous chapter it was clearly stated that interest rates increases when this happens. Increased interest rates in turn affect the exchange rate and the cycle continues.

As stated in previous chapters smaller building projects may not even have an effect at all on import and export, but import and export most definitely have an effect on smaller buildings.

Monetary and fiscal policy once again has the most influence on exchange rates and foreign exchange with regard to import and export of building materials etc. for the construction of building projects.

The 2010 WC world cup has come to an end and we have the infrastructure to attract tourists which in turn attract their spending from other countries into South Africa. This strengthens the Rand against that of other countries.

4.1 Hypothesis

More investors mean a stronger Rand and a promising future for SA's economy. Thus SA has to impress the outside world and investors and building projects can contribute to this. For building projects to stay efficient in SA the trading with other countries should also be effective.
If there are supply and demand problems in the building industry it could cause a massive negative chain reaction, especially economical wise. Tourism in turn can improve if SA's economy is a favourable one to the rest of the world. Building projects in SA most certainly attract tourists.

4.2 Test

As seen with the example of cement as well as the preparation of the 2010 WC, building projects had major effects on the import and export of SA. This in turn causes a chain reaction with regard to other economical indicators for example the exchange rate of the Rand as well as interest rates. The fiscal and monetary policies play an important role in the international trade system. Smaller building projects may not have an effect at all.

The overall conclusion proves the hypothesis correct.

Chapter 6: Conclusion

1. Background

Currently the whole world went through a recession and most of the countries are still recovering. South Africa is one of the countries that is still recovering. This research is evolving around the influence that building projects have on South Africa's economy. It is an important research to indicate if building projects can boost SA's economy.

With the soccer world cup that was hosted and prepared for by South Africa, an indication of the effect on some of the economical indicators was researched. Factors such as Inflation, exchange rates, GDP and monetary policy were researched.

The need for this study is of importance to all the stakeholders involved in the building industry, so that they know where and when to invest, especially the government. In the last couple of years, South Africa had a lot of building projects and a study of the effect it has on certain aspects of the economy for instance interest rates and the JSE stock exchange as well as the effect it has internationally has been made, to see whether or not it has a growing effect.

In addition, a study of government projects versus private projects and its effect it have on the economy, thus which one is more favourable.

To sum this up it is a study to see if it is better to invest in other opportunities than building projects because building projects may not have that big effect on the economy of South Africa. For example: to invest more in other countries, or to invest more in farming.

The influences of supply and demand, as well as profits from construction companies' etc., can give an indication on the JSE as a growing or decreasing effect. All of these economic indicators have a chain reaction of some sort and were analyzed and discussed to determine the overall effects it have and possible solutions to improve it.

2. Summary

2.1 Government projects versus Private projects with regards to the economy

Construction of buildings forms the greater portion of construction and construction in SA in turn has a massive impact on the economy.

The government in SA manages and controls the decisions of the private/public investors through decisions the government make. If the government wants the private/public investors to invest more in SA, it would be as easy as to decrease taxes or provision for expenditure in the budget for projects. In turn, the government makes the market for projects more favourable to invest in.

Government building projects is expenditure and it is good for SA's economy as seen concerning the multiplier process.

It was very clear that private investments grew in the construction concerning the world cup preparations for example maintenance and upgrades on apartment blocks etc. Less private investors will invest in the construction industry if it is a negative environment and would rather save their income, which will have a downward effect on the economy.

When the government invest in a building project, its savings are much higher than that of private investors because the contractor and all the subcontractors and people involved in the project, pays taxes and VAT on their profit and income. The government then in turn receives income from all the people involved in the project through their monthly expenditure on goods and services. This has the effect that the government can spend more with their savings with regard to these factors, in turn increases the multiplier, and therefore boosts the economic growth.

2.2 Building projects' influence on the decisions of the South African Reserve Bank

Fiscal and monetary policies are interrelated with one another. In the end, the government's policy takes higher ranking over the Reserve Bank's policies. Both the fiscal and monetary policies have the aim to improve economic growth.

During the 2010 WC preparation with the increase/decrease of the repo rate, it was seen that the financial institutions, such as banks, also increased/decreased interest rates. This in effect made lending from the banks by construction companies, manufacturers, suppliers etc. more favourable or less favourable. A chain event occurs that influence in turn the monetary policy to interfere.

A rough conclusion was made that the increase/decrease of the interest rates also effected inflation in turn. The WC made it possible for South Africa to reduce some of the effect of the recession. Clearly now that the WC has ended, interest rates has decreased and will most definitely have an effect on inflation.

The WC was a good example to use to indicate the effect on interest rates and in turn inflation. The Reserve Bank and government may make use of this exercise to relieve the aftershock of the recession by continuing to influence the economy. With reduced rates and better living standards, more building projects will occur and in turn help to reduce the effect of the recession as well as monetary policy.

