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AN INVESTIGATION INTO VALUE CAPTURE AND FAVOURABLE CONDITIONS FOR ITS USE IN HELPING TO FINANCE TRANSPORTATION PROJECTS IN SOUTH AFRICA

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A project report submitted to the Faculty of Engineering, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Engineering.

Johannesburg, 1991

DECLARATION

I declare that this project report is my own, unaided work. It is being submitted for the Degree of Master of Science in Engineering in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

.....

(Signature of candidate)

..... day of ...February...1991

ABSTRACT

The purpose of the investigation contained in this project report was to identify what methods of value capture exist and what conditions would favour their use in the transportation field in South Africa.

The investigation was motivated by a need to identify new ways of generating revenues for transport projects since traditional sources are being depleted or used for other purposes.

A review of international literature on value capture identified fourteen techniques which may be used. These techniques were grouped under three headings - property-related charges, joint ventures and merchandising approaches. The advantages and disadvantages of each technique as described in the literature are outlined. Examples of where these techniques have been used around the world are also given and the current situation in South Africa with regard to value capture is presented.

A survey of transportation professionals in the public and private sectors in South Africa regarding the identified value capture techniques showed that joint development, the lease or sale of development rights and advertising space and the use of concessions were the most favoured techniques. Tax increment financing, special benefit assessments and employer wage-bill levies were the least favoured. The survey also provided brief descriptions of some past value capture applications in South Africa in the transport sector whilst, according to the survey respondents, future applications will most likely occur in association with the provision of public transport facilities.

The main conclusions drawn from the investigation are that value capture

must be seen as an essential component in the process of integrating transport and land use; that the involvement of the private sector in value capture exercises is vital and that public authorities will need to revise their role with regard to the delivery of transport facilities if the number of value capture applications is to grow. Additional conclusions offer some guidelines to help further the implementation of value capture in the transportation field in South Africa.

DEDICATION

For my parents who sacrificed much so that I might enjoy further education.

ACKNOWLEDGEMENTS

I would like to thank my supervisor, Dr R F Del Mistro, for his guidance and comments in the preparation of this project report.

Special thanks are due to my former employer and colleagues at the Division for Roads and Transport Technology of the CSIR for their support and assistance in facilitating the investigation presented in this document.

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CHAPTER 1: INTRODUCTION

1.1 Problem statement and purpose of the study

The cost of funding new transport facilities and operating and maintaining existing ones is a heavy financial burden to the public sector. For example, in the Johannesburg Metropolitan Area alone, implementation projects whose total costs were estimated at about R120m were put forward in the 1990-91 financial year (Johannesburg City Council, 1990). Over the past few decades, persistent inflation in South Africa has boosted the capital and operating costs associated with the provision of transport facilities and whilst sources of revenue usually used for funding such costs have also increased, they have done so more slowly. Furthermore, competition for public funds has intensified and transport must compete with other needs whose costs have also escalated.

In the present fiscal climate in South Africa, public authorities are unable or unwilling to make additional budgetary allowances for transport out of general tax revenues. Recently, in fact, there have been cuts in real terms in central government expenditure on transport and income from revenue sources traditionally earmarked for the construction and maintenance of transport facilities, such as the fuel levy, is being diverted to other uses. As a consequence, the transport sector needs to become more self-sufficient and in doing so must explore more innovative financing mechanisms.

The most visible beneficiaries of new transport facilities are clearly their users, but benefits bestowed by such expenditure often accrue to bodies and persons other than the users. In many cases, the value of such benefits could be tapped in ways that would reduce the net costs of providing the facilities and hence improve their feasibility and viability. Such recoupment of costs is known as value capture.

Recognition of the potential value capture could hold for helping to fund transport facilities in South Africa forms the fundamental reason for this study. The principle aims of the investigation are thus:

- o to identify what methods of value capture can be considered and
- o what conditions are required, or would favour, the successful use of such methods in South Africa.

The main research instruments which will be used to achieve these objectives are a literature review of value capture techniques and a survey of transportation professionals in South Africa regarding their perceptions, understanding and experience of the identified value capture techniques.

1.2 Definition of value capture

The term "value capture" is not confined to the field of transport. It can be applied to any public sector improvement where benefits accrue to people other than the direct users. For example, a public improvement may involve substantial costs to the public and at the same time provide benefits to nearby property owners. Any value thus conferred on such neighbouring property owners is arguably "unearned" since it results not from any effort by the owners, but rather is due to substantial expenditures, sometimes accompanied by heavy public debt, by a government body customarily using general tax revenues. If the unearned increment can thus be "captured", the result should be a corresponding reduction in public costs (Callies, 1979).

Thus, value capture means the indirect recoupment by a funding or development organisation of a portion of the value created by it in providing a facility. In the transport context, this value results from the new pattern of accessibility generated by a new transport facility.

The capture of such value does not include direct user charging (e.g. road tolls and bus fares) or funding from the general tax fund which may be earmarked specifically for transportation projects (e.g. fuel tax and sales tax). However, users may make indirect contributions to the funding of a transport facility through their support of associated ancillary facilities. The relationship between value capture and other sources of funding is illustrated in Figure 1.1.

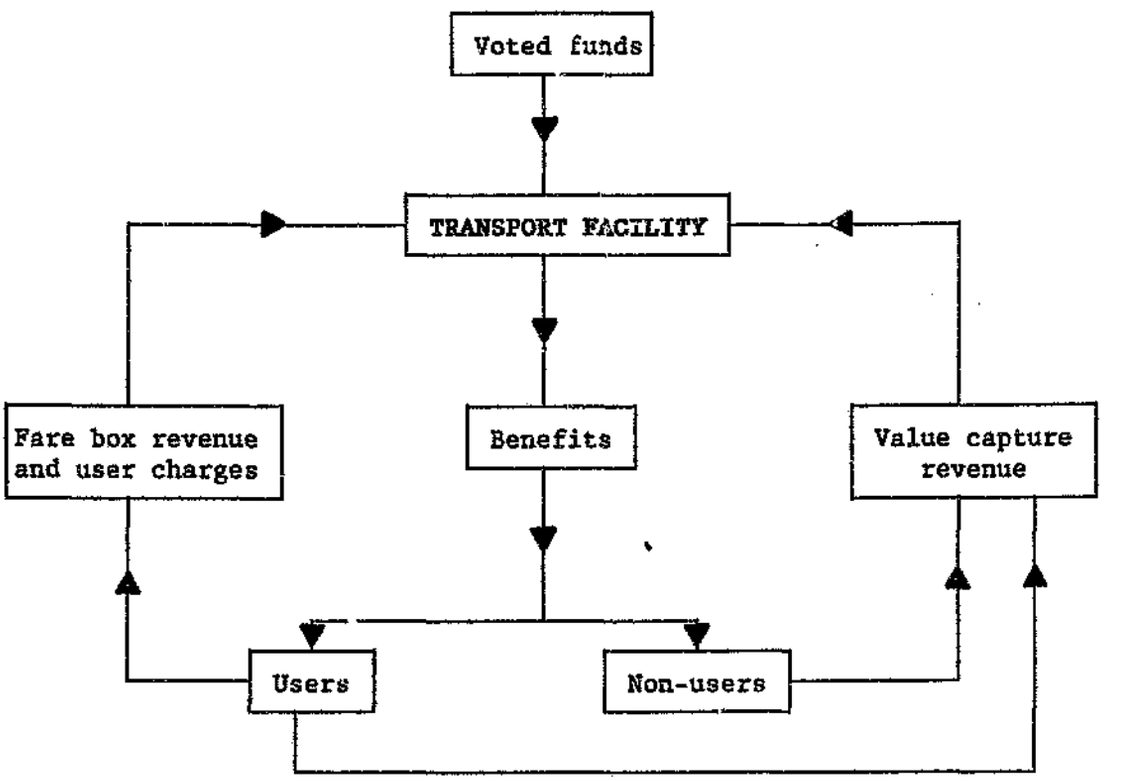


FIGURE 1.1: THE CONCEPT OF VALUE CAPTURE

In its broadest sense value capture for transport facilities could include the creation of a development complex so as to generate enhanced returns on investment. In such a case costs and returns should be calculated for

the whole complex and not for the transport facility alone. At the other end of the scale, returns on investment could be obtained by merely offering advertising rights at a transport facility. This would involve little extra expenditure, if the opportunities which the transport facility offers to others are fully appreciated and exploited.

1.3 Evolution of the value capture concept in South Africa

This section briefly summarises the major factors and circumstances which in the South African context have promoted the concept of value capture.

1.3.1 The interaction between land use and transport

To enhance appreciation of the relevance of the value capture concept it is necessary to make some observations about the relationship between land use and transport. This relationship is often said to be of the "chicken and egg" type. This is because it is so difficult to determine which comes first.

The choice of a piece of land for settlement can occur for a variety of different reasons - e.g. defence, agriculture, trade, availability of raw materials or source of food and water. In many instances travel and transport are important factors in such choices. This is especially true when the choice is made for economic reasons because economic growth is promoted by good accessibility. Even when the original choice is made for reasons other than economic ones, the opportunities for travel and the availability of transport facilities inevitably become important factors in the well-being and growth of a community. Thus land use and transport are inextricably bound together.

Exter (1986) emphasises this link in a paper discussing the land use-transport relationship. He refers to the description by Harold Marks et al (1971) which illustrates the relationship in terms of a cyclic flow.

According to this view, the cycle is continuous and starts with land use. "Activities on a site generate trips; these trips connecting points of origin and destination identify transportation needs; transportation facilities meet these needs; the transportation facilities in turn provide additional access to land; with the provision of such access, land value is enhanced; land value completes the cycle by affecting the land use."

In this concise description is embedded the focal point for the present study, namely that the enhanced accessibility provided by transport facilities increases land values and raises market potential for the selling of goods and services. This is the key factor which, along with the greater understanding of the land use-transport relationship acquired by transport authorities in South Africa in recent years, has led to the proposition that value created by transport facilities can be captured and used to help fund those same facilities.

1.3.2 The funding of transport facilities

In many societies throughout the world it has become an unquestioned norm that certain services and infrastructure are provided by the public sector for the benefit of the user and paid for out of communal revenue (like general taxation). The provision of transport facilities is an example of such practice. However this has not always been so. Funding and pricing policies in fact have varied over time just as much as they do from country to country. Toll roads provide an example of this. In 18th century England, when country-wide travel was becoming more commonplace, a system of roads came into being which was paid for by the users through the levying of tolls. Later, funding of the road network became entirely a public sector responsibility. In the United States, on the other hand, the funding of new roads by tolls has been a common policy for many years and such a "user pays" policy for some new roads has recently been adopted in South Africa. Thus policy on the funding of transport facilities should not be seen as static.

Much of the recent switch in policy in South Africa with regard to the funding of transport facilities has been the result of central government funds becoming progressively scarcer for transport as more emphasis is given to the funding of other areas such as housing and education. At the same time government-run or -assisted transport companies have been asked to become more market orientated and self-supporting and thus less dependent on public funds. Since 1984, State departments have also had to face the payment of rates to local authorities on land they occupy. In the transport field, these new policies are affecting Transnet (formerly the South African Transport Services) particularly severely, because they are owners of large tracts of valuable land in city areas. The new policy paths adopted by central government have meant that innovative means of obtaining funds for transport facilities such as through value capture have received increasing attention.

1.3.3 Enabling legislation

It will become clear during the review of alternative value capture techniques in Chapter 2 of this project report that public authorities and agencies can earn revenue only in ways which are permitted by certain statutes. Usually the law which establishes a given institution specifies not only the functions of the institution but also its powers. The powers granted to most public bodies have tended to limit their ability to charge for services, earn revenue, freely invest, make profits, own, use, lease or sell land and enter into agreements with outside organisations. These are the kinds of activities which are often involved in applying the concept of value capture. Consequently if no suitable enabling legislation exists a transport authority will be unable to take advantage of any value capture techniques.

It will also emerge in the study that the scope of enabling legislation differs widely in different parts of the world. In parts of North America, for example, transport authorities have been able to acquire

extensive land holdings adjoining their facilities and enter into joint development contracts with private sector concerns so as to gain control of some of the value their transport services create. In South Africa this has not been possible until recently, when the South African Transport Services Amendment Act of 1986 enabled Transnet to lease its land for business purposes for the first time. This change of legislation was a response by Transnet to the new government policy of levying rates on land occupied by State departments referred to in the previous section.

An important factor in creating a climate which is favourable to value capture is thus to allow a transport authority to act autonomously. This should be a feature of any enabling legislation, for without it, transport authorities will have to obtain separate approvals to adopt new and innovative procedures for funding transport facilities. This will delay action and thus place the viability of schemes at risk. The recent declared intent by central government to devolve more powers to a local level and the success Transnet has achieved in amending the legislation which governs its ability to generate income suggest that any legislative requirements or changes necessary to promote schemes involving methods of value capture may be favourably met.

1.4 Outline of the study

The preceding sections have sketched an introduction to the concept of value capture and a background to its increasing relevance and acceptance in the transport field in South Africa. The organisation of the remainder of this study conforms to the following framework.

A review of international literature on value capture is presented in Chapter 2 which identifies techniques which may be used as a means for contributing towards the funding of transport facilities. The advantages and disadvantages identified in the literature with regard to the use of

each technique are also described. Some examples of where these techniques have been used around the world and in South Africa are given in Chapter 3.

Chapters 4 to 7 form the central body of the study and present the results of a survey of transportation professionals in South Africa in the public and private sectors regarding their knowledge and opinions of the various value capture techniques. Chapter 4 contains the reasoning behind and a description of the research methodology adopted for the survey. General comments made by the survey respondents concerning the notion of value capture and remarks regarding other indirect financing methods, or local variations of value capture techniques, serves as an introduction to Chapter 5. The attitudes of the survey respondents to each identified value capture technique are then presented and the results related to the findings of the literature review. Chapter 6 describes respondents' experience of past value capture applications in the transport field in South Africa. Favourable conditions and characteristics surrounding potential future transport applications of value capture identified by survey respondents in the public sector are presented in Chapter 7.

A discussion of the study findings in Chapter 8 highlights the issues and problems which the transport fraternity must face in successfully implementing value capture techniques in South Africa and how such difficulties could be tackled and resolved.

The conclusions and recommendations of the study are given in Chapter 9.

CHAPTER 2: A LITERATURE REVIEW OF VALUE CAPTURE TECHNIQUES

2.1 Background

This chapter describes fourteen value capture techniques that have been identified from the literature. The techniques are not listed in any form of preference, but generally fall under one of three categories. Where information is available, the advantages and disadvantages that have been established about each technique are given. The three categories are:

- o Property-related charges
- o Joint ventures
- o Merchandising approaches

2.2 Property-related charges

These focus on tapping a portion of the benefits gained by the owners or users of properties as a result of their location close to a transport facility. Where such charges are related to the value of the property they could be calculated as a proportion of whatever value is used locally for rating purposes. The techniques under this heading comprise:

- o Special benefit assessments
- o Tax increment financing
- o Connector fees
- o Impact requirements
- o Employer wage-bill levies

2.2.1 Special benefit assessments

This technique is a fiscal measure whereby some or all of the costs associated with providing a transport facility are borne by owners of properties within a well-defined area, the boundaries of which are drawn to include all properties benefiting from the project. Historically,

special benefit assessments have been used to fund local improvements such as streets and sewers (US Department of Transportation, 1979), but more recently, this approach has been used to fund specific transport facilities. A special taxing district (sometimes established voluntarily by prior consultation) needs to be established, inside which property owners benefiting from a facility pay additional taxes. The charge must be proportionate to the benefits received and the assessment can be based on criteria such as plot size, floor area and/or distance from the facility. The size of the assessment is usually related to the size of the development site and the land value. It can be a one-time fee, which does not tend to affect property value, or a recurring charge for a pre-determined number of years. The assessment can be zonal or parcel specific and can be levied on all existing uses and future uses or only on new uses. The revenue can be used to support capital or operating expenses associated with the transport facility but is typically used to repay loans obtained to finance the construction of the facility. The revenue potential of this technique depends largely on the cost of the facility, the benefits bestowed on surrounding properties, the size of the tax district, the intensity of economic activity within the district and the attractiveness of rents in the district compared with others in the region (US Department of Transportation, 1982a and 1983a).

Advantages: As special benefit assessments are not community-wide taxes, they are considered a more politically desirable and acceptable method of value capture (US Department of Transportation, 1982a). This is because only those directly benefiting from the improvement pay additional taxes. Minimal additional administrative costs are incurred because the tax can be added to the existing property rates.

Disadvantages: The principal problem with this method is in determining equity in the proportion of benefit received versus the assessment allocated to a particular property owner. Obtaining the support of those affected may be difficult if property owners challenge both the

establishment of the assessment district and the formula used to determine the assessment. Enabling legislation might be required and this problem could be compounded if the assessment district covers several local authorities (Cheng-Min Feng, 1985). Revenue potential is also limited to a circumscribed area and thus the tax base may be relatively small.

2.2.2 Tax increment financing

This technique is not unlike special benefit assessment. However, whereas special benefit assessment imposes a flat tax on properties within the sphere of influence of a transport project, tax increment financing involves a charge in respect of the appreciation of those properties' values. The method is based upon the premise that public improvements spur development in the surrounding areas and as a consequence property tax revenues increase. The projected increases in property tax revenues are normally used to repay loans with which the public improvement is financed. Alternatively, annual increments of tax revenue are deposited in a fund dedicated to improvements in the tax district. Tax increment financing typically works in three basic steps (US Department of Transportation, 1986). Firstly, a tax increment financing district is established covering the area likely to benefit from the project or improvement. Secondly, a base year of assessed property value is set down and assessments are frozen at that level for normal taxing purposes for a specified period. Thirdly, the increases in property value attributable to the improvement are estimated and the resulting increases in property taxes are dedicated to the improvement while the taxes on base line property values are distributed to pre-existing purposes.

Advantages: This technique does not impose an additional tax but reserves the incremental increase in property tax revenues for financing the transport facility. It can also spread the burden of repayment over a period of time. Tax increment financing can generate substantial revenue depending on the local tax rate, the size of the taxing district, the

amount of development after the base year and the attractive power of the transport facility (US Department of Transportation, 1982a and 1983a).

