

## An evaluation of investment and investment decision-making in the construction industry in South Africa

### Abstract

It seems out of a research survey carried out in South Africa, as well as the general stand of the civil engineering and construction industries over the past few years, that economical and political factors have a far greater influence on the growth of the industry than internal organisational factors. The risk associated with projects, seen within the broad spectrum of other internal and external risk factors, seems to be the biggest concern of investors and developers. Financing construction projects is the second highest factor, and can be of critical importance. The view should always be to improve the cost-effectiveness of the decision of how and what and when to invest. It is evident that the quantity surveyor and/or cost engineer has an important role to play in this regard.

**Keywords:** Finance, construction projects, economy, politics, South Africa.

## 'N EVALUASIE VAN BELEGGINGS EN BELEGGINGSBESLUIT-NEMING IN DIE SUID-AFRIKAANSE KONSTRUKSIEBEDRYF

### Opsomming

Onlangse navorsing dui daarop dat ekonomiese en politieke faktore selfs 'n belangriker rol as interne organisatoriese faktore speel, in terme van groei in die konstruksiebedryf. Risiko's veral ten opsigte van die finansiering van konstruksie-projekte, speel 'n kritieke rol. Dit is hier waar koste-effektiwiteit en besluitneming ten opsigte van waar, wanneer en hoe beleggings gemaak word, 'n deurslaggewende rol speel. Die bourekenkundige en koste-ingenieur kan 'n groot bydrae maak wat betref projek- en risiko-bestuur, uitvoerbaarheidstudies, koste-besnoeiings, en kontrole oor boumateriaal en -toerusting.

**Seutelwoorde:** Finansies, konstruksie-projekte, ekonomie, politiek, Suid-Afrika.

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1 RQS. M(URP) BSc(QS) Dip Arch, MAQS, ASAIB, AAArb, MSAID, MIHSA. Senior Lecturer: Department of Civil Engineering and Building, Technikon Free State, Bloemfontein, South Africa. A paper read at the 15th International Cost Engineering Congress, Rotterdam (Netherlands), 1998.

## Introduction

The South African Construction Industry has been influenced by extensive economic fluctuations over the years gone by. During the economic isolation of South Africa, the Construction Industry went through serious surviving problems. The decrease in the value of the South African currency (rand) against the American Dollar, as well as the inflation rate, contributed to this.

Despite the effects of these and other economic factors, like high bank loan rates, the Construction Industry survived the dry years of international isolation. With an estimated population growth rate of 2,61% per annum in 1995, the demand from communities for infrastructure, medical facilities, educational centres and schools, as well as, most important, proper housing, has shown a tremendous growth rate. This placed enormous pressure on the rate of supply of these amenities. Funds must be generated, either nationally or internationally, to supply the people of South Africa in their demands.

### **factors influencing investment in construction projects**

In an address by Stals [1995], Governor of the South African Reserve Bank, on the factors influencing interest rates, it was stated that the interest rate is determined by forces of demand and supply of loanable funds. If the demand for loanable funds tend to exceed the supply of loanable funds, the interest rate will tend to rise, and vice versa, when demand is less than supply, the interest rate will tend to decline. Obviously, an increase in interest rates indicates a shortage of funds, caused by increasing demand or a decline in the supply of funds. An increase in interest rates therefor brings a clear message to borrowers: reduce your demand for loans.

The construction industry is part of this staging of events. Very little working capital is available for investment in construction projects in South Africa, and thus people are to some extent forced to make use of loans to satisfy their construction and infrastructure demands. Thus, as interest rates increased, the supply of such amenities decreased, with the demand increasing almost on a daily basis. This led to a backlog in the South African construction industry in supplying in the needs of the people.