2.3 Building projects' refection on the Johannesburg Stock exchange

The JSE channels funds into the economy and provides investors with returns on their investments. South Africa is reaching a period of recession and the JSE can be used as an advertisement tool for foreign investors. It also shows a relative forecast of each company's relative averages as well as the JSE itself.

Many of the big construction companies, manufacturers and suppliers are listed on the JSE. When profits are made by them when big building projects are underway, it reflects on the JSE and in turn attracts investors from both national and internationally to invest in these companies. The construction industry managed to survive through the infrastructure development of the WC.

"This significant commitment highlights the potential for the construction industry to serve as an important driver of economic growth in South Africa, owing to its ability to develop the infrastructure necessary for economic activity (Leads 2 Business: 2010)".

By increasing government building projects, companies on the JSE will also be affected as seen in the research. The overall JSE all shares in turn reflects positive.

2.4 Building projects contribution Nationally and Internationally

South Africa is an excellent trader between other countries. "Foreign trade is an important component of the South African economy, as illustrated by the ratio of exports and imports to gross domestic product (GDP)" (South Africa's foreign trade 2007:1).

A lot of factors have a big effect on the exchange rate of SA and import and export. The 2010 WC was a good example to use once again to prove that building projects have a chain reaction effect on supply and demand of materials.

If there are supply and demand problems in the building industry it could cause a massive negative chain reaction, especially economical wise. The law of supply and demand states that when the demand for materials and products are higher the prices for that materials and products will increase. This in turn also increases the demand for loans and capital from banks. In the research it was clearly stated that interest rates increases when this happens. Increased interest rates in turn affect the exchange rate and the cycle continues.

Cement was used as an example. Normally SA has enough cement resources to sustain the demand therefore in SA, but with the preparation of the 2010 WC the demand was so high that SA had to import from other countries to meet the demand. This in turn pushed up the price of cement as well as the property market in turn.

More investors mean a stronger Rand and a promising future for SA's economy. Thus SA has to impress the outside world and investors and building projects can contribute to this. For building projects to stay efficient in SA the trading with other countries should also be effective.

The 2010 WC world cup has come to an end and we have the infrastructure to attract tourists which in turn attract their spending from other countries into South Africa. This strengthens the Rand against that of other countries

3. Conclusion

It is a general rule that it is better to invest in South Africa rather than other countries and building projects is one of the biggest investment forms. A massive amount of capital is used to construct building projects in the shortest possible duration. Thus building projects most certainly have an immense effect on SA`s economy and boosts it in the short term as well as in the long run. Building projects are one of the most efficient investments in this regard.

Although smaller building projects, for example houses, may not affect the economy at all, in bulk it most certainly will have an effect.

In the research, the hypothesis was tested and a correct outcome was established. All of the economical indicators that were researched, were definitely affected in some or other way. As stated before the 2010 world cup preparation contributed unquestionably a great deal to this research.

Comparisons were made with regard to interest rates, inflation, exchange rates and supply and demand. All of these indicators, with the influence of Monetary and Fiscal policy, affected one another during the 2010 WC. Also in the research it was clearly seen that the construction of the 2010 WC stadiums and other building projects were the biggest expenditure for SA's government.

4. Suggestions for further research

- **The research is limited to only a few economical indicators in South Africa. Thus, the research could extend to more indicators and their chain reaction to other aspects.**
- **Only big building projects were investigated. The research could extend to bulk small building projects as well as infrastructure/construction in South Africa as a whole.**
- **In detail investigation to tourist attraction regarding buildings of stature in SA and their overall view on SA. Research regarding foreigners` investment overview of South Africa (Invest or not to invest).**
- **A more in detail Investigation between monetary and fiscal policy regarding their interrelationship to improve the economy through more efficient investment and interrelationship choices.**
- **Construction companies, suppliers and manufacturers could be investigated in more detail with regard to their interrelationship and the effects it have on the economy.**
- **The government's savings regarding TAX/VAT when taking on building projects in more detail as well as the chain reaction to the economy.**

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ABBREVIATIONS

1. Abbreviations

JSE:	**Johannesburg Stock exchange**
SARB:	**South African Reserve Bank**
WC:	**FIFA 2010 Soccer world cup**
SA:	**South Africa**
ASGISA:	**Accelerated Shared and Growth Initiative of South Africa**
PVC:	**polyvinyl chloride**
GDP:	**Gross Domestic Product**
PPC:	**Pretoria Portland Cement**
G-LTA:	**Grinaker-Lta**
M&R:	**Marray and Roberts**
GNP:	**Gross National Product**

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