Disadvantages: Enabling legislation may be necessary before the technique can be employed and political resistance can be expected to the creation of special tax districts by those property owners inside their boundaries. Resistance may also be encountered from other tax revenue recipients such as health and education bodies which rely heavily on general tax revenues (US Department of Transportation, 1983a). It is often hard to justify utilising increases in property tax revenues within a district solely for transportation purposes alone. This is due to the fact that it is difficult to separate transport-induced values from the myriad of other economic forces at work in a tax district (US Department of Transportation, 1986). Thus tax increment financing has been limited to areas with potential real estate development and has been most used in locations undergoing widespread redevelopment rather than for financing specific transport projects.

2.2.3 Connector fees

Connector fees are charges to owners or developers of buildings adjacent to a transportation facility in return for the advantage of being physically connected to it. They are typically of three types (US Department of Transportation, 1986):- i) a lump sum payment to compensate for the capital cost of being connected; ii) an annual contribution to the operating costs of a transportation facility, e.g. cleaning and maintenance; iii) the donation of property held by the owner of a building in return for being connected to the transport facility.

Advantages: The technique is simple to implement, usually requires few changes to existing property interests and has benefits for both parties involved.

Disadvantages: Public authorities may not possess the legal power to negotiate connector fees and thus enabling legislation may be necessary as a prerequisite to instituting such a scheme.

2.2.4 Impact requirements

Impact requirements are charges or other conditions that are imposed upon new developers to mitigate or compensate for the impact of their projects on existing or planned transport facilities. Such requirements are established by local regulations and are administered through powers such as the building permit process (US Department of Transportation, 1986). They are seen as compensation to a public body for the extra transport demands and infrastructure needs imposed by a new development.

Advantages: The charges can generate sizable revenues and can be convincingly argued for by public authorities in the case of new developments.

Disadvantages: Legal issues questioning the extent to which a public body can attach conditions to regulations governing land use and building may be raised. Developers are also likely to argue that such charges impede growth and economic development and that existing zoning rights imply the supply of infrastructure by the public authority (US Department of Transportation, 1986).

2.2.5 Employer wage-bill levies

This method is similar in its operational procedure to the other techniques in this category, but emphasis in this case is placed on employers in a defined area affected by a transport facility rather than on owners of properties. It can be introduced in situations where employers benefit, as a result of a new or improved transport facility, from a greater and/or more reliable availability of labour (US Department

of Transportation, 1982a). A tax is levied on all wage-bills paid by employers within a defined geographical area and dedicated to the funding of the transport facility. The tax may be applied to all private employers within that defined area. Non-profit organisations and State and local authorities may be exempt. Utilisation of the employer wage-bill tax for transport purposes has been limited but where used it has been successful in generating substantial revenues.

Advantages: The employer gains access to a larger work force than would be available with unreliable or no transport. Improved public transport can reduce the need for parking space which can be a major cost to both public authorities and employers. Employee morale may be improved if better public transport facilities relieve congestion during peak hours, thereby reducing commuting time. In certain cases the tax payments can be considered to be business expenses and thus deductible from taxable income (US Department of Transportation, 1982a).

Disadvantages: It is possible that statutes may restrict public bodies from using the employer wage-bill levy at a local level. Employers may object to paying an additional employee-related expense and may argue that this tax would discriminate against those employers whose employees do not have convenient access near their homes to public transport facilities (US Department of Transportation, 1982a).

2.3 Joint ventures

The techniques in this category recognise that it is frequently mutually advantageous for the public and private sectors to co-operate on transportation projects. The extent to which either sector is involved in each technique can vary but the techniques have been listed so that the first ones involve largely the public sector and the later ones more the private sector. However, it must not be thought that the techniques are mutually exclusive; in fact they can be and often are linked to form an

effective package. The techniques discussed under the heading of joint ventures are:

- o Land banking
- o Leasing or selling development rights
- o Leasing or selling developed property
- o Joint development
- o Negotiated investments
- o Cost sharing and turnkey agreements
- o Donations

Of these, the first four involve public sector activity in both land and transport development and financial benefits accrue to the public sector from their involvement in the associated private development. However, in the last three the emphasis changes. In these cases the public sector is not directly involved in private sector development but obtains financial benefit through agreements with the private sector developers whereby the latter contribute in different ways to the costs associated with the transport facility.

2.3.1 Land banking

This involves the public acquisition and holding of land for planned future uses (US Department of Transportation, 1982a). Land can be acquired at a lower cost before value due to its ultimate development potential accrues to it and before speculative increases in value occur due to planned transport facilities. It also serves to avoid inflationary increases in land prices. Parcels of land may also be assembled so that land can be retained, or more readily assembled into tracts large enough for major development. Gains in land value due at least in part to public investment in transport facilities will thus accrue to the public sector and can be recaptured through the later sale or lease of development rights (see section 2.3.2). In this way, the timing, pace and character

of development around transport facilities can be controlled (US Department of Transportation, 1985). If the purchased land subsequently becomes useless for transport purposes, it can be sold, in most instances for a profit.

Advantages: Land banking can be a means of providing revenue through value capture and control of development which helps maximise the financial yield from a public body's real estate portfolio. The early purchasing of land also enables the most desirable sites to be acquired and can save a public body large amounts of money through reduced future outlays.

Disadvantages: Legislation or public policy may preclude the acquisition of land and property by public bodies for future use. Elected officials often perceive short term investments to have higher funding priorities than long term investments, particularly if the future return on investment is regarded as uncertain or speculative (US Department of Transportation, 1982a). Acquiring land may necessitate the use of expropriation which may prove unpopular and, politically, questions may be raised about the desirability of a public body fulfilling the role of a land banker (US Department of Transportation, 1985).

2.3.2 Leasing or selling development rights

Public bodies can lease or sell the rights to develop above or below a transport facility or the rights to develop land surrounding a site used for transport purposes. Such rights are known as air, below-ground and ground rights, respectively. In some instances, a public authority may choose actively to acquire land adjacent to a transport facility at pre-construction prices and, once the facility is completed, lease or sell the rights at a higher price to developers who value proximity to the facility (US Department of Transportation, 1983a). This involves the purchasing of more land than is actually required for transport purposes and consequently means additional public investment. However, where the

existing owner does not wish to retain ownership of an awkward remainder, the purchase of such extra land is unavoidable. In many other cases public authorities may want to recoup some of the increase in property value associated with an existing transport facility through the lease or sale of air, surface or sub-surface real estate development rights directly associated with the facility or on land that is surplus to or not of immediate transport use.

Long term leasing of development rights is generally more satisfactory than selling (US Department of Transportation, 1979). This is because in contrast to a one-time payment from a sale the owner retains title and hence overall control of the land, an important long range consideration if the transportation requirements change. In addition the owner can participate in the long term appreciation in land values and can provide through leasing arrangements important investment and tax incentives to developers considering a project. Although such benefits and incentives lessen initial revenue returns, more revenue may be generated in the long term. The private developer usually pays the public body an annual rent and in some cases a percentage of retail sales or some other form of additional payment (US Department of Transportation, 1985). However, because the ground level public use is charged with the value of the land, the developer's initial cost is reduced. Leasing also allows for the periodic upward adjustment of rents, thereby compensating for inflation.

This technique could also include leasing of a whole site on which a transport facility is situated for management by private enterprise. In this situation, the private sector would take full responsibility for the "public" facility.

Advantages: The leasing or selling of undeveloped air and ground rights is a way of generating substantial amounts of revenue for public bodies. The amount of income which may be realised is directly dependent on market demand for lease space, transport facility location, the existing value of

land and the amount of surface and air rights which are available for lease. Putting such resources to productive use does not require any significant new public investment.

Disadvantages: Many owners lack sufficient authority and legal precedents to engage in the process of leasing or selling development rights. Returns may not be substantial if the property climate is weak or the transport facility located in an unfavorable position. In the case of air rights, development is usually economically feasible only where the surrounding land is developed in high density use and the market for further high density development is strong (US Department of Transportation, 1985). The public may complain that the lease/sale agreement benefits the private developers more than the public sector. Very close liaison is called for between developer and owner, especially in the case of air rights development, where continuous transport operations must be catered for during the construction phase.

2.3.3 Leasing or selling developed property

This technique is similar to the one described above with the exception that the public body itself develops the air and ground rights they hold and then leases or sells the property that has been erected. The opportunity for real estate development exists when the difference between existing land value and its value in a changed state exceeds the cost of conversion. While the economic conditions which are basic to development are relatively simple, the application of this concept to real situations is more complex (Urban Land Institute, 1980).

Advantages: Significant amounts of revenue can be generated to finance transport facilities. Control of the nature of the development will remain with the public authority.

Disadvantages: Many of those identified with the previous technique also apply, but larger initial capital investments beyond the cost of land will be required. In the case of air rights development, a substantial capital outlay to build the deck over the transport facility may be needed to support the development (US Department of Transportation, 1982b). Expertise with respect to the real estate market would also be required by the public body.

2.3.4 Joint development

One of the means by which some of the disadvantages of the previous technique can be overcome is for public owners to enter into joint development projects with the private sector. This approach recognises that it is frequently mutually advantageous for the public and private sectors to co-operate on the development or improvement of transportation facilities and surrounding properties, since a pairing of public and private resources can benefit both sectors and initiate development which might otherwise not take place. The concept does not necessarily imply a form of partnership between the two sectors and the degree of involvement on both sides can vary from case to case. It often happens, however, that the public authority participates in the overall planning and implementation of the project and the private sector involves itself with the design and operation of the commercial aspects of the project (US Department of Transportation, 1985).

Joint development projects are those in which investments in transport facilities are closely linked to the development of private property to stimulate economic development and to encourage urban renewal and public transport. The right of direct access to the transport facility for the private developer is a usual facet of joint development. From the private investor's point of view, the advantages of access and the large volume of traffic generated by transport facilities make joint development projects very attractive. Many private developers realise that private facilities

can operate more efficiently if they are integrated with public facilities (Urban Land Institute, 1980). From the point of view of the public authority on the other hand, joint development offers access to the financial resources and entrepreneurial skills of the private sector. The success of such projects depends largely on the degree of co-operation between the various parties involved and the role of individual personalities.

Advantages: Joint development projects can often be extremely profitable though existing examples tend to be mainly large in scale. For the public body, not only is there the opportunity to recapture some of the value added to their land holdings, but also the possibility of rewards in respect of increasing transport patronage, expanding job opportunities, increasing the tax base and the revitalisation of depressed areas (US Department of Transportation, 1983b). For the private developer, there is the prospect of sharing project expenses and risks with the public sector and an increased return on investment.

Disadvantages: The viability of such projects must be well researched and depends largely on market forces, economic cycles and the money market. The public sector carries a certain amount of the risk and costs normally carried by the private developers. Close planning and co-operation is required and time and complexity may be added to the project by the involvement of the public sector (US Department of Transportation, 1983b). The necessity to employ highly qualified staff for the public authority may also be an impediment (Keefer, 1985). The legal authority, financial resources and administrative requirements to implement a joint development plan could pose significant barriers. Equally, responsibility in the case of the financial failure of a development needs to be clearly identified.

2.3.5 Negotiated investments

A negotiated investment involves an agreement between a developer and a

public body through which the former agrees either to make a needed public improvement or to contribute a fixed sum towards an improvement which will benefit his development. This contribution is usually made in exchange for some concession needed by the developer. The concession by the public authority often takes the form of land use rezoning, building permit approval or the leasing of publicly-owned land. The public body is not, however, involved in the development of the land. Public authorities must exercise their political skills to influence the negotiated investment process (US Department of Transportation, 1982a) which often takes place between the developer and the planning or development control authority. The types and levels of benefits likely to result from any agreement will have to be adequately shown by the public authority.

Advantages: The mutual benefit which accrues to the parties concerned means negotiated investments usually have a good chance of being carried out. Revenue potential can be significant.

Disadvantages: Legal issues questioning the extent to which a public body can attach conditions to regulations governing land use and building may be raised (US Department of Transportation, 1982a). If the bargaining process becomes too protracted or the demands too excessive, the developer may decide to move his project elsewhere. Opportunities to bargain with developers can be limited by the desirability of the location selected for development and the rate of growth in the area.

2.3.6 Cost sharing and turnkey agreements

This technique is, in the opinion of many, the most effective joint venture technique. It is based on the fact that, in order to gain a long term competitive advantage for their projects, developers are often willing to share operating expenses or contribute to the capital construction costs of transportation facilities that are interconnected to or integrated with their developments (US Department of Transportation,

1986). Cost sharing agreements involve expenditure by developers to support the transport facility and do not include any concept of joint land development.

A slight variation of this technique is that of turnkey agreements. A turnkey agreement is a contract between private developers and a public authority authorising the developer to deliver a newly constructed transport facility ready for use. For example, a developer would build a transport facility to the authority's specification and turn it over to that authority for reimbursement at cost or as a donation in return for transport services at the developer's location (US Department of Transportation, 1983a). Turnkey agreements are suitable for a site where the land needed for the transport facility is controlled by a large landowner or the transport facility will be next to a large development such as a shopping centre. The landowner may be most willing to contribute to the transport facility on a turnkey basis in a situation where access to large volumes of passengers promises significant financial returns to him. Emphasis in this case, is placed on the initial cost to the public authority of creating the transport facility.

Cost sharing of transportation facilities is thus an approach to achieving an equitable relationship between the distribution of public and private costs for transport projects. Opportunities exist in connection with the maintenance and operation of existing and new facilities as well as with new construction.

Advantages: The level of investment and staff requirements of the public authority are less than those in the case of joint development because of the authority's more passive role. This applies not only to its involvement in land development but also to its responsibilities for operation and construction of the transport facility itself.

Disadvantages: All potential cost sharers need to be identified and included in the design stage of a transport facility (US Department of Transportation, 1986). This may lengthen the initial stages of project implementation. As with other joint venture techniques, public authorities must possess the legal authority to enter into cost sharing agreements.

2.3.7 Donations

Public authorities may be successful in obtaining donations from the private sector to improve or expand their transportation systems. Donations are generally of two types - monetary donations for capital improvements or donations of real property as sites for transport facilities (US Department of Transportation, 1986). They are usually made in connection with some highly visible project through which companies or individuals will be recognised for their contributions or they are made for reasons of pure self interest-e.g. to increase access to a development.

Advantages: Little administration or work by the public authority is required to implement this technique. However, consideration of both donors and investment opportunities is important when establishing a system for donations. If a non-profit tax-exempt fund can be established to accept the donations, such contributions can be invested without tax liability and corporations making contributions are eligible to receive tax rebates.

Disadvantages: The public authority must be legally empowered to accept donations. The type of project which companies or individuals may wish to contribute to may be limited to those of a prestige or high profile nature.

2.4 Merchandising approaches

These techniques focus on the opportunities for sales presented at the transport facility itself. Such sales are basically limited to the sale of advertising space and the sale of goods and services. Consequently the techniques under this heading comprise:

- o Leasing of advertising space
- o Concessions

2.4.1 Leasing of advertising space

The sale of advertising rights at transport facilities can yield significant revenues for public bodies. Transport terminals and public transport vehicles themselves make excellent locations for marketing goods and services due to the large volume of people coming into contact with them each day (US Department of Transportation, 1986). Advantage can be taken of this situation by renting or leasing advertising space in high traffic areas. Mechanisms include the use of kiosks, rental display cases, audio-visual displays, panel boards, vehicles, timetables and tickets. Public authorities may deal with a single contracting agency when hiring out advertising space or use direct-bid procedures. These may allow for long term contracts.

Advertising can help to create an exciting environment if it is sensitively integrated with the overall urban design concept, but care must be taken to avoid visual confusion and clutter, which would be stressful to the viewer.

Advantages: The technique is a widely applicable revenue producing mechanism at transport facilities that can be carried out without engendering opposition.

Disadvantages: The literature gives no disadvantages associated with this technique. If, however, advertising rights are not handled by a contracting agency, the public authority may incur certain administrative costs as a result of dealing with various advertisers. On the other hand, loss of control may result from dealing with an advertising agency.

2.4.2 Concessions

Public authorities have the opportunity to generate additional revenues through the sale or lease of concession space in or around their transport facilities. Pedestrian traffic through most transport terminals will generate adequate business to support news-agents, food enterprises, florists, banks, dry cleaners and other convenience orientated undertakings. Precise revenue potential depends on three principal factors (US Department of Transportation, 1983a). Firstly, the on-site availability and condition of under-utilised facilities or property; secondly, the strength of the real estate market surrounding the facility; and thirdly, ridership levels. This technique generates low to moderate amounts of revenue depending on the amount of space that can be leased at a transport facility. Market research will help to determine needs and opportunities.

Advantages: Few legal or political problems are encountered in leasing concession space at transport facilities since each concession provides a convenient service to travellers. Functional improvements to the facility may be generated by liaison with concessionaires.

Disadvantages: The design of a transport facility may dictate how many trading activities can be given concessions. If a new facility is being built, the design may have to be more elaborate to accommodate concession development. Issues that arise in providing concession areas are related to maintenance, cleaning, safety and security requirements (US Department of Transportation, 1985). Therefore it is essential that good management relationships be established and maintained.

2.5 Summary

The literature review of value capture techniques shows that there are fourteen methods which can be considered, although many of these are variations of one of three particular approaches. These approaches are:

- Property related charges - which aim to obtain a share of the benefits gained by owners or users of properties as a result of their location close to a transport facility;
- Joint ventures - which attempt to exploit the advantages gained through public and private sector co-operation on transportation projects; and
- Merchandising approaches - which focus on the opportunities for sales presented at a transport facility.

It is possible, however, to use some of the techniques in combination with each other thereby strengthening any financing strategy.

Each technique has both advantages and disadvantages which must be weighed up against each other. In addition, the applicability of any value capture technique, or combination of techniques, as tools for funding transportation projects is likely to depend upon the nature of the individual project being considered as well as the prevailing national or regional economic and political culture.

CHAPTER 3: VALUE CAPTURE USAGE WORLDWIDE

3.1 Background

The budget cutbacks and revenue shortfalls faced by public authorities in the transport sector worldwide have meant that increasing attention has been given to value capture techniques. The available literature on value capture covers three areas of the world - chiefly North America, but also Western Europe and the Far East. To a large extent, experience has been confined to projects associated with mass transportation, chiefly rapid rail schemes. However, the techniques are being increasingly applied to other transportation projects in varying degrees. This chapter briefly reviews which techniques have been utilised in the three areas of the world previously mentioned and gives examples of the levels of income that can be expected from each technique. The chapter includes a summary of recent developments in South Africa in this sphere.