Stals [1995] also mentioned that a net outflow of capital as South Africa experienced from 1985 to 1993, reduces the amount of funds available for domestic application. In a country such as South Africa, where gross domestic saving over the past decade

declined from about 25 percent to 17 percent of gross domestic product (GDP). The deficit on the government's budget absorbs private saving to an amount equal to about 6 percent of GDP, against the normal 3 percent of GDP. Private consumption expenditure grows at a steady 3,5 percent per annum. All these facts, according to Stals [1995], indicate that interest rates must and will be high. Were it not for the net capital inflow of about R20 billion since the middle of 1994, the level of interest rates would have been much higher in South Africa.

Research related to investment in construction projects was undertaken by the author during 1996. The research was done by means of an extensive questionnaire covering the period January 1991 to December 1995. It was targeted at Property Developers, Government Departments, Banks, Local Authorities, Insurance Companies, Mining Industry and the Construction Industry as such, to determine the extent of the policy of decision-making and eventual investment in the Construction Industry in South Africa.

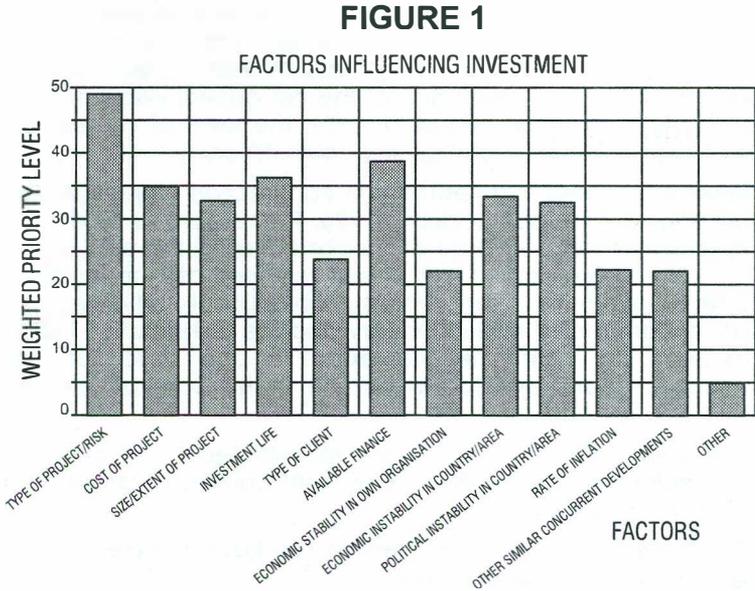
The results of the research are represented in a number of graphical and tabled illustrations, with comments and conclusions, in respect of

- ◇ Factors influencing investment in construction projects
- ◇ Risk management conditions
- ◇ Project life criteria
- ◇ Factors deterring investment
- ◇ Factors encouraging investment
- ◇ Gross annual construction investment,

the latter clearly showing a distinction between the period before and after the democratic elections of 27 April 1994 elections (the "old" and "new" South Africa).

The construction industry can be considered to be in a vulnerable profit and loss situation. The profit in any construction project can be threatened by a number of factors, both economically and organisationally. Internal factors in the organisation can be critical. This includes too high overhead costs, the utilisation and operation of mechanical plant, labour, as well as bad administration with the ordering and utilisation of construction materials. However, it seems out of the research survey and the general stand of the civil engineering and construction industries over the past few years, that economic and political factors have a far greater influence on the growth of the industry than internal organisational factors. It must, however, be said that the influence of such external factors are sometimes artificial, and this

should be attended to. *Figure 1* [Heckroodt:1997] shows some of the internal and external influencing factors.