3.2 North America

The significant role played by private enterprise in the North American economy along with its federal political structure has probably contributed to the fact that all the techniques described in this report have been adopted to some degree or another in this part of the world. In Canada, emphasis has mainly been on joint venture techniques, but in the United States all the techniques have been applied. Examples of the places where each technique has been used are given below in accordance with the categories already identified in Chapter 2.

3.2.1 Property-related charges

Special benefit assessments have been utilised in Denver and Los Angeles (US Department of Transportation, 1983c and Braun, 1984). A 1978 revision to the Denver city charter permitted the creation of a special assessment district adjacent to the rail corridor which helped fund maintenance of it. The first year's assessment was expected to raise US$1,5m. In Los

Angeles, commercial property located in a special benefit assessment district around a rail system is expected to contribute up to US$250m towards supporting the project at a rate of 27,5 cents per square foot. Clearly, the scale of the project affects the total revenue generated.

There has not been much experience in North America with tax increment financing for purely transportation purposes. It has, however, been used extensively in urban redevelopment projects, some of which have had transportation components. Examples of where it has been used only for a transport project include a station in San Francisco (US Department of Transportation, 1982b) and a county in Maryland (Rice Centre, 1985) which established ten tax increment financing districts to finance transport improvements. Over a period of six years, these districts have generated US$8,5m.

A number of US cities have used connector fees. In Washington D.C., a department store paid US$500 000 to connect the shop's basement level to the region's Metro system (US Department of Transportation, 1983d). The shop experienced an initial 53% increase in retail sales volume and to date has realised subsequent increases each time the Metro system was expanded. A county in Florida is projecting that US$5m in revenues could be collected through connector fees from the central component of their rail system which is currently under construction.

There are some good examples of the technique of impact requirements in California (US Department of Transportation, 1984 and 1982a). Through the enactment of a "transit development fee ordinance" in San Francisco, developers can be required to pay up to US$5 per square foot of new office space to compensate for the likely impact of their developments on transportation services. In another example in California, developers are required to design ride-sharing programmes in order to reduce potential traffic congestion.

Utilisation of employer wage-bill levies for transportation purposes has been limited. This technique has been used in Portland in the state of Oregon to support the local transit system (US Department of Transportation, 1982a). Revenue must be used for operating expenses before it is used for any capital expenditures. In 1980 and 1981, the Portland tax generated US$35m and US$37m, respectively, or 55% of the system's operating budgets in those years.

3.2.2 Joint ventures

Examples of where the range of joint venture techniques have been implemented can be found in both the United States and Canada.

Land banking can occur through negotiated purchase or through the exercise of appropriation but effective use of it requires a long term plan. Instead of acquiring land by default, it should be obtained strategically and examples of such land banking programmes can be found in most major cities (US Department of Transportation, 1982a and 1985).

The sale or lease of development rights has been used widely too. Air rights over Denver's central transit district is expected to provide some US$55m in income during its first 15 years (US Department of Transportation, 1982a). In Miami US$2-3m per year will be received from development rights over one of the stations of its rapid rail system (Brosch, 1984). Development around Toronto's heavy rail underground system which cost Can$63m to build has created Can$10 billion worth of assessment (Mass Transit, 1988).

A good example of a negotiated investment is in New York (US Department of Transportation, 1982a). A group of developers there are providing US$31,5m to the city's rail authority to renovate an overcrowded subway. The money forms part of a US$100m package of public improvements to the developers' proposed housing and commercial project along the Hudson

River. A second example of a community that has used negotiated investments successfully is a county in Virginia (Spielberg, 1985). In that county, a developer recently contributed almost US$20m in road improvements, only a proportion of which were required for his development, in exchange for being allowed to construct an office and hotel complex in an area which had previously been zoned for residential purposes.

Cost sharing agreements have been negotiated in Los Angeles and Washington D.C. with regard to station maintenance and the provision of heating and air conditioning respectively (US Department of Transportation, 1983d). Similarly, in Iowa, a real estate firm is sharing in the start-up costs of a bus service to an outlying area (US Department of Transportation, 1982b). In Houston, turnkey agreements have been utilised to construct park and ride facilities (US Department of Transportation, 1982a).

Several communities have also been successful in raising hundreds of thousands of dollars for specific transport projects via private donations (US Department of Transportation, 1982a).

3.2.3 Merchandising approaches

Two final techniques for which figures can be given have been well used throughout North America - those of advertising rights and concessions.

New York raises almost US$17m annually from advertising while the Metro in Washington D.C. raises US$1,6m and that in Chicago US$2,2m (US Department of Transportation, 1983d). With regard to concessions, the Southern California rapid transit district generates approximately US$1m in annual revenue from its vending machines whilst in Toledo, several banks are paying the maintenance costs of bus shelters in which they have installed automatic teller machines (US Department of Transportation, 1983d and 1982b).

3.3 Western Europe

The literature shows that value capture techniques have almost exclusively been used in Europe in connection with rail schemes. Although the literature indicates that employer wage-bill levies have been utilised for transportation purposes in Paris and Vienna (City Transport, 1987) and that joint development projects have been implemented in West Germany and France, no figures on the amount of revenue generated are available. It also appears that the use of special benefit assessments and tax increment financing has not proved popular. The reasons for this are not given in the literature. In Western Europe generally, joint venture projects and the exploitation of advertising rights and concessions at stations seem to have enjoyed priority. In the case of the latter two techniques no revenue figures are available.

In Britain, some figures on the amounts of revenue earned from joint venture projects are available (Hayes, 1985 and Loubser, 1986). Historically, British Rail has held large amounts of land and during the 1970's the British Rail Property Board was established to utilise the land it held to best advantage and accrue as much revenue as possible from it. Initially, revenue was earned by selling surplus land and during the 1970's between £22 and £42m annually was obtained. In 1980, British Rail Investments Ltd. was set up and the responsibility for all non-operational property was transferred to it from the Property Board. This was to prepare for the introduction of private capital for development of British Rail land holdings in accordance with the government's policy of privatisation. Since 1980, they have succeeded in attracting £345m from the private sector to create offices, shops and factories on railway land.

London Regional Transport (LRT), the operators of London buses and the London underground, was also involved with private developers in the 1970's in several joint developments on LRT sites which earned extra

revenue of approximately £2m per annum. This initiative has been stepped up recently and the development of property assets in 1984/85 included a programme of sales, ground leases and direct developments. In this period, the net rental income from property management was £13,6m and the receipts from the development programmes were £3,6m.

Cities in Britain such as Glasgow, Liverpool and Newcastle have not used value capture techniques to help support their extensive rail systems and have relied instead on support from central government and local ratepayers.

The new Docklands redevelopment scheme in London is expected to generate substantial profits from property development but no evidence exists as to whether this revenue will be used to support the new Docklands Light Railway (City Transport, 1988). In the main, local authorities in Britain have been keen to secure the realisation of their development plans by involving both public and private capital. Typically, these have been redevelopment schemes adjacent to commercial centres of towns and cities or [illegible] developments in suburban locations. Transport projects have formed only one element of these broader schemes (GB Department of the Environment, 1983).

In Croydon, London, the Valley Park redevelopment scheme provides evidence that the negotiated investment technique can generate large-scale private capital for transport improvements out of new development rights created for a 40 hectare derelict power station site (Surveyor, 1988). In this proposal, the developer will pay over 80% of the total of £6 to £7m for major road improvements, a relatively small proportion of the total cost of the development scheme, which is estimated at £475m (1988 prices).

3.4 Far East

There are indications from the literature that privately owned railways in

Japan have implemented developments over railway cuttings (Tsukada and Kuranami, 1990) and that tax increment financing has been experimented with in Taiwan (Kuo-Ping Chang, 1986), but no detail on these projects is available.

In Hong Kong, however, the mass transit corporation has entered into a number of joint ventures which have been widely documented (Hong Kong Mass Transit Railway Corporation, 1985). Joint development was undertaken to develop airspace above stations and depots to take advantage of enhanced land values in the vicinity of the railway. The corporation has taken a 50% share of the profits from commercial and residential developments and this revenue has made a significant contribution of about 10% of railway construction costs up to 1985. In addition, recurring rental income from retained commercial facilities makes a useful annual contribution to revenue (HK$80m in 1985). By 1985, eight joint development ventures had been completed, with work on another nine sites in progress. The corporation manages residential properties which house more than 50 000 people, provide 127 500 and 24 000 square metres of office and shop space, respectively, and it owns and operates 54 500 square metres of shops. During 1985, the corporation disposed of a number of sites originally acquired for railway construction generating HK$151m from the sales.

Earnings from poster advertising, and concessions (rental of kiosks and mini-banks) increased from HK$42m to HK$57m in 1985. Over 10 000 poster sites and 113 kiosks are in operation.

The success achieved in Hong Kong has spurred Singapore and Calcutta to acquire land for development around stations, although it must be remembered that the very high population densities and keen competition for limited urban property in Hong Kong has enabled the large scale developments to take place.

3.5 South Africa

The initial interest in value capture in South Africa, which has come to the fore in recent years, is also largely centred on rail based transportation. This was generated on the one hand by Transnet's more business-like approach to the land assets it holds as a result of having to pay taxes on them (referred to earlier in the introductory chapter) and on the other by the attempts of a committee, set up to investigate the feasibility of an underground railway system for Johannesburg, to seek ways of raising funds to support the huge capital costs of construction. More recently, interest has been expressed by local authorities who want to find ways to fund transportation facilities for which they are responsible. The potential for the joint venture approach has already been demonstrated in the Golden Acre/Strand Concourse development schemes in Cape Town, for example (Brand, 1980), even though such schemes have not been specifically designed to benefit the transport system.

Transnet has made great strides towards realising the development potential of some of its land holdings. It has set up a Business Development Section to stimulate the generation of income through the lease of unutilised or under-utilised fixed assets for development by private developers. A policy of generating profit from Transnet land holdings has been energetically pursued. It is expecting to secure revenue even greater than that required to cover additional expenditure incurred by property rates and taxes (Loubser, 1986). Transnet is offering mainly three options - leasing air space and leasing and selling land. The opportunity to establish modal interchanges at strategically located stations is arousing particular interest. Already, development is taking place at a station site in Germiston and sites in Johannesburg, Cape Town, Pretoria and Durban have been identified as possible future projects. In addition, the proposed development of waterfront facilities at harbour sites in Cape Town and Durban is attracting the attention of private developers.

The committee set up to investigate the feasibility of an underground rail system for Johannesburg is aware of the potential which value capture techniques hold for making the proposal into a viable proposition and is likely to advocate the use of such techniques if the scheme goes ahead (Johannesburg Mass Transit Committee, 1986).

At a local level, authorities are now becoming more aware of the potential that transport facilities hold for encouraging development. In Cape Town, the strong development that has taken place adjacent to the main line station has encouraged the authorities to investigate further ways of strengthening the relationship as well as utilising value capture techniques for light rail proposals in the city. Similar awareness is also being expressed on the Witwatersrand and in other South African cities. This is particularly evident in the development of modal transfer facilities.

A final comment can be made in relation to the sale of advertising rights and concession space at transportation facilities in South Africa. Although this is exploited to some extent by Transnet at railway stations, local authorities at public transport termini and the Department of Civil Aviation (DCA) at State airports, it is unclear whether this approach has been sufficiently promoted. These are techniques which could probably be more actively used.

3.6 Summary

The examples described in this chapter of where value capture techniques have been used around the world demonstrate that substantial revenues, totalling many millions in monetary terms, can be generated by each technique. The income obtained varies according to the nature of and circumstances surrounding each individual project. Based on the available literature, it is clear that North America and in particular the United States leads the way in terms of experience with numerous examples of the successful implementation of a broad range of value capture techniques.

In Europe, evidence indicates that the joint venture and merchandising categories of techniques are most popular whilst countries in the Far East are fast emerging as new centres of value capture knowledge and experience.

The literature thus confirms that considerable scope does exist for South Africa to investigate and experiment further with the range of identified value capture techniques since to date use of them locally has been limited.

The following chapters focus on research which attempts to assess local attitudes, opinion and knowledge of value capture so that the capacity for its development in financing transportation projects in South Africa can be determined.

CHAPTER 4: VALUE CAPTURE AND TRANSPORTATION IN SOUTH AFRICA: A SURVEY

4.1 Background

The planning and execution of a survey is a combination of technical and organisational decisions (Moser and Kalton, 1979). At some point in such an exercise, the following methodological questions have to be addressed: the purpose of the survey and the nature of the information or data to be collected, the coverage of the survey, the survey method to be employed including its design and the nature of the sampling frame. This chapter describes the planning and methodology adopted for the survey on value capture undertaken as part of this study.

4.2 Purpose and objectives of the survey

In order to investigate the potential value capture might hold for the funding of transportation projects in South Africa, it was considered important to obtain feedback from appropriate individuals and bodies inside the country. This would assist in evaluating the suitability of each value capture technique identified from the literature according to prevailing local conditions and circumstances. A survey of transportation professionals from the public sector and representatives of organised business in the private sector was believed apt for acquiring relevant information because these people were likely to be the chief actors in any value capture exercise in the transport field. In turn, their perceptions and awareness of the different value capture methods would most probably prove fundamental in respect of the successful outcome, or otherwise, of any local application of the value capture concept.

Three principle objectives were established for the survey:

- to canvass opinion about the value capture techniques identified in the literature review;

- to identify existing examples in South Africa in the transportation field where value capture has been applied; and

- to describe and evaluate proposed transport schemes in the major cities throughout the country which were considered to have value capture potential.

The results of the survey were expected to show whether consensus existed among the participants with regard to the use of the various value capture techniques in South Africa and whether a pattern could be identified in respect of both the nature of past applications of value capture in the transport sector and prospective transport projects advocated as candidates for the future application of value capture.

4.3 Survey coverage

Although possibilities for value capture should ideally be investigated for all transport projects, evidence from the literature review suggested that success in implementing value capture techniques is more likely in conditions where there are large concentrations of people. This generally implies urban areas and more particularly transport nodes in urban areas. As a consequence, it was decided in the first place to undertake the survey amongst public sector representatives responsible for road transportation in all the metropolitan core cities in South Africa, viz. Pretoria, Johannesburg, the East Rand, Durban, Pietermaritzburg, Port Elizabeth, Cape Town and Bloemfontein. It was considered that the potential for applying value capture to transport projects in these areas would be greatest and thus worthy of extensive investigation. In addition, representatives of Transnet, formerly the South African Transport Services (SATS), and the Directorate of Civil Aviation (DCA) were consulted in order to ensure that feedback was obtained regarding the use of value capture in relation to other major transport modes (i.e. rail and air transport).

Since value capture techniques normally require the involvement of the private sector, views were also sought from the South African Property Owners Association (SAPOA), the Johannesburg Central Business District Association and the Association of Chambers of Commerce and Industry of South Africa (ASSOCOM). Subsequent to the completion of this research, the latter organisation has amalgamated with the Federated Chamber of Industries to form the South African Chamber of Business (SACOB).

In order to obtain acceptable feedback, the survey involved various professionals practising in the transport field. Thus in the metropolitan core cities, respondents included chiefly transportation engineers and town planners, but also representatives of cities' legal and financial services (e.g. Chief Estates Officer, City Secretary). Representatives of Provincial authorities also partook in the survey in some instances. In the case of Transnet, discussions were held with the Directors of Business Development, Passenger Services and Planning, whilst representatives of the State Airport Administration were consulted from the DCA.

With regard to the private sector, respondents included property and financial executives, transportation and urban affairs consultants, economists and public transport operators.

4.4 Survey method

Having identified the purpose and coverage of the survey, the next step concerned the decision as to what survey method should be used. The majority of sample surveys use a questionnaire of some kind and the choice in this area is usually between a self-administered questionnaire survey or an interviewer-administered questionnaire survey.

In an extensive study of the effects of survey method and questionnaire design on the quality of data collected in transportation surveys, Barlow (1981) compared the advantages and limitations of the two questionnaire methods previously mentioned. His results showed that the self-administered questionnaire survey was suitable for collecting simple factual information and generally had time and cost advantages over the interview-administered questionnaire survey. However, the latter method is more suitable for collecting complex attitudinal and perceptual information where the presence of the interviewer can help overcome any comprehension problems experienced by the respondents in understanding the design of, or questions contained in, the questionnaire. In addition, a larger volume of information can be collected, open-ended questions can be asked, probing is possible and the interviewer can provide encouragement and motivation to prevent non-response and discourage guesses. Finally, the interviewer-administered questionnaire survey was more likely than the self-administered questionnaire survey to provide high quality information.

It was decided that the survey method to be employed for the value capture study would be an interviewer-administered (by the author) questionnaire survey primarily because both perceptual and attitudinal information would be sought as well as factual information. For each organisation approached, the interviews conducted would involve, wherever possible, the individual completion of a questionraire followed by a group discussion. Prior to the interview, a copy of a report of the literature review completed as a result of the first phase of the study was forwarded to the body or persons to be interviewed and those attending the interview were asked to read the findings in order to acquaint themselves more fully with the subject of value capture. This was to enable respondents to partake more fruitfully in the subsequent survey and discussion.

The questionnaire (see Appendix A) which each respondent at the interviews was asked to complete attempted to obtain information by asking two

questions. The first question asked for general comment about value capture based on the literature review findings together with information on any other value capture techniques or variations the respondent was aware of. The second question asked respondents to indicate their attitude towards each of the fourteen value capture techniques identified in the literature review in terms of their potential for practical implementation in South Africa. This was attempted by asking for one of six possible responses concerning each technique using a verbal rating scale. The responses were: like a lot, like some, indifferent, dislike some, dislike a lot and don't know. Van der Reis (1983) has shown that verbal rating scales are superior to numerical or visual rating scales in terms of respondent understanding and familiarity and that a five-point scale is the optimum for westernised respondents judging transport attributes, as would be the case in this study. The response "don't know" was added to the five point scale in order for respondents to express the view that they did not understand the significance or intention of a particular value capture technique. Having selected their choice, respondents were then asked to state motivations for their answer and to indicate whether they were aware of any legislative or other obstacles which might impede the implementation of a technique in South Africa.

During the group discussions that followed completion of the questionnaires, information was sought on three topics. Firstly, a general discussion was held concerning the fourteen techniques and the responses given in the completed questionnaires. Secondly, any existing local transport related scheme where value capture techniques had been applied was identified and examined in terms of its problems and successes. Finally, respondents were asked to identify prospective transport schemes in their local area which they considered to have value capture potential. Each of these proposed schemes was discussed and categorised according to a list of variables (see Appendix B) associated with the transport-land use relationship. This exercise was intended to establish two things: firstly, whether particular types of transport

scheme were perceived to lend themselves more readily to value capture than others and secondly, whether those schemes identified as having value capture potential had particular characteristics in terms of the transport-land use variables used to categorise them.

The questionnaire was pilot tested amongst colleagues in the transportation research field and on respondents from the Pretoria City Council and found to perform to adequate standards. Minor adjustments to the format of the interview were made, however, in order to reduce the time required to complete it. Thus details of past applications of value capture and possible future applications were recorded by the interviewer and not the respondents.

4.5 Sampling frame

The practical difficulties posed by time and cost constraints precluded the use of a randomly selected representative sample of individuals from all the respondent organisations.

Therefore, since it is public authorities, or their agents, which to a large extent plan and control transport facilities, the first priority was to obtain opinions regarding value capture techniques from these quarters. In order to enable value capture to become a practical reality, however, it was realised that the views of the private sector would need to be obtained and contrasted with those of the public sector.

In total, the interview survey obtained the opinions and comments of eighty individuals who represented three broad sectors of interest - local authorities, private sector groups and transport operators/administrators. The majority of the responses (two thirds) were obtained from local authority representatives. The remaining responses (one third) were those of representatives of private sector organisations and of Transnet and the DCA.

In terms of completed questionnaires, which provided a full evaluation of the fourteen identified value capture techniques, fifty-two were obtained from local authorities, six from individuals in the private sector and three from representatives of Transnet, giving a total of sixty-one. The DCA representatives declined to complete the questionnaire on the grounds that they considered themselves ill equipped to offer valid judgements concerning the techniques. They did, however, provide interesting information regarding policy in respect of commercial practices permitted at State airports and the successes and problems experienced in this regard. The comparatively low number of completed questionnaires obtained from private sector respondents was largely the result of many of these individuals being unable to afford the time (up to three hours) required to complete both the questionnaire and hold a worthwhile discussion. In most cases the respondents preferred, in the time they did have available, to provide a more general overview concerning value capture and the identified techniques as part of a group discussion.

The sample is, therefore, skewed with regard to completed questionnaires in favour of public sector respondents. In terms of interpreting the results, however, this bias need not be considered a drawback for the following reason. Although fewer completed questionnaires were obtained from private sector respondents, their opinions were expressed through group discussions and, as shown in the following chapter, their opinions did not differ sharply from those of the public sector respondents.

It can also be argued that initiatives to implement value capture extensively in the transport field would necessarily have to obtain the approval and support of those currently responsible for policy regarding the provision of transport facilities, viz. public authorities. Consequently, the experience and opinion of the public sector respondents would be particularly significant in establishing workable guidelines regarding the implementation of value capture. However, the vital role to be played by private sector interests in converting value capture concepts into successful practices must not be overlooked.

4.6 Presentation of survey findings

The results of the interview survey are presented in the next three chapters according to the following format. Chapter 5 includes the general comments made by the respondents on the concept of value capture, it reports on variations to the value capture techniques not described in the literature and it analyses the attitudes of the respondents towards the fourteen identified value capture techniques. Chapter 6 describes past applications of value capture in the transport field in South Africa as recalled by the respondents whilst Chapter 7 presents an examination of possible future transportation applications of value capture.

Where relevant and where a particular organisation, or respondent from an organisation, emphasised a specific point, the views and comments expressed are broadly referenced to either the public sector or the private sector or to the three source groups identified in section 4.5 (i.e. local authorities, private sector groups and transport operators/ administrators), but confidentiality in terms of individual response is maintained.

CHAPTER 5: ATTITUDES EXPRESSED TOWARDS VALUE CAPTURE

5.1 General comment on the concept of value capture

Before a detailed analysis of attitudes towards each value capture technique is presented, this section provides a brief overview of the opinions expressed by the respondents towards the general notion of value capture as well as noting variations to the value capture techniques the respondents were aware of but which were not identified from the literature.

Although reaction to the fourteen identified value capture techniques varied (see section 5.2), the general concept of value capture was favourably perceived by all the interest groups interviewed, albeit from different perspectives.

Many public sector representatives conceded that to date the possible benefits of value capture had not been fully appreciated or exploited by public authorities in South Africa. To a large degree, this stems from economic and political ideologies concerning the provision of public facilities that have existed until recently in the public sector, but which now seem unlikely to prevail into the 1990s as funding problems worsen and the world-wide trend towards privatisation and deregulation gains momentum. Indeed, the link between the government's current privatisation initiatives and the involvement of the private sector in the provision of transport facilities through value capture was widely recognised and cited as topical.

As a result of past public sector practices, however, the possibilities of raising revenue for transport projects by means other than through direct user charges or taxation was, for some local authority respondents, an approach that was now being considered for the first time and the lack of public sector expertise in this area was consequently a cause of major

concern. It was also recognised that any future application of value capture will require, in many cases, a change in philosophy towards land use control which, if not carefully handled, could lead to the rejection of long established land use principles in order to produce revenue. This in turn could affect the prioritisation of projects and compromise codes of equity. In the opinion of some local authority representatives, the possibilities for raising funds for transport projects via value capture methods was only likely to succeed in metropolitan areas where wealth was sufficiently concentrated and where private sector investment was likely to yield an adequate return.

Public sector respondents considered that the qualifications and personality of those people involved in the implementation of value capture projects was crucial in ensuring success and that before value capture could be widely applied, structures to enhance co-operation between the public and private sectors would need to be established. The issue of whether a local authority should be seen as a development agency in the market place and the question of its involvement in risk venture schemes also required attention; these matters necessitated joint planning between the private and public sectors.

Transnet, which is presently a pioneer in many respects in South Africa with regard to the employment of certain value capture techniques, has inherited from SATS an autonomous arm set up to pursue this method of raising funds. This is interesting in view of the comments made by local authority respondents concerning the establishment of structures to facilitate the implementation of value capture. The land holdings that the railways administration historically acquired has placed Transnet in a strong position to employ joint venture type value capture techniques. The Transnet representatives interviewed, however, were keen to point out that development and transport should be looked at in their totality and not from the perspective of transport, or a particular transport mode, alone. Value capture revenues obtained could be used by Transnet for augmenting funds to support socio-economic services although the level of

transport service operated would probably be a crucial factor in the issue of attracting investment. It has not yet been decided to which part of Transnet value capture revenues would be earmarked or dedicated. This remains a matter of current debate pending Transnet's commercialisation and possible privatisation.

The issue of dedicating funds was also raised by private sector respondents. It was the view of many interviewed in this sector that the credibility of dedicated funds has fallen away, particularly in the transport field, where revenues received from levies on fuel, for instance, are now utilised for purposes other than transport. Such a trend could undermine potential transport related value capture projects if private sector investment were not matched by adequate public sector expenditure on transport. Transport systems would have to remain viable to encourage private sector participation.

In general, the private sector representatives emphasized that for the private sector to willingly enter into value capture projects, a benefit or profit in their favour would need to be clearly identified. A fear existed that overseas models regarding value capture should not be accepted without first conducting more research or feasibility studies demonstrating the workability of value capture in the South African situation, where the danger of the concept becoming politicized was a distinct possibility.

One point that was repeatedly made concerned any pre-supposition that the provision of a transport facility would automatically create a potential for the use of value capture techniques. The private sector respondents emphasized that to promote value capture purely because of a lack of public funds for transport is an incorrect approach. Real economic growth was required to create real value which could be captured and this was not possible in a stagnant or declining economy nor where policies were not co-ordinated.

It was further pointed out that adequate transport systems may be necessary in certain situations to protect existing investments from declining and that decentralization policies, for example, work against the viability of central business districts. Although it can be argued in this particular example that any investment undertaken does not automatically warrant further expenditure to support it, there is a need to focus on how value capture interacts with other policies in the planning and transport fields so that attention is brought to bear on what is being implemented in pursuing value capture rather than simply on how to implement it.

Relevant legislation was widely recognised by many respondents as a potential obstacle to the implementation of value capture in South Africa. Respondents were asked in the survey to identify what legislation might prevent the use of a particular technique and although this problem was alluded to with regard to many of the techniques, the respondents were generally unable to identify specific legislation which should be investigated. This largely reflects their lack of legal expertise and is compounded by the large number of executive authorities which exist in South Africa. They did emphasise, however, that all land use and transport legislation affecting the different levels of government as well as laws governing what duties public authorities may perform or how they should operate would require attention. The question will thus require research which is beyond the limits of this investigation.

All of the respondents stressed that value capture was not a panacea to present funding problems in the transport field and that there was no single formula that could be applied with regard to its implementation. Instead each individual situation should be assessed on its merits and value capture recognised as one tool which can be used in the funding of transport projects.

Notwithstanding all of the issues raised by the interest groups interviewed, sufficient interest was expressed on the theme of co-operation between the private and public sectors in the provision of transport facilities to justify more serious investigation of the value capture concept. If adequately tested and marketed, value capture could, in the opinion of many respondents, make a meaningful contribution towards the funding and provision of transport facilities.

5.1.1 Value capture techniques not identified in the literature review

As part of their general comments on the concept of value capture, survey respondents were also asked to state whether there were any variations or other value capture techniques they were aware of which were not contained in the literature review.

A method commonly used by some local authorities in South Africa (either in the past or currently) to obtain funds for required infrastructure, over and above revenue derived from ordinary local taxation, is that of a charge collected when granting more intensive use of, or a change in, land use rights (i.e. rezoning).

These charges are known as an engineering services levy, enhancement levy, bulk services contribution, endowment contribution or betterment levy depending on where in the country is under discussion. The charge is, or has been, levied according to various formulae, many of which are based on the increased rateable value of the land or property after rezoning takes place.

To a certain extent, these charging methods are akin to some of the techniques identified in the property related charges group in the literature review. However, they have generally been applied in the transportation field in South Africa only in respect of local road construction or improvements (often in residential areas) and not as a

contribution towards, for instance, system wide improvements or public transport facilities. Furthermore, whereas the supply of other public services, such as water and electricity, may secure additional revenue based on a measurement of their use, this does not apply in the case of public road usage. Funds from fuel levies, which were previously earmarked for transport improvements and maintenance, have declined in real terms and have recently been diverted for other purposes. One result of this loss of funds for transport has manifested itself in the recent moves to privatise and toll certain new roads.

It is evident, therefore, that methods such as rezoning levies, which can be considered to fall within the value capture family of techniques, will have to be seriously reviewed in attempting to redress the imbalance between the need for transport facilities and the lack of available funds for meeting this need.

Most of the other possible instruments mentioned by respondents for obtaining revenue for transport projects are essentially variations of those techniques described in the literature review. They include the transfer of development or bulk rights, the buying of priority for a transport improvement vital to a developers' project, a proposal call for the design and construction of a transport project and the establishment of a private company (in which shares are sold) to establish and/or operate a transport facility. These methods could all be described as variations of the joint venture category of value capture techniques, details of which have been summarised in the literature review.

Two other techniques mentioned by survey respondents were a local sales tax and a profitability tax. Although, as direct forms of taxation, these warrant attention from a wider perspective of the funding problem in transport, they were not considered to fall, for the purposes of this study, under the value capture umbrella and are therefore not discussed further.

5.2 Attitudes regarding the fourteen identified value capture techniques

5.2.1 Background

The responses obtained from those who took part in the interview survey regarding their attitudes and perceptions towards the fourteen value capture techniques are reviewed in the following sections.

The analysis of the questionnaire responses focused as much on detecting trends and areas or points of emphasis or agreement as on the number or percentage of respondents who expressed preferences or particular attitudes towards each technique according to the rating scale. It was considered that care had to be exercised in relying solely on a statistical analysis of the rating scale results. This was because the options selected and the perceptions expressed by the respondents in support of their choice were subjective and were based on the respondent's thinking and experience. Equally, answers may have been influenced by a respondent's understanding of how a particular technique is utilised or implemented. One technique may therefore have been appropriate for one individual or organisation and not for another.

Furthermore, it was felt that by following this more holistic approach, insights of greater relevance would be obtained. This would assist in the task of developing a value capture policy in the field of transportation and in turn would facilitate the drawing up of guidelines which both identify the major issues surrounding value capture as well as suggesting ways of tackling them.

Therefore, in order to interpret more readily the responses obtained, a two step process was followed. Firstly the number of positive responses (i.e. like a lot, like some), negative responses (i.e. dislike a lot, dislike some) and non-commital responses (i.e. indifferent, don't know)

given to each technique were totalled, as shown in Appendix C. Secondly, examination of the comments given by the respondents, both in the questionnaires as motivations for supporting the response they selected and in the general discussions, enabled specific strengths or weaknesses concerning each technique to be highlighted. This second step in the analysis allowed for the inclusion of comments made by those respondents who were unable to complete the questionnaire because of time constraints.

The presentation of the results of the attitude survey thus adheres to the following structure. Firstly, a brief definition of the value capture technique is given. The definition is the same as that used in the questionnaire to remind each respondent of how the technique is utilised. A summary of the responses received in the rating scale exercise is then shown followed by a résumé of the positive and negative perceptions mentioned by the respondents in either supporting their rating of each technique or as expressed in the group discussions. Finally, a synopsis of the most pertinent remarks made about each technique is presented and related to the major issues raised in the literature.

In the literature review, the value capture techniques were grouped into one of three categories: property-related charges, joint ventures and merchandising. For the purposes of showing the responses obtained in the interview survey, this categorisation is maintained. Each category and the value capture techniques contained in it are, therefore, briefly summarised below for the purposes of continuity and to aid the reader.

Value capture techniques placed in the property-related charges group focus on tapping a portion of the benefits gained by the owners or users of properties as a result of their location close to a transport facility. The five techniques under this heading comprise: special benefit assessments, tax increment financing, connector fees, impact requirements and employer wage-bill levies.

The techniques in the joint ventures category embody the principle that it is frequently mutually advantageous for the public and private sectors to co-operate on transportation projects. The extent to which either sector is involved in each technique can vary. The techniques placed in this category are: land banking, leasing or selling development rights, leasing or selling developed property, joint development, negotiated investments, cost sharing and donations.

The techniques in the third category, merchandising approaches, focus on the opportunities for sales presented at the transport facility itself. Such sales are basically limited to the sale of advertising space and the sale of goods and services. Consequently, the techniques under this heading comprise the leasing or selling of advertising space and concessions.

5.2.2 Property related charges

(i) Special benefit assessments

Definition: A fiscal measure whereby some or all of the costs associated with providing a transport facility are borne by owners of properties within a well defined area, the boundaries of which are drawn to include all properties benefiting from the project.

Rating scale results:

Positive responses	31%
Negative responses	59%
Non-committal responses	10%
TOTAL	100%

Positive perceptions: This technique had appeal for some respondents based on its theoretical rationale and because it incorporated elements of

the user pays principle. There was a belief that applying this technique would be more appropriate in the case of new transport facilities and that it may reduce the harmful aspects of property speculation in respect of a proposed transport facility. It was suggested that a better understanding of North American experience in relation to implementing this technique might serve to reduce many of the negative perceptions surrounding it, especially the impression gained by most respondents that it would be enforced rather than voluntarily applied.

Negative perceptions: Problems associated with this technique, which were repeatedly mentioned by respondents from all interest groups, were those of implementing it in practice. This would involve equitably assessing the extent of any benefit derived over both time and distance from the transport facility. The determination of the area over which the assessment would apply, the drawing of boundaries and the problem of discontinuity associated with boundaries were all cited as significant disadvantages which would arouse opposition. There was also the possibility that the assessment might be contested in court culminating in expensive and protracted litigation. Concern was expressed that property owners in an assessment district might bear the risk of an unsuccessful transport project or pass on any costs incurred to consumers or tenants. If land and property values were to increase around a transport facility because of its presence, some respondents argued, increased revenue would accrue to local authorities in any case through higher property taxes. Thus to add a further charge in the form of an assessment fee would constitute double taxation. Since South Africa was already in many people's opinion a heavily taxed nation, such a fee would not be favourably received. Extra administration costs would arise and changes in legislation would probably be needed.

Summary: Although the principles behind the special benefit assessment were generally supported, the respondents perceived that because the technique is a fiscal measure, any assessment might be imposed rather than

applied with the support of the community who had to pay it. In addition, the respondents endorsed the problems with this technique highlighted by the literature, most notably those of how to equitably determine the benefit received and thus the assessment to collect.

(ii) Tax increment financing

Definition: A charge which is based on the expected appreciation of property values within the sphere of influence of a proposed transport project. The property value increment is used as a security to obtain funding for the project.

Rating scale results:

Positive responses	33%
Negative responses	57%
Non-commital responses	10%
TOTAL	100%

Positive perceptions: Although still generally disliked, tax increment financing was marginally more favoured than special benefit assessments on the grounds that the benefits which would be expected to accrue as a result of a transport project would have to be more adequately demonstrated in advance in order to secure the necessary financing. The technique would also allow for relevant before and after data to be collected, which would ease the revenue assessment and collection process. Despite possible distortions such a technique might have on the property market, property valuations were seen in general as being governed largely by free market forces. Property rating was also considered to have a tradition of arbitration and was a mechanism many officials had experience of.

Negative perceptions: Many of the problems identified with special benefit assessments were seen as common to tax increment financing.

Again, measuring any appreciation in property values due to a transport project would prove difficult, particularly when taking into account inflation and the effects of non-transport factors. It was considered likely that the property valuation system would need to be refined and improved. The degree of risk involved concerned many public sector representatives, particularly if, after a transport project was completed, growth failed to take place or development was driven away because of extra costs. The effect on small business might be especially critical in this respect. Increased administrative costs and legislative problems were also envisaged.

Summary: Tax increment financing was not well liked by majority of the survey respondents for much the same reasons as the special benefit assessment. In particular, it was considered that the sophistication of the local property valuation and local tax systems might have to be considerably enhanced in order to accommodate the use of the technique. The respondents fully agreed with the point raised in the literature concerning the difficulty of separating transport induced benefits from those generated by other factors, but added that problems in this regard could be compounded by inflation and by weak or no economic growth situntions.

(iii) Connector fees

Definition: Charges to owners or developers of buildings adjacent to a transportation facility specifically in return for the advantage of being physically connected to it.