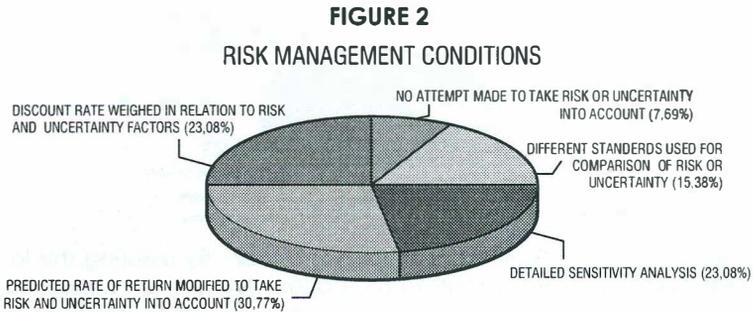
### Risk and sensitivity

The risk associated with each project, seen within the broad spectrum of other internal and external risk factors, seems to be the biggest concern of investors and developers. Financing of construction projects is the second highest factor, and can be of critical importance. Despite the statement of Stals [1995] that one of the more important elements to cure high inflation, is extremely high interest rates, investors participating in the survey placed inflation rate on a much lower level of priority than other factors that may have an influence on investment.

The Quantity Surveyor and/or Cost Engineer should play an important role in project planning, project management, risk management and the cost of projects, paying special attention to the feasibility of specific projects in terms of project demand, project life, cost savings on projects and control of materials and plant used on site.

The risks associated with construction investments should be carefully managed and monitored, so as to act pro-actively on the possible negative effects of the indicated influencing fac-

tors. There are various means of managing risk, as indicated by South African investors and represented in Figure 2 [Heckroodt: 1997].



**Project life evaluation**

Project life and investment life are also critical factors which should be carefully monitored. That is why feasibility studies are of vital importance. Figure 3 [Heckroodt:1997] shows the basis on which project life is determined for investment purposes, as indicated by the respondents that have taken part in the research.

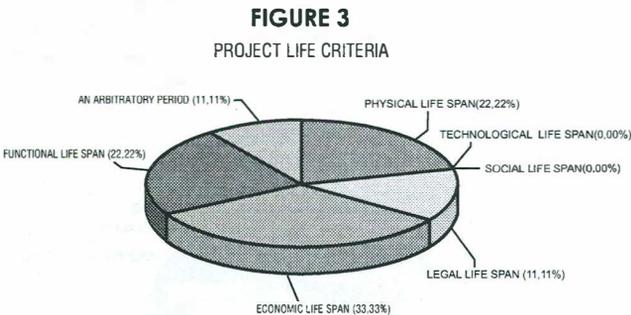
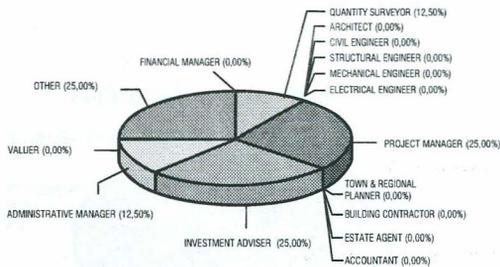


Figure 4 [Heckroodt:1997] gives an indication of the competent persons within investing organisations who are responsible for determining and evaluating project life in South Africa.

**Investment decision-making**

The decision-making process concerning investments to be made in construction projects, is of critical nature. The process is a complex one owing to the quantitative and qualitative factors

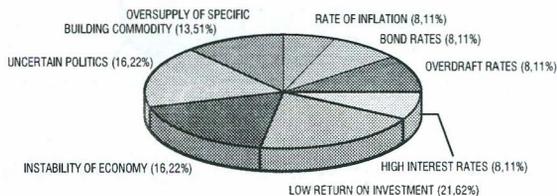
**FIGURE 4**  
PROJECT LIFE EVALUATION



flowing from a particular investment option. By assuring the lowest possible financing cost to the contractor in terms of construction investment, the project can become more cost-efficient and hence more competitive with the balance of investment options available. It is important to carefully evaluate all available investment options before arriving at a final decision. The view should always be to improve the cost-effectiveness of the decision of how and what to invest at which period of time.