Rating scale results:

Positive responses	77%
Negative responses	15%
Non-commital responses	8%
TOTAL	100%

Positive perceptions: It was generally accepted by all of the respondents that the benefits to be obtained through the application of the connector fees technique could be more easily calculated that the other techniques in the property related charges group. Private sector respondents believed that any charge could be based on some assessment of turnover or income. This would make it easier for a developer or entrepreneur to decide whether the costs of connection were bearable. An annual charge rather than a one-off fee might prove more equitable and could also allow for adjustments. It was further believed that both private and public sectors could easily recognise the benefits that both parties could secure from an agreement of this type. The public authority was likely to be in a reasonably strong bargaining position where such a technique was a possibility since something tangible was being offered to the private sector. It would seem to be a relatively easy technique to implement and a negotiated agreement could be drawn up at the beginning of a project so reducing property speculation. An important factor concerning this technique was that it was perceived to be voluntarily applied rather than enforced. Substantial benefits can be derived by certain businesses from a good location and undertakings with strong accessibility needs or dependent on passing trade may well be enthusiastic to enter into a partnership of this nature. Being attached to a transport facility could offer a captive market if travellers must pass through the connecting access way and in return the attractions of a connected development may stimulate the patronage of the transport mode involved.

Negative perceptions: Despite a general perception that connector fees could be fairly easily calculated, there remained concern amongst public sector respondents that difficulties could be faced in reaching agreement between the parties involved and that costs incurred by the private sector might eventually be passed on to their clients. Legislation would probably require amendment and the public body's responsibility with regard to this technique would need to be clearly defined. It was felt that there may be relatively few opportunities to utilise this technique,

particularly in low income or depressed areas. Furthermore, others not connected to a transport facility would not contribute to its cost yet could still derive benefit from their proximity to it. Care should be exercised to ensure that community needs were not sacrificed for commercial interests and that pedestrians leaving a transport facility would not be forced to walk contrary to their desired routes.

Summary: Considered an appealing technique by most respondents, but especially those from the private sector, the only major drawback mentioned about connector fees was that the opportunities to implement the technique might be limited to facilities such as public transport terminals or parking garages. The commercial advantages to be obtained by connecting developments to transport facilities for both the private sector (through increased trading opportunities) and the transport operator (through increased patronage) were points well understood by the respondents even though not highlighted in the literature.

(iv) Impact requirements

Definition: Charges or other conditions imposed on new developers to mitigate or compensate for the impact of their projects on existing or planned transport facilities.

Rating scale results:

Positive responses	77%
Negative responses	13%
Non-commital responses	10%
TOTAL	100%

Positive perceptions: Like connector fees, impact requirements were mostly seen as charges which could be negotiated rather than legislated

for and thus would be relatively easy to implement and administer. If the technique was used at the outset with regard to a development proposal, it would likely be more acceptable and would thus reduce any costs the community might otherwise have to bear. The technique was seen as an extension of requirements which already exist in many local authorities covering contributions towards the provision of engineering services and parking facilities necessitated by new developments.

Negative perceptions: Dissatisfaction may be caused amongst developers if suitable guidelines regarding the use of this technique are not drawn up and implemented equitably. Any charges levied would need to be carefully managed, for if costs exceed perceived benefits, development may be stifled and diverted elsewhere. It would appear unlikely that this technique could be imposed upon developers acting within their existing rights without first studying the legal ramifications.

Summary: Impact requirements (like connector fees) were not seen as compulsory contributions towards funding transport facilities as was perceived in the case of special benefit assessments and tax increment financing. However, the respondents agreed with the literature review finding that if impact requirements were aggressively applied, development could be constrained. Given South Africa's need to stimulate economic growth, this issue would require careful attention. Nevertheless, respondents had had experience of local interpretations of this method which could be built on to ensure that application and management of the technique is uniform.

(v) Employer wage-bill levies

Definition: A tax levied on all wage-bills paid by employers within a defined area served by a transport facility.

Rating scale results:

Positive responses	29%
Negative responses	56%
Non-commital responses	15%
TOTAL	100%

Positive perceptions: This technique may be easier to implement and control following experience of this type of levy with the establishment of the Regional Service Councils. As transport improvements generally benefit a whole region and help to ensure a steady workforce supply, this method allows for the costs associated with those transport improvements to be spread more evenly. The technique may be more successful where new, especially industrial, areas are established and the charge levied could either be a one-off or an annual charge.

Negative perceptions: The major difficulties identified with implementing this technique were again those of defining the basis for calculating the charge and the area over which it would apply. Problems might also be encountered with respect to how or where revenue obtained would be spent. Although widely based, it was argued that not all contributors may clearly benefit. Labour intensive companies would be discriminated against and small or young businesses would be burdened with extra costs. This could result in lower wages for the workforce and have a negative effect on job creation. The objections raised when introducing Regional Service Council employer wage-bill levies could well mean that their further use would be unpopular or politically unacceptable. Legislation would probably require amendment and certain administrative costs could be incurred.

Summary: Familiarity with this technique, as a consequence of its recent introduction in South Africa as a general revenue raising mechanism, did not encourage the survey respondents to favour it. Instead, its use as a method to fund specific transport projects was perceived more as an extra employee-related expense which would particularly affect companies or industries employing large labour forces. This latter point, which was not highlighted in the literature is particularly important in South

Africa. Given the country's present population profile, where large numbers of young people will be entering the job market over the next decade, the need to create employment opportunities, especially unskilled ones, is an issue which may preclude any extended use of employer wage-bill levies.

5.2.3 Joint ventures

(i) Land banking

Definition: The public acquisition and holding of land for planned future use.

Rating scale results:

Positive responses	59%
Negative responses	33%
Non-commital responses	8%
TOTAL	100%

Positive perceptions: To a certain extent, some public authorities in South Africa (e.g. Transnet and Bloemfontein) have passively banked land in the past. Land banking can be an effective policy if carried out with circumspection and it can support forward planning and the co-ordination of appropriate land use to achieve desired planning goals. Revenue may be obtained through a land banking policy to provide facilities and services which are not generally income producing or cost covering. Land banking might also help to avoid problems currently experienced when expropriating land.

Negative perceptions: Many respondents, especially from the private sector, cited ethical reasons against allowing public authorities to operate in the property market. There were fears that such a move could distort market forces and that corruption and speculation might be

fostered, for instance, by authorities withholding information to obtain land at cheaper prices. The acquisition of land could also drain an authority's resources and might in some cases expose it to a certain degree of risk. If land acquisition accelerated, the planning of transport schemes might not keep pace and acquired land might then possibly lie sterile before development, a sub-optimal use of land that could affect surrounding property values. Often, local authorities are not permitted to purchase land except for a specific reason, but to prevent abuse, a time limit could be set beyond which land should either be sold or developed. Most government agencies are also now obliged to pay tax on their land holdings. A negative reaction could ensue if land acquired by a public authority was not used for the purposes originally intended. In an atmosphere of privatisation and deregulation, it appeared incongruous to many respondents to encourage public sector acquisition of land. Land banking was likely to be of limited use in more developed cities and administrative and legal difficulties could arise.

Summary: The land banking technique proved to be one of the more controversial value capture methods in the minds of many respondents. The ability to control land use and development through large holdings of land was clearly perceived by all respondents. Those from the public sector understood their planning responsibilities could be more easily carried out if they owned large tracts of land, but present government policy directions tended to temper their enthusiasm. The private sector respondents, on the other hand, fully supported the contention made in the literature questioning the desirability of public bodies performing the role of a land banker. The financial constraints and the long time frame often associated with the development of land, already appears, however, to be restraining the public sector's influence in this area. Nevertheless, the significance which the ownership of land imparts upon the mechanics of many of the techniques in the joint ventures category was recognised.

(ii) Leasing/selling development rights

Definition: The leasing/selling of rights to develop above, below or around a site used for transportation purposes.

Rating scale results:

Positive responses	90%
Negative responses	5%
Non-commital responses	5%
TOTAL	100%

Positive perceptions: This technique was well liked by virtually all respondents as it could be fully negotiated and no coercion was involved. In most cases where this technique could be utilised, the public authority would be in a strong bargaining position, yet the private sector would probably be willing to co-operate if it perceived a clear benefit to its operations. Little development expertise is required by the public sector and minimal risk is involved. The technique also helps to optimise land use and encourage integrated planning. The planning authority is in a position to retain a degree of control over the type of development, especially through leasing, which would be useful if the transportation facility needed to expand at a later date.

Negative perceptions: Public authorities would need to acquire new expertise with regard to negotiating or gauging the economic climate in the property market. This would also involve preventing any distortions to the property market by the release or acquisition of publicly owned land. There was concern, too, that commercial interests should not be allowed to override social ones and that revenue obtained should be dedicated in some way in order to prevent its misuse. Any lease or sale of development rights should preferably be carried out on a tender basis and should be preceded by a well thought out land use and urban design plan. Legislation to enable the use of this technique may be required.

Summary: Very strong support was received from nearly all the respondents regarding this technique and the literature findings were fully agreed upon. The most significant limiting factor appeared only to be one of sufficient understanding by the public sector of the workings of the property market, although this could be relatively easily overcome through co-operation with private sector interests.

(iii) Leasing/selling developed properties

Definition: The public body itself develops the rights it holds and then leases or sells the property that has been erected. This could include leasing of the whole site on which the transport facility is situated for management by private enterprise.

Rating scale results:

Positive responses	62%
Negative responses	20%
Non-commital responses	18%
TOTAL	100%

Positive perceptions: Many of the positive perceptions concerning the leasing or selling of development rights applied equally to the technique of leasing or selling developed property. Although input from the private sector was still necessary, more control rested with the public authority in this case and more attention could be paid to enhancing the viability of the transport facility in concert with the development. An alternative to direct public sector involvement could be the establishment of private companies to control such projects. This might involve a sale to the private sector (including the transport facility) and a leaseback by the public authority.

Negative perceptions: Far more negative feedback was received regarding this technique than with the sale or lease of development rights. This was mainly because it was perceived by many respondents, including those from the local authorities, that it was not the role of the public sector to compete with the private sector in the property market. In any case, little expertise was available in the public sector to fulfil the requirements necessary to implement this technique and there was currently little prospect of funds being made available to employ specialists in this field. In addition, if a strain was placed on funds through investing in property, more urgent projects could be neglected and this could arouse opposition in many circles, not least from the State, which had to approve the expenditure of public authorities. Investing in property also carries a financial risk which is subject to the vagaries of the economic climate and although such investments had the potential to secure good returns in the long term, they were deemed not to be as flexible as leasing development rights. The general consensus was that private enterprise was more geared towards the optimal utilisation of land and property. Practical difficulties in terms of administration and legislation would also be faced when implementing this technique.

Summary: Leasing or selling developed property was less favourably perceived by the survey respondents than the previous technique largely because neither the expertise nor the resources presently exists on any significant scale in the public sector in South Africa to exploit this method of value capture. In this regard the literature findings were again endorsed.

(iv) Joint development

Definition: Projects in which investment in transport facilities is closely linked to the development of private property, thus involving both the private and public sectors in informal and formal development partnerships.

Rating scale results:

Positive responses	93%
Negative responses	0%
Non-commital responses	7%
TOTAL	100%

Positive perceptions: This technique was favourably perceived by all respondents because the prime functions of the public sector to co-ordinate and the private sector to make a profit were seen to be brought together. In this way, transport and land use could be integrated and development stimulated over and above the creation of the transport facility itself. The respective contributions of the public and private sectors to joint projects would be the subject of negotiation, but large expensive projects, for example mass transit systems, could be made more feasible in this way. An emphasis lay on flexibility in securing agreements of this sort. Joint projects were likely to increase the rates base and also the patronage of the transport facility.

Negative perceptions: Public sector respondents expressed limited reservations in respect of their lack of expertise in negotiating skills and knowledge of the real estate market. They wished to prevent public authorities from being taken advantage of and priorities from being distorted to the detriment of the public interest. The selection of suitable partners for joint development was seen as critical, because negotiations could be protracted and involved. Responsibilities and ownership with respect to different elements of a project would need to be defined. Legislation may require amendment.

Summary: Well received by all the respondents, the survey showed this method to be the most popular across all three categories of value capture techniques. The period of change which South Africa is currently undergoing is lending itself to co-operation between the public and private sectors. This is particularly true with regard to the funding of

infrastructure because resources available to the public sector are being progressively strained. The pressing need to address the less developed parts of the economy is, therefore, increasingly likely to require a form of partnership between the private sector and the various levels of government. Given this backdrop to the South African situation, it is perhaps not surprising that the notion of joint development was so favourably received.

(v) Negotiated investments

Definition: An agreement between a developer and a public body through which the former agrees either to make a needed public improvement or to contribute a sum towards an improvement in exchange for a concession which will benefit his development.

Rating scale results:

Positive responses	82%
Negative responses	10%
Non-commital responses	8%
TOTAL	100%

Positive perceptions: The positive statements which were made in favour of the joint development technique were repeated to a large extent with respect to negotiated investments. The importance and value of negotiation and flexibility were emphasised.

Negative perceptions: Most of the reservations concerning this technique again emanated from the public sector respondents. Their anxieties, however, were more pronounced in this case than with the joint development technique. They were particularly concerned that there would be more scope for corruption and bribery and for land use principles to be

disregarded in favour of obtaining revenue. If a transport facility were to be completely in the hands of the private sector, design standards may be difficult to enforce. Attention would need to be given to the legal implications of utilising this technique.

Summary: Although this technique was generally liked, the lack of any guidance in the literature on negotiating procedures to be followed as well as the possibility that several planning dictates could be undermined caused concern amongst certain public sector respondents. A conflict of interest between adhering to specific guidelines on the one hand and an exchange of concessions inherent in the negotiating process on the other will likely require the attention of those skilled in the management of negotiation and bargaining procedures in order to help allay fears raised in this regard.

(vi) Cost sharing (turnkey agreement)

Definition: The sharing of operating expenses or contributions to the construction costs of a transport facility by a private developer. No joint land development is involved but the benefits are derived from integration or interconnection between the transport facility and the private development. (A turnkey agreement involves the construction of a transport facility by private enterprise on behalf of a transport authority).

Rating scale results:

Positive responses	69%
Negative responses	2%
Non-commital responses	29%
TOTAL	100%

Positive perceptions: This technique also attracted much of the positive comment recorded for the joint development and negotiated investment techniques. Its flexibility was liked but it was seen as a technique that was likely to be more selectively applied than the latter two.

Negative perceptions: Difficulties were foreseen in resolving the apportionment of costs and benefits amongst the various involved parties. Although this technique may help with some of the capital requirements necessary to fund transport facilities, doubt was expressed as to its capacity to help support operating expenses. As with many of the techniques in the joint venture category, the question of whether public bodies possess the legal authority to enter into agreements of this kind would require investigation.

Summary: A degree of confusion existed in the minds of many survey respondents concerning this technique judging by the relatively large number of non-commital responses received. The literature indicates that cost sharing does not involve any joint land development, but envisages private developers contributing towards the cost of a transport facility because the penalty incurred in doing so is outweighed by the actions received from improved accessibility to a development. The survey respondents, however, did realise that agreement on the allocation of costs was a crucial element in any cost sharing scheme.

(vii) Donations

Definition: The obtaining of donations (monetary or physical land/property) from the private sector in return for recognition or publicity.

Rating scale results:

Positive responses	61%
Negative responses	18%
Non-commital responses	21%
TOTAL	100%

Positive perceptions: Most respondents considered this technique acceptable providing the private sector saw feasible opportunities in this regard. Donations on a small scale or in prestigious areas were a possibility. Such a technique would require minimal administration.

Negative perceptions: Large scale altruism on the part of the private sector was seen as unlikely by many respondents. Although no major problems were envisaged in pursuing this technique, it was seen as limited in scope with few opportunities capable of generating significant amounts of revenue, especially if the economy were weak. Public bodies should remain open, accountable and impartial in receiving donations to avoid malpractices and should be wary of any later favours requested by a sponsor.

Summary: The survey respondents were supportive of the literature in their comments on the donations technique. However, a certain degree of indifference was expressed by some respondents because they did not envisage many opportunities to materalise.

5.2.4 Merchandising approaches

(i) Leasing advertising space

Definition: The sale of advertising rights in or around transport facilities.

Rating scale results:

Positive responses	85%
Negative responses	5%
Non-commital responses	10%
TOTAL	100%

Positive perceptions: This technique was accepted by nearly all respondents as a suitable method of earning extra revenue for transport facilities and one that was commonly practised in many areas. It had a proven track record, required no changes in legislation and had the potential to be further exploited to maximize revenue.

Negative perceptions: The revenue to be earned via this technique was considered in most instances to be relatively small. Concern was expressed that advertising could be environmentally disruptive, causing visual intrusion. Thus a policy of control may be required to apply certain standards and limits to advertising and so ensure that it is responsibly handled. Tenders and contracts may have to be drawn up and the services of an advertising contractor could be used. By-laws may require amending.

Summary: The lease or sale of advertising space in association with transport facilities was seen as a very acceptable revenue raising mechanism by nearly all the respondents not least because it is one that is not unknown in South Africa. The survey respondents agreed with the literature that the major issues here were ones of aesthetics and control, although as some respondents pointed out, revenues are subject to the fluctuations of the economic cycle.

(ii) Concessions

Definition: The generation of revenues through the sale/lease of concessions for business purposes in or around transport facilities.

Rating scale results:

Positive responses	79%
Negative responses	8%
Non-commital responses	13%
TOTAL	100%

Positive perceptions: This method was also recognised as one which is already well utilised in certain areas and could easily be developed further. Concession areas are usually an integral part of a transport facility and the dedication of revenues to transport should not arouse much controversy. Concessions could also be integrated with other value capture techniques.

Negative perceptions: The granting of concessions needs to be contractually tied up and safety, operational and maintenance control exercised. The planning of the layout is important and will depend on the availability of space and passenger volumes. Market research may be necessary, tenders will need to be drawn up and the public authority will have to bear the management burden.

Summary: The use of concessions, like the lease or sale of advertising space, was a method of raising revenue of which certain respondents had had experience and was also very popular with the majority of those interviewed. It was generally agreed, though, that transport facilities in South Africa are often planned and designed in isolation without due regard to ancillary features.

5.3 A comment on public and private sector attitudes expressed towards the value capture techniques

A full discussion of the main issues raised by the survey respondents with respect to each value capture technique and to the three categories of techniques (i.e. property related charges, joint ventures and merchandising approaches) is contained in Chapter 8 of the study.

A salient feature apparent from the comments received in the survey, however, is worth noting at this point. This is the degree of broad consensus shown between respondents representing the interest groups interviewed. The relatively small number of completed questionnaires

obtained from the private sector respondents means that no significance can be attached to any statistical comparison of the rating scale results between respondents from the public and private sector. Nevertheless based on the discussions held with all the interest groups, there appears to be a clear appreciation amongst the majority of respondents of the diminishing level of funds available in the public sector for transport and also a willingness to seek new sources of revenue for this purpose which will involve input from the private sector.

Although, as might be expected, certain differences of opinion regarding the applicability of the value capture techniques was reflected on an individual level, the feedback indicates that in general, there is much in common regarding the viewpoints expressed by respondents from both the public and private sectors. Differences which can be identified are more of emphasis than substance and this tends to reflect the priorities held by each sector. For example, public sector respondents were more concerned with equity and fairness in terms of implementing value capture whilst the private sector respondents were more interested in opportunity and profit. The areas of agreement which do exist between the public and private sector respondents, however, indicate that given the right incentives, scope exists to pursue the concept of value capture into the sphere of practical possibilities.

5.4 Summary

Based on the rating scale results and the comments made about each value capture technique in both the questionnaire and the group discussions, a simplified summary of responses was compiled and is shown in Table 5.1.

No or little reservation	Some reservation	Stronger reservation	Not favoured
Joint development	Negotiated investments	Leasing developed property	Tax increment financing
Leasing development rights	Impact requirements	Land banking	Special benefit assessments
Leasing advertising space	Connector fees		Employer wage-bill levies
Concessions	Cost sharing		
	Donations		

TABLE 5.1: DEGREES OF FAVOUR EXPRESSED TOWARDS VALUE CAPTURE TECHNIQUES

The four sections of Table 5.1 relate to the degrees of favour expressed towards the various value capture techniques. The table serves as a useful guide for gauging the likely reception a technique may encounter should an attempt be made to implement it in South Africa in the near future. It should not, however, be interpreted in a way that would preclude the techniques that are least favoured from being considered in any value capture exercise nor that the most favoured techniques should be the only ones to consider. The possible benefits and pitfalls identified by the respondents in the survey that may be faced in implementing each technique should thus be carefully weighed in any decision making process involving value capture.

CHAPTER 6: PAST APPLICATIONS OF VALUE CAPTURE IN THE TRANSPORT FIELD IN SOUTH AFRICA

6.1 Background

In order to evaluate recent experience of value capture techniques in South Africa, public sector respondents from the metropolitan core cities and those from Transnet and the DCA were asked to identify any examples of transport related schemes they knew of within their ambits where value capture techniques had been applied. Specific problems or successes associated with the implementation of any of the techniques were also discussed. The information supplied by the respondents in this regard is detailed below beneath the headings of the three categories of value capture techniques that have been used in this study.

6.2 Property related charges

None of the respondents were able to cite examples of where either special benefit assessments or tax increment financing have been utilised for transport projects in South Africa. To some extent, this may explain the ambivalence expressed towards these techniques in the attitude survey.

A single example of the connector fees techniques was cited in respect of the Strand Concourse development in Cape Town. This development involved the construction by the local authority of a pedestrian subway beneath Adderley Street in central Cape Town to cater for up to 6 000 pedestrians an hour who were walking between the Golden Acre and Old Mutual developments. The owners of these two developments paid a sum, or connector fee, of R0,5 m to extend their premises beneath the street and link up with the subway. The owners or lessees of additional shops which were constructed beneath the street with frontages onto the subway contributed revenue in the form of rent, which, together with the income

obtained from the connector fees, enabled the costs of the scheme (approximately R6,5 m) to be paid off within 10 years without any form of subsidy.

In spite of the success achieved with the Strand Concourse development, no other examples of where connector fees have been used in relation to schemes for transport purposes were given either elsewhere in Cape Town or in other cities. This demonstrates that public authorities have remained largely passive to date with regard to opportunities which exist to link transport facilities with surrounding developments.

Utilisation of the impact requirements technique has occurred on a small scale in most of the major urban centres, especially in respect of the provision of parking facilities. It has become common practice for local authorities in these centres to assess the impact of proposed developments, new townships, rezonings or sub-divisions on existing parking facilities, or on the existing road system, according to the requirements laid down in town planning ordinances. Contributions may then be asked for in respect of the need to provide parking or improve the local road system or traffic flow as a result of the expected impact of a new development. In many cases, permission to proceed with a development will not be granted unless the developer agrees to provide a certain level of parking as part of a development. In most instances, however, such conditions are not absolute requirements but are subject to negotiation between public authority officials and the developer. This situation highlights the dilemma faced by local authorities which is posed by the desire to encourage development whilst at the same time ensuring that the necessary infrastructure to support such development is available. In Johannesburg, the local authority has faced legal difficulties in implementing its development fee for the provision of parking as it could not be shown that levies paid in this regard were actually dedicated to providing parking facilities.

In the past, levies have been collected from employers to help fund the operation of public transport for blacks and coloureds in South Africa. These levies have now been superseded in Regional Service Council (RSC) areas by levies on payrolls - employer wage-bill levies - and turnover. Revenues obtained from this source are not specifically dedicated to transport related schemes, but go instead into a general fund from which monies may be allocated to transport projects. Funds administered by the RSCs are applied mainly to the provision of infrastructure in areas where the need is judged to be greatest. Thus, as is the case with the allocation of central government funds, transport must compete with other demands in securing a share of available revenue. To date, therefore, the support of transport projects through employer wage-bill levies, which falls strictly within the scope of the term value capture, has not taken place in South Africa.

6.3 Joint ventures

The practice of land banking has occurred in South Africa, but in all the examples cited by respondents in the survey, the primary motivation has been one of attaining specific public sector development goals rather than the obtaining of a maximum return on the land asset. The railways administration in particular has historically acquired large tracts of land, much of it in prime locations in the country's largest cities. Bloemfontein municipality is also a substantial land holder, the land having been acquired for the development of residential and industrial townships. A number of local authorities also gave examples of where land had been acquired, sometimes well in advance, for a particular transport project.

An interesting example of where value capture has taken place in the case of Transnet's land holdings is that of the reclamation of the Foreshore in Cape Town, which occurred as a consequence of the reconstruction of the city's harbour during the 1940s. The sale of part of the reclaimed land

allowed the railways administration to recoup some of the costs of building the harbour. It was expected that the reclaimed land would allow for the expansion of Cape Town's central business district (CBD) and would provide space for the construction of roads to relieve bottlenecks in the city centre. Although this has happened to some extent, controls on development seen to have inhibited the spreading of some of the CBD core activities and the city centre has tended to become denser instead of spreading outwards.

Public authorities in general, though, have not been particularly active in seeking out the best possible returns on their land assets, nor in the co-ordination of transport projects together with any development of their land holdings. However, following the introduction of recent legislation which now requires government agencies to pay rates and taxes on land they own, Transnet is leading the way in introducing more flexible planning with regard to its land holdings in order to generate income to help meet its tax obligations. A spin-off of this new perspective by Transnet has been the co-ordination of transport facilities with business opportunities on the land it owns.

With regard to the leasing or selling of development rights, a few examples were given by the representatives of the metropolitan core cities. These included the construction of a skyway on land leased from the local authority to link two developments in Port Elizabeth. The short term leasing of local authority owned land obtained for future transport purposes is more common place. Revenue collected in this manner, however, normally goes to a local authority's general fund and is not dedicated to the transport account. Furthermore, pro-active policies in respect of generating income from unutilised public owned land are not followed in most cities.

Prior to the more commercialised position which Transnet is now adopting, revenue from the lease of Transnet owned land amounted to no more than

R10 m per annum. This has already increased to R50 m per annum in the last few years. The DCA also obtains income from the lease of land around State airports to airlines and cargo handlers as well as a major hotel in the case of Jan Smuts airport in Johannesburg. Bales of grass cuttings sold to farmers as fodder is an additional, if unusual, source of income.

There is evidence, too, of the leasing of developed property associated with transport facilities. In Durban, for example, a parking garage attached to the Workshop development was constructed by the local authority and then leased for the private sector to run. In Pietermaritzburg, the local authority has developed a site at a cost of R40m which houses municipal offices, a shopping centre and a bus station. The commercial part of the property is leased to the private sector for retail activity. In general, however, it appears that the capital required for the construction of publically owned property for subsequent leasing to the private sector precludes most public authorities from entering this market.

Despite the evident popularity in the attitude survey of joint development as a value capture technique, very few examples were given by the public sector representatives where this technique has been utilised in association with the provision of transport facilities. Ormet, (the East Rand Metropolitan authority), gave an example where they have entered into a joint venture with a developer of a shopping centre in order to include a pedestrian mall and a parking garage in the scheme. In Cape Town, the provision of facilities for buses and taxis in Claremont has been carried out in association with a private sector development. One of the problems which public representatives noted presently works against public bodies entering into joint development contracts was that they were obliged to go to tender with regard to any mooted project. This tended to discourage private developers who wished to maintain confidentiality with respect to their ideas.

Examples of negotiated investments and turnkey projects, a variation of the cost sharing technique, which were allied to transport facilities were given by respondents from Cape Town. The Golden Acre development in the city centre included the resurfacing of the bus terminus as part of the project, whilst the housing authority responsible for the development of Mitchells Plain constructed the bus station there as it considered this to be an important part of the township's development. The Exchange Place Mall was financed as a turnkey project by Old Mutual and access to Adderley Street was made a part of the project at no cost to the city.

Donations, the remaining technique in the joint ventures category, have not, according to the respondents in the survey, occurred with respect to transport facilities. The only example which could be considered to represent a donation is where advertising is permitted on road or street signs and the signs are manufactured and erected at the expense of the advertiser. This particular form of value capture is discussed more fully, however, in the following section with respect to advertising.

6.4 Merchandising approaches

Concessions and the leasing or selling of advertising space are the value capture techniques with which public bodies in South Africa have had the most experience to date. In spite of this, there is evidence that existing attitudes and regulations have prevented their full exploitation.

The granting of concessions by local authorities has occurred, where deemed appropriate, at council owned public transport facilities or on surplus land where people congregate. In Durban, concessions have been granted on the parking area along the beach front whilst in Bellville, Cape Town, the leasing of concessions at the bus terminus helps to pay for the cleaning and maintenance of the facility. In Johannesburg, concessions have been granted on the Smal Street mall which encroaches onto the former street area.

Both Transnet and the DCA have also granted concessions at railway stations and State airports respectively. Areas surrounding mainline passenger railway stations such as Johannesburg and Cape Town have been designed to accommodate specific concessionaires, especially catering services. However, the granting of the concessions has been done more in order to provide basic conveniences for passengers rather than to generate revenue. As a result of the recent growth of the informal sector around railway stations and in particular the decline of long distance rail passengers, revenue from concessions has not contributed significantly to Transnet's income to date. What revenue has accrued goes into the general account and is not dedicated in any way. The more pro-active, commercial stance recently adopted by Transnet, however, may well result in increased revenue from this source in future.

All land on which State airports are situated is owned by the Department of Land Affairs and Public Works, who determine concession rates according to the regulations of the State Tender Board. As with railway stations, catering concessions are most prevalent, although banks, chemists, book and gift shops are also allowed to operate, and there are also conference facilities for hire at Jan Smuts airport. Additional income accrues from car hire firms permitted to operate from airports; this is usually on the basis of a percentage of a company's turnover. At the larger airports, a major concession is the operation of car parking facilities.

Most public authorities have generated revenue in the past through the leasing of advertising space associated with transport facilities. Local authorities have allowed advertising on publicly operated buses, on bus shelters, road signs and parking meters as well as alongside certain major arterials and at public transport termini. In many situations, however, a conflict has arisen between maximum exposure for the advertiser and the maintenance of aesthetics or the efficient location or functioning of the transport facility. In cases where bus shelters or road signs have been provided in return for advertising rights on the structure, the facilities

have often been poorly maintained. Advertising agencies have been sub-contracted by some public authorities to handle such accounts, but with recent shifts to other advertising media and the relatively small amounts of revenue generated, this method has in some instances lost favour.

Advertising is also found at railway stations and State airports. In fact, advertising revenue is the third most important source of income for the DCA after aircraft parking and landing fees. The DCA, however, does not operate a trading account and all revenue from advertising goes to a central consolidated revenue fund. The outcome of this form of organisation results in the DCA concerning itself primarily with aviation matters and although opportunities for retailing and advertising are taken up, commercial activities tend to be of secondary importance.

6.5 Summary

Transport related applications of value capture have occurred in South Africa in the past. Generally speaking, however, it appears that these have been isolated or unco-ordinated attempts with no specific intention of helping to fund the costs of the associated transport facility through the revenues generated. In fact, most of the income obtained has been credited to public authorities' general accounts.

Despite this situation, the experience gained in such exercises should serve as a suitable springboard to further a more widespread application of value capture in the transport sector. A useful exercise would be to establish the precise financial returns which value capture applications create by conducting case studies of both past examples and any planned future applications.

Based on the examples cited in this chapter, Table 6.1 provides an introductory guide to the experience South Africa has acquired regarding the various value capture techniques.

Much experience	Some experience	Little experience	No experience
Leasing advertising space	Leasing development rights	Joint development	Tax increment financing
Concessions	Land banking	Connector fees	Special benefit assessments
	Employer wage-bill levies *	Leasing developed property	
		Negotiated investments	
		Donations	

* Only as a general revenue raising mechanism.

TABLE 6.1: SOUTH AFRICAN EXPERIENCE OF VALUE CAPTURE TECHNIQUES

CHAPTER 7: POSSIBLE FUTURE APPLICATIONS OF VALUE CAPTURE IN THE TRANSPORT FIELD IN SOUTH AFRICA

7.1 Background

Discussions held with the representatives of the metropolitan core cities and Transnet included the consideration of future applications of value capture and the identification of proposed transport, or transport related, schemes in the major cities of South Africa which were considered by the respondents to have value capture potential. These schemes are examined in this section.

The representatives from the DCA felt that they had fully exploited possibilities for value capture at State airports in so far as present institutional and legal structures allowed whilst the private sector respondents stated that if legal obstacles and prevailing attitudes with regard to the funding and provision of transport facilities were amended, they would probably be more pro-active with regard to the inclusion of transport facilities as part of their developments.

In general, private developers tend to respond to economic and market signals when implementing their projects and usually complete developments within a relatively short time frame compared to transport schemes. Consequently, the private sector respondents who were interviewed were unable to identify any proposed developments which could contain transport elements and where value capture might be applied. Nevertheless, they were keen to point out that this situation should not be construed as meaning they were not in favour of the concept of value capture, but rather that the policies and structures to facilitate the use of value capture in respect of providing transport infrastructure were not yet in place.

7.2 Current developments regarding value capture in South Africa

As a result of the changing spending priorities occurring in the public sector, pressures are now increasingly being brought to bear on private sector interests to assist in the provision of transport facilities. This is already manifesting itself in terms of the construction and tolling of stretches of road by private consortia. Furthermore, the potential role of value capture in helping to provide and fund transport facilities was endorsed by both the representatives of the metropolitan core cities and Transnet.

In broad terms, the respondents from the metropolitan local authorities indicated that, in future, increasing attention is likely to be focused on the demand which new or expanded developments generate for parking facilities and also on traffic flow on access roads surrounding developments. The use of the property related charges group of techniques, in particular the impact requirements technique, could thus be increasingly applied in such situations providing suitable methods of apportioning costs can be devised and agreed upon.

The possibility of joint venture schemes materialising has been enhanced following the recent promulgation of legislation empowering local authorities to form companies or close corporations and such schemes might be particularly applicable in the redevelopment of specific areas (e.g. Cape Town Harbour, Church and Verwoerd Squares in Pretoria). Such redevelopments may or may not contain transport elements, but they will almost inevitably have an impact on existing transportation infrastructure.

The merchandising pair of value capture techniques were methods which local authorities could implement more rapidly than many of the other techniques because of the knowledge, experience and consequent familiarity gained from their earlier use. A current example, in fact, is the recent

introduction of new street name signs in Pretoria's central city area. Permission has been granted for advertisements to be placed on the standards bearing the street name and for this privilege advertisers must pay the local authority a fee. The large number of people who congregate daily in the city centre means that the advertisements receive a high degree of exposure and, as a result, the opportunities presented for advertising in this manner have proved popular. Although not a novel example of value capture in South Africa, it indicates that local authorities are giving attention to such possibilities. It is also evident that such initiatives are not without their teething problems. Appendix D contains an article from the local Pretoria newspaper highlighting complaints received by the local authority from the public regarding the new street signs.

The predominant type of transport scheme, however, which the local authority respondents expected to materialise within the near future in their cities and which they envisaged as having the most potential for applying value capture was in the provision of public transport terminal facilities. In practice, these were bus and combi-taxi termini and stations which would form part of proposed new rail based networks for certain cities. The respondents were of the opinion that a number of the value capture techniques identified in this study could be employed, either individually or in combination with one another, in helping to fund the provision of such facilities.

The techniques which appeared most applicable in these cases were connector fees, joint venture schemes and advertising and concession possibilities.

The Transnet representatives who were interviewed explained that the railways administration holds large tracts of land, much of it in prime central city areas, which, because of recently introduced legislation, is now costing it money in the form of rates and taxes. A result of this

change in circumstance has been the establishment of an independent arm known as the Business Development section, which has the objective of securing a better return on the assets held by the organisation. In certain respects, this has thrust Transnet into a leading role with respect to the widespread application of value capture in South Africa and it is expected that much may be learnt in future from their experience.

As of January 1989, the Business Development section was investigating over 80 projects countrywide with regard to the generation of revenue on Transnet owned land and the majority of these projects were associated with station sites. Of the 80 projects, nearly a third had been given high priority status and of this total thirteen had been identified as having specific transportation elements, although this situation is constantly reviewed as projects mature.

The schemes which Transnet had identified as containing transportation elements and where value capture could be applied would favour very heavily the joint venture and merchandising group of value capture techniques and in particular the leasing of development rights and developed property and joint development.

In total, the respondents from the metropolitan core cities and Transnet were able to identify 28 possible future transport projects which were deemed suitable candidates for the application of value capture. A significant feature of these projects was that they were all focused on public transport termini or facilities. This clearly indicates where future initial efforts to pursue value capture in the transportation field in South Africa are likely to lie. The proposed projects are examined in the following section by assessing each one in terms of a set of descriptive variables. The intention of this exercise was to establish whether the proposed schemes contained particular characteristics which might be considered important in successfully applying value capture.