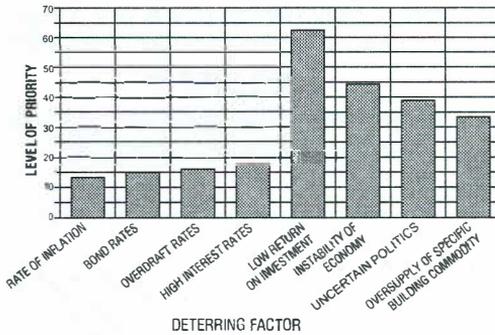
There are various financial options available. It is, however, important to realise that any investor has some form of risk when financing a construction project in the construction industry. Part of the investment research was to determine which factors discourage and which encourage investment in construction projects. Figures 5a and 5b [Heckroodt:1997] clearly show that a low return on investment compared to the return on other forms of

**FIGURE 5a**  
INVESTMENT DETERRING FACTORS



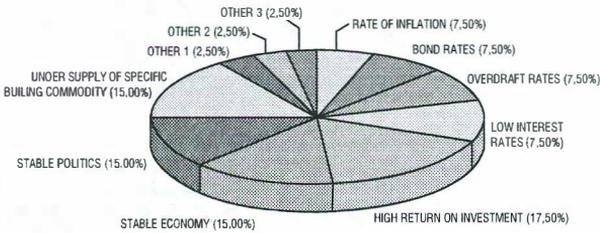
investment in the financial sector, is the most important deterrent during the investment decision-making process. Uncertain politics and instability of the economy also plays a major role. Take note that the statement made by Stals [1995] about the correlation between high inflation and high interest rates, is clearly reflected in the response received from investors during the research. It is unfortunately also true that high interest rates are

**FIGURE 5b**  
WEIGHTED INVESTMENT DETERRING FACTORS



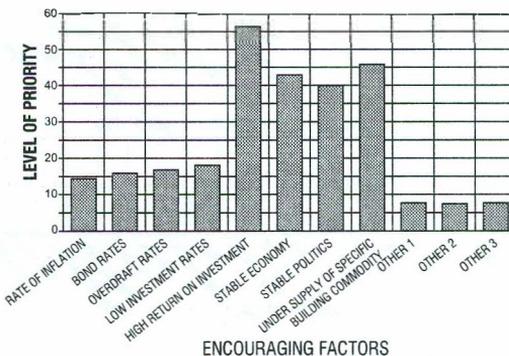
bad for economic growth and that they will discourage new investment and restrict expansion in the economy.

**FIGURE 6a**  
INVESTMENT ENCOURAGING FACTORS



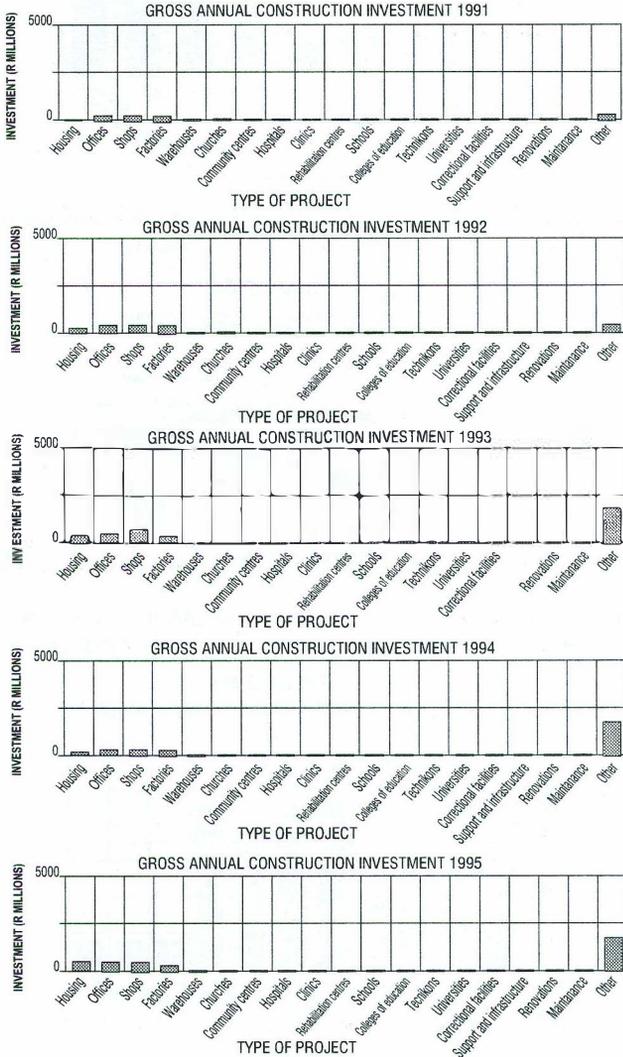
Figures 6a and 6b [Heckrodt:1997] indicate that investors will be encouraged to invest in the civil engineering and construction