7.3 Characteristics of potential value capture projects

Having obtained from the local authority and Transnet respondents an understanding of the type of future transport projects perceived as having value capture potential (viz public transport facilities), each of the 28 identified possible projects was examined in terms of thirteen variables. The variables were related mainly to the transportation and land use aspects of the projects (see Appendix B). The set of variables employed in this analysis was not exhaustive, but was considered relevant in establishing the nature of the projects in question and whether certain characteristics pertaining to the projects emerged frequently enough to suggest that their occurrence might be significant in supporting the deployment of value capture. This in turn could help in identifying other possible transportation projects where value capture could be applied.

Although all the proposed projects involved public transport facilities, they were separated for the purposes of clarity in the analysis into three sub-categories - bus and combi-taxi termini (12 projects), new rail based transport schemes (3 projects) and development schemes at railway stations (13 projects). The results of the exercise are detailed for each sub-category in Appendix E along with composite results covering all the projects. Since there is no guarantee that the projects will come to fruition and also to retain confidentiality requested by the survey respondents, the location of the projects has not been divulged.

The predominant characteristic for each variable type (drawn from the composite table of results for all projects in Appendix E) is shown in Table 7.1. The detailed results given in Appendix E suggest that a wide range of characteristics exist for many of the variables, indicating that there are no precise or absolute conditions when value capture should be considered. However, a "typical" scenario, based on the projects analysed can be derived from Table 7.1.

This typical scenario may serve as a starting point or a preliminary check list for individuals or parties involved in a proposal where the provision of transport facilities is required. If some or a majority of the characteristics shown in Table 7.1 are found to pertain to a proposed project, then the possibilities for utilising value capture methods should be seriously investigated. Projects which would appear most worthy of investigation appear to be specific inner city sites in fairly dense commercial areas which are close to other nodes and ripe for redevelopment and also where the transport element involves various modes and substantial pedestrian flows. The transport component is likely to be serving the low to medium income groups where freeway access is not vital. The most serious obstacle for the parties involved is likely to be up front costs incurred by the public authority before value capture revenues accrue or are secured.

VARIABLE TYPE	PREDOMINANT VARIABLE CHARACTERISTIC
Transport Facility Status	Upgrade
Transport Mode Involved	Multi-modal
Location	CBD
Scale	Single site
Land Ownership	Public
Perceived Dominant Surrounding Land Use	Commercial retail
Intensity of Surrounding Land Use	Floor area ratio: 0,2-1
Condition of Surrounding Land Use	Mixed order
Income Group Served by Transport	Low to medium
Freeway Accessibility	> 1km
Pedestrian Flow	10-50,000 per day
Proximity to Other Commercial or Transport Nodes	< 1km
Potential Deterrents/Obstacles	Up front costs to public authority

TABLE 7.1: PREDOMINANT CHARACTERISTICS OF POTENTIAL PROJECTS CONSIDERED SUITABLE FOR IMPLEMENTING VALUE CAPTURE

The conditions described in Table 7.1 should not be seen as overriding, but rather as a guide which can suggest situations and circumstances under which the implementation of value capture can be considered. Once trial applications have been initiated in South Africa and when further experience of value capture methods begins to accumulate, the use of value capture in wider and less clear cut situations may become possible.

7.4 Summary

The appreciation of the value capture concept in South Africa would seem to be gathering some momentum based on Transnet's recent actions and those of certain local authorities. An attempt has been made in this chapter to further these developments by examining the characteristics of potential value capture projects identified by the survey respondents. Out of this exercise has emerged a description of certain conditions which might favour the implementation of value capture techniques. This description in turn could assist public bodies in identifying potential value capture projects in their areas.

CHAPTER 8: A DISCUSSION OF THE RESEARCH FINDINGS

8.1 Introduction

This chapter brings together both the findings of the literature review on value capture as well as those from the survey of local practitioners in the transport field and discusses them against the backdrop of the major economic and political trends currently at work in South Africa.

Certain general issues which have emerged from this investigation of value capture are discussed first, followed by comment regarding the findings on the three categories of identified value capture techniques (i.e. property-related charges, joint ventures and merchandising approaches). The potential for each category of techniques and each individual technique for helping to fund transport projects is discussed within the context of the conditions which will be necessary, or which will favour, their implementation in South Africa. The discussion will enable local problems regarding the use of value capture to be clarified as well as identifying possible solutions or paths which can be pursued in attempting to resolve such problems.

8.2 General issues surrounding value capture

The investigation of value capture described in this project report has confirmed that changing central government policies in South Africa, which are now encouraging greater private sector input and participation in the provision of transport facilities, have laid the foundations for a more active pursuit of value capture in the transportation field.

In order to further possibilities in this sphere, however, it is evident that co-operation between the public and private sectors will be necessary and that structures and communication channels to facilitate discussions

on value capture may be a pre-requisite before value capture methods can be widely and successfully implemented. Past government policies have tended to place the onus for providing transport facilities almost solely on the public sector and prevailing attitudes regarding the functions of the two sectors in this regard have become somewhat rigid - i.e. the provision of transport facilities is seen as a public sector responsibility. If value capture is to play a progressively meaningful role in the provision of transport facilities, current attitudes may have to be broken down and hence the need for discussions on value capture between relevant bodies. A good start might be made here by initiating contacts between relevant local authority and other government departments on the one hand and private sector bodies on the other such as SAPOA and the recently formed South African Chamber of Business (SACOB). The interview survey carried out in this study demonstrated that although opinions on value capture in both the public and private sectors were not dissimilar, structures to give momentum to the implementation of value capture techniques in the transport sector were not yet in place.

Both the literature review and the survey respondents also identified another hindrance to the successful implementation of many of the value capture techniques. This is the possible need to amend pertinent legislation. Most of the survey respondents were unable to pinpoint which legislation might require attention because of a lack of legal expertise, but suggested that local authority and provincial planning ordinances as well as certain State legislation affecting transportation should be examined. Statutes governing how public bodies may function or operate also require attention as implementing value capture techniques may require public authorities to act in ways which current legislation precludes.

The legal issue is compounded, in the view of some survey respondents, by the belief that much legislative power in South Africa is currently vested in central government. A result of this may be that options for local

government or government agencies to implement value capture techniques may be limited unless central government is prepared to approve changes to certain laws or unless the power to do so is devolved to a local level. The current fluidity in South African politics may yet lend itself to revised constitutional structures which would permit more local autonomy. At present, however, due to historical ties, much existing South African legislation is derived from Great Britain and it may be that from a legal perspective, should this situation remain largely unchanged, particular value capture techniques may be simpler to introduce than others. As the literature review indicated, it is worth noting that the wides_ use of all the different value capture techniques identified in this study is found in the United States, where scope for local sources of funding is undoubtedly higher than in many countries because of the separation and relative independence of the three tiers of government.

On the other hand, it may be that existing legislation in South Africa need not have to be amended, but rather that the interpretation of relevant legislation or practice requires modification. It should also be remembered that separate pieces of legislation often have to be read and understood with each other. Thus, changes to one law may impact upon the meaning of another. It would appear necessary, therefore, to enlist the services of a member of the legal profession, who has experience in legislation affecting transport, to investigate the legal implications of using any of the value capture techniques. This would serve to confirm what legal obstacles might exist with regard to the implementation of each technique and how relevant legislation should be amended.

Another issue raised by the survey respondents revolved around the question of dedicating revenues obtained through the application of value capture to the transport facility which generated them in the first place. It was argued that if at least part of the income derived in this manner were not dedicated to the transport facility, the credibility of the value capture concept might be undermined and this would act as a disincentive

to its acceptance. This is a difficult problem and is likely to rekindle the debate on dedicated funds which continues to surround the allocation of revenues received from fuel levies in South Africa. It is a question which would appear to require investigation, however, especially if, as some survey respondents in this study inferred, it challenges the very basis of the value capture concept.

A final point worth mentioning in this section on general comments surrounding value capture is one emphasised by many of the transportation planners in the survey. This was that although value capture is primarily a funding concept, in many cases it can be much more than that. It can also be a means towards achieving better integration of land use and transport development since land use and transportation planning decisions can exploit transport as a development tool. To date, planning for transport and land development in South Africa has generally been carried out in isolation although this weakness is being increasingly recognised by the transportation fraternity. Thus, part of any scheme to improve transport should be to co-ordinate it with land use planning so that transport developments can foster related urban development benefits.

Transport, however, may not be sufficient to encourage development on its own. Changes in land use and development patterns may occur only in the presence of other favourable factors such as supportive land use policies and development incentives, availability of developable land and a good investment climate. Nevertheless, there is little doubt that investment in transportation, from whatever quarter, can help to shape towns and cities and where conditions are supportive, there should be no reason why value capture can not be used to good effect.

The following three sections in this chapter examine the various value capture techniques according to the three categories used throughout this study - property-related charges, joint ventures and merchandising approaches.

8.3 Property-related charges

Based largely on the experience gained in the United States, the literature review indicated that the use of value capture techniques in the category of in property-related charges (i.e. special benefit assessments, tax increment financing, connector fees, impact requirements and employer wage-bill levies) can generate significant revenues for transport projects. Property-related charges are ultimately linked to land values and to the location of property. Since land is fixed in location and its identity registered, it makes an ideal local tax base and taxes on land value or charges related to location can be easily adjusted and thus are an effective planning tool.

Despite these favourable factors, certain value capture techniques in this category attracted strong criticism from the local survey respondents. These were the area-wide techniques of special benefit assessments, tax increment financing and employer wage-bill levies. In the case of business property in particular, a fine balance needs to be achieved if it is going to be taxed. If the assessment, charge or tax imposed is too severe, it may force a business to relocate elsewhere. This may have repercussions not only with regard to the revenue required to help pay for a transport facility, but also with regard to general economic activity in the area. This, in turn, will have a negative impact on revenue from the property tax base as a whole. It would seem vital, therefore, should an authority consider using special benefit assessments, tax increment financing or employer wage-bill levies that a high degree of understanding and acceptance be achieved with the local community affected before a level of taxation is fixed. This underlines the merit of establishing voluntary tax districts and using referenda to gauge local opinion.

A second area of criticism associated with the property-related charges group of techniques was their regressive nature and the question of equity. For example, non-resident owners of property within a tax

district may pass on the charges levied to the tenants or users of the property who may be deriving insufficient benefit from the transport facility to make the charge acceptable. Such a redistribution of the burden of property-related charges can also occur in the case where businesses charge more for their goods and services (thus transferring the burden to the consumer) or where they are able to claim tax concessions (thus transferring a portion of the burden to the State). Possibility of "leakages" occurring when applying techniques in this category should thus be evaluated. A uniform tax charge may also not be considered equitable if, for instance, wide variations in property values occur in a small area.

The survey respondents were also of the opinion that South Africans were already too heavily taxed and that any method which was enforced would not be well received. Central government acceptance of the recent recommendations of the Margo Commission Report, which investigated South Africa's tax structure, suggests that there may well be a concerted effort made to reduce the burden of direct taxation in favour of indirect taxing methods. Such a shi t may create the conditions under which the value capture techniques involving area-wide taxation on a local level become more acceptable, particularly if the present lack of funds for transport result in increasing congestion or deteriorating transport infrastructure.

In the case of the employer wage-bill levies, it was often remarked that the use of such a technique could hinder job creation - a critical problem the country is presently trying to address - and that such a levy would duplicate those already applied by the Regional Service Councils. The introduction of a further charge specifically for transport projects might thus prove unpopular unless the benefits of new or better transportation can be clearly shown.

Impact requirements and connector fees were more favourably perceived on

the grounds that they could be applied voluntarily, through negotiation or in accordance with current practice. However, there were certain reservations concerning both techniques in that impact techniques might inhibit development and connector fees could invite favouritism.

In summary, with the exception of the site specific techniques of impact requirements and connector fees, much uncertainty surrounds the use of property-related charges in South Africa as a form of value capture. The application of the techniques, especially those which are area-wide in nature, would need to be formalised, would likely require new legislation as well as special expertise by a local authority in order to calculate the charge. If the manner in which a charge is calculated is not clear, it is likely to be challenged. Nevertheless, the significant revenue returns these techniques can offer indicate they should not be discounted. Initially, connector fees and impact requirements should perhaps receive more detailed attention given the survey results from this study, but the other techniques in this category could be more favourably received if applied on a voluntary basis and thus should not be ignored.

8.4 Joint ventures

When reviewing evidence of the application of value capture techniques around the world, those in the joint venture category seem to be the most utilised. Joint venture projects have been accepted and implemented in North America, Western Europe and the Far East. It is also interesting to note that this category of techniques is at present also receiving most attention in South Africa. The investigations carried out by Transnet in this sphere have generated much interest and press coverage (e.g. Financial Mail, 1986 and Pretoria News, January and August 1986).

The acceptability of joint venture projects appears to lie in the widespread benefits which accrue to both the private and public sector bodies involved and the fact that from the outset co-operation between the

parties is encouraged. Whereas property-related charges can be imposed, in the case of joint ventures, points of conflict are the subject of more open negotiation and bargaining. Although this may lead to a more protracted implementation process, the chances of success for a project are enhanced. Moreover, it is often found that a by-product of using joint venture techniques is to increase transport patronage and viability. This is because these methods typically take advantage of the improved accessibility at transport nodes by concentrating development nearby.

The drawbacks likely to be associated with implementing joint venture techniques in South Africa revolve largely around any legislative changes which may have to be made to permit a project to take place and the need to obtain or train staff able to organise and maintain joint development programmes. This might also involve establishing administrative and negotiating procedures for top public officials to follow. The cost incurred in this process, however, should be relatively modest in comparison to the revenue achievable once the project is completed. Neverthless, a period of several years can still be expected to elapse between a public authority making initial joint venture expenditures and it receiving significant revenue returns.

Transnet has already shown that problems in this sphere in South Africa can be overcome. It has succeeded in obtaining amending legislation affecting the nature of its operations and has set up a separate section which has both the autonomy and the drive to further Transnet's objectives in the property and commercial fields.

Joint ventures were generally well liked by the survey respondents, although in the case of land banking and the sale or lease of developed properties, doubt was expressed about the role of the public sector in the real estate and property markets. It was generally felt that a land acquisition policy could deplete public sector funds and lead to the sterilisation of land and that property development should rather be left

in the hands of the private sector. Negotiated investments, cost sharing and donations, although generally favoured, also invoked concern about possible malpractices with regard to favouritism and a lack of impartiality in the granting of consent.

Joint development and the lease and sale of development rights were the most popular of all the value capture techniques and it appears very likely that projects utilising these techniques will proliferate in South Africa following the lead taken by Transnet. The expertise gained by local authorities in the joint implementation of town planning schemes and commercial projects with the private sector should also prove useful when applying joint venture value capture techniques to transport projects. Finally, it should be mentioned that the strong involvement of the private sector in many of these techniques is in line with the government policy of privatisation.

8.5 Merchandising approaches

Unlike many techniques in the previous two categories, those of merchandising approaches are well known in South Africa. From this perspective, therefore, returns from pursuing such techniques more vigorously are likely to be more immediate.

In many cases in South Africa, local authorities have not realised the commercial potential of their transport facilities. More often than not, retail developments seem to be tacked on to a transport facility rather than planned for and fully exploited at the design stage. There is a need, therefore, to incorporate such development along with the improvement of any transport facility. By following a more market orientated approach, much interest may be evoked in the private sector to establish outlets selling goods and services, particularly at transport termini and interchanges. The encouragement of merchandising techniques may also be particularly suited to the growth of both the informal and the small business sectors, facets of the South African economy which are becoming increasingly important.

Merchandising techniques were recognised by the survey respondents as the methods most commonly used in South Africa and were well received. After joint development and the lease or sale or development rights, these were envisaged as the value capture methods most likely to succeed given South Africa's present economic and political realities. For the most part, this reflects support for free market principles whereby value can be negotiated and agreed upon between the parties concerned.

CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS

9.1 Background

The concept of value capture as it applies to transportation has been investigated in this project report. The term value capture refers to the indirect funding of transport facilities through securing a portion of the value or benefits created in providing them which may accrue to people or bodies other than the transport facilities direct users.

The investigation was undertaken in order to achieve two main objectives:

- to identify what methods of value capture exist; and
- to establish what conditions are required which would favour the use of value capture techniques in South Africa.

Two avenues of research were followed in order to achieve these objectives. The first was a review of available literature on value capture techniques employed in the transportation field and their usage around the world. The second was a survey of professional people active in the transport field in the public and private sectors in South Africa regarding their views and knowledge of value capture. The survey attempted to establish which value capture techniques were favoured most by the respondents for use in South Africa, to what extent value capture methods have been utilised in the past and what transport projects in the future might be considered for employing value capture techniques.

Brief summaries of the research findings from the two parts of the investigation are given below before the main conclusions and recommendations from the study are presented. Areas identified from the investigation where future research on value capture in South Africa could be fruitfully pursued are found in the final section.

9.2 Research findings from the literature review

Fourteen methods of value capture were identified from the literature. Broadly speaking they fall into one of three categories - property-related charges, joint ventures and merchandising approaches. Property-related charges intend to secure a share of the benefits gained by owners or users of properties as a result of their location close to a transport facility. Joint venture techniques attempt to capatalise on the advantages gained through public and private sector co-operation on transportation projects. Merchandising approaches focus on the opportunities for sales presented at transport facilities.

Each of the techniques described in the three categories can be used on its own or in combination with other techniques. As the literature explained, the techniques all have particular advantages and disadvantages regarding their use, but ultimately it is most likely to be the type, size and circumstances surrounding the particular project under consideration as well as the prevailing institutional, political and economic climate which will dictate the outcome of any value capture exercise.

According to the available literature, usage of value capture techniques to help fund transportation projects has been most extensive in the United States. Examples of where all fourteen value capture methods have been employed can be found here. Joint ventures and merchandising approaches are the categories of techniques which have been most widely used in Canada, Western Europe and the Far East. This is also the case with South Africa although this country has not been particularly pro-active to date in this area. The income to be obtained through the use of value capture techniques varies depending on the size and nature of the transport project being considered, but the literature indicates that revenues can be generated which may total up to many millions of rands in monetary terms.

9.3 Research findings from the value capture survey

Enthusiasm for the concept of value capture was shown by the majority of respondents interviewed in the survey carried out for this study. It was admitted, however that the possible benefits of value capture have yet to be fully appreciated and exploited in the transportation field in South Africa. Public sector respondents were mostly concerned with questions of equity and fairness in terms of implementing value capture whilst the private sector respondents were more interested in opportunities for long term profit.

Despite the differences in emphasis of approach, a remarkable degree of consensus was shown between the survey respondents in terms of their attitudes towards each value capture technique. The most favoured techniques were joint development and the lease or sale of development rights from the joint ventures category and the sale or lease of advertising space and concessions from the merchandising approaches category. The least favoured value capture techniques were special benefit assessments, tax increment financing and employer wage-bill levies - all from the property-related charges category.