**FIGURE 6b**  
WEIGHTED INVESTMENT ENCOURAGING FACTOR



industries when a high return on the investment could be realised (in effect, then, higher profit). A stable economy, stable politics and the under supply (which points out a high demand) of the specific commodity are also important motivating factors.

**FIGURE 7**  
WEIGHTED INVESTMENT ENCOURAGING FACTOR

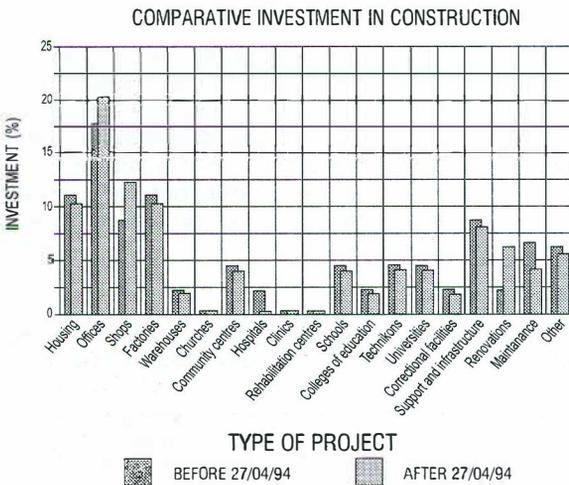


Specific economic factors can influence the decision-making process during the investment planning phase of budgeting. The impact of these factors should be lessened by counteracting the non-investment disease caused by such factors. This may be done by reducing overhead costs, interest rates and the inflation rate, together with stability in the political arena. Research undertaken during the five years encircling the April 1994 events in South Africa, pointed out the influence of these factors, whether politically or economically, on construction investment.

**Extent of construction investment financing**

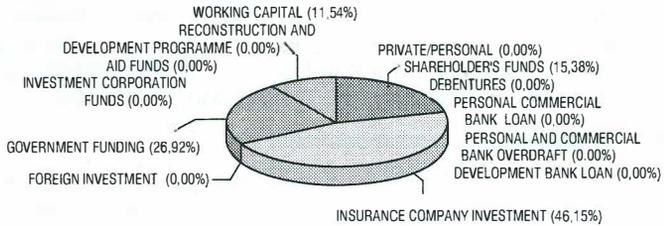
Figure 7 [Heckroodt:1997] indicates the extent of investment in construction projects from 1991 to 1995. Figure 8 [Heckroodt: 1997] indicates the comparative investment over these periods.

**FIGURE 8**



The presence and existence of persistent influencing factors makes it even more important to carefully select an investor and the form of investment financing that will be earmarked and implemented as investment in construction projects. Investment can be done through various means, like private funding, bank loans, insurance company investments, foreign investment, reconstruction and development programmes (RDP funding) and real estate developers. Figure 9 [Heckroodt:1997] indicates that insurance companies are the biggest source of financing for construction projects in South Africa.

**FIGURE 9**  
**ORIGIN OF INVESTMENT FUNDS**



### Conclusion

In conclusion it must be emphasised that investment in construction projects is a very sensitive matter which needs a lot of expert opinion and inputs, as well as elaborate planning and management, before a final decision could be made whether to invest or not to invest. It is inevitable that the strategic planning of quantity surveyors and cost engineers around the globe will be of vital importance to the economic growth in the construction industry in South Africa.

### References

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