Past applications of value capture in the transport field in South Africa have occurred on an ad hoc basis. These have most frequently involved the merchandising pair of value capture techniques. However, little concerted effort has been made in the past by most public authorities to exploit value capture potential. Feedback obtained from the survey respondents suggest that public transport facilities at nodal interchanges are likely to be the best candidates in the near future for the use of value capture. This is basically because of the concentrations of people which gather at these points and the consequent commercial opportunities which are presented, on which private sector interests would be keen to capitalise.

9.4 Conclusions

A number of conclusions can be drawn from the work undertaken on value capture in this project report:

- Planning for public transport and land development in South Africa is often carried out in isolation. Any scheme to improve transport should thus be co-ordinated with land use planning and value capture can be used to good effect in this sphere.

- The involvement of the private sector in most value capture techniques is of major importance.

- If value capture techniques are to be accepted as valid, especially from the point of view of the private sector, it is important that additional wealth is seen to be created.

- The ability of any public body to utilise any of the value capture techniques is dependent not only on the organisational structure of the body, but also on the legislative basis of its existence and the personalities involved in implementation. Negotiating skills, drive and commitment are often attributes required by individuals involved in fulfilling value capture proposals.

- Public authorities should not see themselves only as providers of transportation services, but also as undertakings with the duty to seek profit in private sector activities as a means of reducing operating deficits and public subsidies. This is readily understood by taxpayers.

- Value capture is not a remedy to funding problems in the transport sector and no single value capture technique is likely to provide a means to offset all of a project's capital and operating costs. Returns from use of the techniques are likely to vary from very small amounts to significant returns. Application of a value capture policy, however, could contribute towards partially resolving the financing difficulties faced by the public sector in the provision of transport facilities.

- Value capture is applicable to all modes of transport but is best suited to conditions where there are large concentrations of people. Value capture techniques can be most readily applied at nodal points. Along a route, value can be dissipated but opportunities still exist to exploit nodes on a route or to encourage corridor development, especially along busy freeways and major roads and adjacent to well patronised rail routes.

- Evident suggests that success in implementing value capture techniques is most likely at sites where new transport facilities are proposed. The application of value capture to old facilities, which are considered paid for, may arouse opposition.

- The connector fees and impact requirements value capture techniques in the property-related charges category were the most favoured by the survey respondents in this investigation. The remaining techniques in the property-related charges group - tax increment financing, special benefit assessments and employer wage-bill levies - are likely to be successful only when convincing evidence can be produced to show that the transport facility will generate or has generated significant benefits for property-owners, tenants or employers.

- Joint venture projects look promising for South Africa judging by the reactions of the survey respondents in this study to the value capture techniques in this category. Overseas experience suggests they are able to generate large amounts of revenue as well as offering potential for increasing transport ...dership.

- In South Africa, the application of merchandising approaches can be utilised with virtually immediate effect. Past experience in this area can be capitalised upon.

- Results obtained in this investigation suggest public transport terminals and interchanges in South Africa, especially in inner city areas, are worthwhile starting points for exploiting value capture potential.

9.5 Recommendations

Understanding the mechanics of how value capture can be employed will be insufficient unless relevant parties help promote its use in the transport field. It is therefore recommended that:

- Government bodies at all levels presently responsible for the provision and funding of transport facilities as well as interested organisations from the private sector endeavour to become more familiar with the range of value capture techniques.

- Value capture possibilities be automatically considered prior to any approval or implementation of proposed transport projects.

- Structures be established on a local level which facilitate communication between the public and private sectors and which investigate and encourage the use of value capture in relation to transport proposals.

9.6 Research needs

The following research needs were identified during this investigation:

- To identify south African legislation which deters the implementation of value capture in the transportation field;

- To establish how existing legislation could be amended or enabling legislation introduced which would facilitate the use of value capture;

- To determine the range of financial returns which could be expected from the use of different value capture techniques by conducting individual project case studies.

- To investigate the extent to which it is necessary for value capture revenues to be dedicated to supporting the transport project which generates them; and

- To undertake similar work to validate the results obtained from this study.

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APPENDIX A:

VALUE CAPTURE QUESTIONNAIRE

VALUE CAPTURE QUESTIONNAIRE

The objectives of the questionnaire are:

a) To obtain feedback and discussion on the first part of the study - namely the literature review on value capture.

b) Based on the respondents' experience and judgement, to obtain reaction to the applicability in South Africa of the 14 value capture techniques identified in the literature review.

c) To identify legislation requiring revision in order to implement any of the value capture techniques.

d) To identify existing value capture applications in South Africa and the issues associated with them.

e) To produce a typology of potential value capture schemes in South Africa.

Please fill in your name and affiliation below:

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QUESTION ONE

i) Please give the three comments on the value capture literature review which you personally consider to be most significant.

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ii) Do you know of any variation or other value capture technique apart from those identified in the literature review? If so, please give details.

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QUESTION TWO

In this question, we would like to know what you feel about each technique in terms of its potential for practical implementation in South Africa. The definition of each technique is given and then you are asked to express your opinions regarding them.

1. Special benefit assessments

A fiscal measure whereby some or all of the costs associated with providing a transport facility are borne by owners of properties within a well defined area, the boundaries of which are drawn to include all properties benefiting from the project (area-wide).

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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2. Tax increment financing

A charge which is based on the expected appreciation of property values within the sphere of influence of a proposed transport project. The property value increment is used as a security to obtain funding for the project (area-wide).

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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3. Connector fees

Charges to owners or developers of buildings adjacent to a transportation facility specifically in return for the advantage of being physically connected to it (site-specific).

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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4. **Impact requirements**

Charges or other conditions imposed on new developers to mitigate or compensate for the impact of their projects on existing or planned transport facilities (site-specific).

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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5. Employer wage-bill levies

A tax levied on all wage-bills paid by employers within a defined area served by a transport facility (area-wide).

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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6. **Land banking**

The public acquisition and holding of land for planned future use.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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7. Leasing/selling development rights

The leasing/selling of rights to develop above, below or around a site used for transportation purposes.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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8. Leasing/selling developed properties

The public body itself develops the rights it holds and then leases or sells the property that has been erected. This could include leasing of the whole site on which the transport facility is situated for management by private enterprise.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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9. Joint development

Projects in which investment in transport facilities is closely linked to the development of private property, thus involving both the private and public sectors in informal and formal development partnerships.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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10. Negotiated investments

An agreement between a developer and a public body through which the former agrees either to make a needed public improvement or to contribute a sum towards an improvement in exchange for a concession which will benefit his development.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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11. Cost sharing (turnkey agreement)

The sharing of operating expenses or contributions to the construction costs of a transport facility by a private developer. No joint land development is involved but the benefits are derived from integration or interconnection between the transport facility and the private development. (A turnkey agreement involves the construction of a transport facility by private enterprise on behalf of a transport authority.)

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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12. Donations

The obtaining of donations (monetary or physical land/property) from the private sector in return for recognition or publicity.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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13. Leasing of advertising space

The sale of advertising rights in or around transport facilities.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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14. Concessions

The generation of revenues through the sale/lease of concessions for business purposes in or around transport facilities.

LIKE A LOT	LIKE SOME	INDIFFERENT	DISLIKE SOME	DISLIKE A LOT	DONT KNOW

(please tick the box you feel is most applicable)

If you chose one of the first five options, please give reasons for your choice.

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Do you foresee any problems with regard to legislation, or other snags, if this technique is implemented? If so please give details. With regard to any legislative problems, can you suggest who should be consulted further?

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APPENDIX B:

CATEGORISATION OF PROPOSED TRANSPORT SCHEMES WITH VALUE CAPTURE POTENTIAL

CATEGORISATION OF PROPOSED TRANSPORT SCHEMES WITH VALUE CAPTURE POTENTIAL

Proposed transport schemes identified by questionnaire respondents as having value capture potential were categorised according to the following criteria:

TRANSPORT FACILITY STATUS

Existing
Upgrade
New

TRANSPORT MODE INVOLVED

Rail - light; heavy
Road - car; bus; combi-taxi; other (specify)
Sea
Air

LOCATION

CBD
Suburban
Other (specify)

SCALE

Single site
Area wide

LAND OWNERSHIP

Public
Private
Multiple

PERCEIVED DOMINANT SURROUNDING LAND USE

Commercial - retail office
Residential
Industrial
Other (specify)

continued overleaf

INTENSITY OF SURROUNDING LAND USE (within walking distance)

Floor area ratio: < 0,2
Floor area ratio: 0,2-1
Floor area ratio: > 1

CONDITION OF SURROUNDING LAND USE

Good order (hard)
Bad order (soft)

INCOME GROUP SERVED BY TRANSPORT

Low
Medium
High

FREEWAY ACCESSIBILITY

< 1 km
> 1 km

PEDESTRIAN FLOW

< 10,000 per day
10,000-50,000 per day
> 50,000 per day

PROXIMITY TO OTHER COMMERCIAL OR TRANSPORT NODES

< 1 km
> 1 km

POTENTIAL DETERRENTS/OBSTACLES

Resistance from property owners
Losses to businesses elsewhere
Up-front costs to public authority
Resistance within public authority
Legislative changes required
Other:
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APPENDIX C:

RATING SCALE RESULTS OF ATTITUDES TOWARDS THE VALUE CAPTURE TECHNIQUES

RATING SCALE RESULTS OF ATTITUDES TOWARDS THE VALUE CAPTURE TECHNIQUES

ATTITUDES OF RESPONDENTS		LIKE A LOT				+	LIKE SOME				=	SUM OF FAVOURABLE RESPONSES			
VALUE CAPTURE TECHNIQUES		Respondents		TOTAL	% OF ALL RESPONSES		Respondents		TOTAL	% OF ALL RESPONSES		Respondents		TOTAL	% OF ALL RESPONSES
		Public Sector (Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)			Public Sector Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)			Public Sector (Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)	
PROPERTY RELATED CHARGES	Special Benefit Assessments	4	1	5	8%		10	4	14	23%		14	5	19	31%
	Tax Increment Financing	4	2	6	10%		11	3	14	23%		15	5	20	33%
	Connector Fees	20	4	24	39%		18	5	23	38%		38	9	47	77%
	Impact Requirements	15	1	16	26%		25	6	31	51%		40	7	47	77%
	Employer Wage Bill Levies	6	2	8	13%		8	2	10	16%		14	4	18	29%
JOINT VENTURES	Land Banking	17	2	19	31%		15	2	17	28%		32	4	36	59%
	Leasing/Selling Development Rights	31	6	37	61%		15	3	18	29%		46	9	55	90%
	Leasing/Selling Developed Property	17	2	19	31%		14	5	19	31%		31	7	38	62%
	Joint Development	30	8	38	62%		18	1	19	31%		48	9	57	93%
	Negotiated Investments	20	3	23	38%		21	6	27	44%		41	9	50	82%
	Cost Sharing	13	3	16	26%		21	5	26	43%		34	8	42	69%
	Donation	19	1	20	33%		14	3	17	28%		33	4	37	61%
MERCHANDISING	Leasing/Selling Advertising Space	29	6	35	57%		14	3	17	28%		43	9	52	85%
	Concessions	28	4	32	52%		12	4	16	26%		40	8	48	79%

ATTITUDES OF RESPONDENTS		INDIFFERENT				+	DON'T KNOW				=	SUM OF NON-COMMITAL RESPONSES			
VALUE CAPTURE TECHNIQUES		Respondents		TOTAL	% OF ALL RESPONSES		Respondents		TOTAL	% OF ALL RESPONSES		Respondents		TOTAL	% OF ALL RESPONSES
		Public Sector (Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)			Public Sector Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)			Public Sector (Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)	
PROPERTY RELATED CHARGES	Special Benefit Assessments	4	0	4	7%		2	0	2	3%		6	0	6	10%
	Tax Increment Financing	4	0	4	7%		2	0	2	3%		6	0	6	10%
	Connector Fees	5	0	5	8%		0	0	0	0%		5	0	5	8%
	Impact Requirements	3	0	3	5%		3	0	3	5%		6	0	6	10%
	Employer Wage Bill Levies	8	0	8	13%		1	0	1	2%		9	0	9	15%
JOINT VENTURES	Land Banking	3	1	4	7%		1	0	1	2%		4	1	5	8%
	Leasing/Selling Development Rights	1	0	1	2%		2	0	2	3%		3	0	3	5%
	Leasing/Selling Developed Property	9	1	10	16%		1	0	1	2%		10	1	11	18%
	Joint Development	2	0	2	3%		2	0	2	3%		4	0	4	7%
	Negotiated Investments	4	0	4	7%		1	0	1	2%		5	0	5	8%
	Cost Sharing	5	1	6	10%		12	0	12	20%		16	1	18	29%
	Donations	7	3	10	16%		3	0	3	5%		10	3	13	21%
MISCELLANEOUS	Leasing/Selling Advertising Rights	5	0	5	8%		1	0	1	2%		6	0	5	10%
	Concessions	3	1	4	7%		4	0	4	7%		7	1	8	13%

ATTITUDES OF RESPONDENTS		DISLIKE A LOT				+	DISLIKE SOME				=	SUM OF UNFAVOURABLE RESPONSES			
VALUE CAPTURE TECHNIQUES		Respondents		TOTAL	% OF ALL RESPONSES		Respondents		TOTAL	% OF ALL RESPONSES		Respondents		TOTAL	% OF ALL RESPONSES
		Public Sector (Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)			Public Sector (Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)			Public Sector (Total=52)	Private Sector + Transport Operators (Total=9)	(Total=61)	
PROPERTY RELATED CHARGES	Special Benefit Assessments	12	2	14	23%		20	2	22	36%		32	4	36	59%
	Tax Increment Financing	11	2	13	21%		20	2	22	36%		31	4	35	57%
	Connector Fees	4	0	4	7%		5	0	5	8%		9	0	9	15%
	Impact Requirements	3	0	3	5%		3	2	5	8%		6	2	8	13%
	Employer Wage Bill Levies	19	5	24	39%		10	0	10	16%		29	5	34	56%
JOINT VENTURES	Land Banking	6	2	8	13%		10	2	12	20%		16	4	20	33%
	Leasing/Selling Development Rights	1	0	1	2%		2	0	2	3%		3	0	3	5%
	Leasing/Selling Developed Property	6	0	6	10%		5	1	6	10%		11	1	12	20%
	Joint Development	0	0	0	0%		0	0	0	0%		0	0	0	0%
	Negotiated Investments	4	0	4	7%		2	0	2	3%		6	0	6	10%
	Cost Sharing	1	0	1	2%		0	0	0	0%		1	0	1	2%
	Donations	2	2	4	7%		5	2	7	11%		7	4	11	18%
MERCHANDISING	Leasing/Selling Advertising Rights	0	0	0	0%		3	0	3	5%		3	0	3	5%
	Concessions	1	0	1	2%		4	0	4	7%		5	0	5	8%

APPENDIX D:

PROBLEMS ASSOCIATED WITH THE LEASING OF ADVERTISING SPACE ON STREET SIGNS IN PRETORIA

(Source: Pretoria News, 25 April, 1989)

THE PRETORIA NEWS Tuesday April 25 1989

Some need map to get around

New signs leave drivers in the dark

VALERIE BOJÉ, Staff Reporter

NEW illuminated street name boards are up now, but for many Pretoria residents and visitors to the capital they are not proving too illuminating.

Boards bearing details of their sponsors, often including a street address, have led to confusion and complaints, not only because of the advertisements but because of incorrect naming and the choice of advertisers.

At the busy intersection of Lynnwood Road and Duncan Street, a new street name board announces "Lynnwood Street", and crossing it "Duncan Road". But immediately above the name Duncan Road is "Burnett Street" on an advertisement for the Hatfield Plaza.

Businessmen in the shopping centre at the intersection are angry because the street is in fact a "Road", the name Burnett introduced on the board makes the sign confusing and because a business centre six blocks away and in another suburb is advertised, rather than their local facilities.

In Beatrix Street near the Kingsley Centre a sign advertises a business in Soutter Street, at least 3 km away.

Where Charles Street and Brooklyn Road meet, a sign advertises a Club Avenue restaurant — and the "Club Avenue" is in a bigger type than the Brooklyn Road sign, say residents.

Motorists not familiar with the name change in Charles Street at Magnolia Dell now have to help them a street sign indicating Charles Street/Walker Street and University Road, but also a fourth name — Jorissen Street, which cannot be reached directly from the intersection.

In the city centre the confusion continues with a new street name board outside the Reserve Bank stating that this is the corner of Prinsloo and Church Streets, but directly above the Church Street (Kerkstraat on the reverse side) sign is an arrow indicating Van der Walt Street.

After much debate the city council decided to go ahead with the new advertising-sponsored street signs in Pretoria's business areas and on busy street intersections in the suburbs.

A council spokesman said the public got, at no charge, a street sign which was bold and easy to read, and the city council received a rental from the advertiser, too.

"We check that the advertisement will not cause offence and require that a specific, standardised type size and style be used for the street names," the spokesman said.

"A different type is used on the advertising panel and there should be no cause for confusion."



Pictures: CHARLES HYMAN

Signs of the times: advertising boards illuminate Pretoria's street corners but for Ria Fourie a map was necessary to understand the sign at the Lynnwood Road-/Duncan Street corner.



Which way: Church Street? Van der Walt Street? This sign outside the Reserve Bank could confuse visitors to the city.



Brooklyn or Club: confusion is caused because the size of type used on the advertising panel is larger than that on the street name.

APPENDIX E:

CHARACTERISTICS OF PROPOSED TRANSPORT PROJECTS CONSIDERED TO HAVE VALUE CAPTURE POTENTIAL

A) BUS AND COMBI-TAXI TERMINI (12 Projects)
B) NEW RAIL BASED TRANSPORT SCHEMES (3 Projects)
C) TRANSPORT SCHEMES AT STATIONS ON TRANSNET OWNED LAND (13 Projects)
D) ALL PROJECTS (Total of 28)

CHARACTERISTICS OF PROPOSED TRANSPORT PROJECTS CONSIDERED TO HAVE VALUE CAPTURE POTENTIAL
A) BUS AND COMBI-TAXI TERMINI (12 Projects)

VARIABLE TYPE	VARIABLE CHARACTERISTIC	INCIDENCE OF VARIABLE CHARACTERISTIC
1) Transport Facility Status	a) New b) Upgrade	5 7
2) Transport Mode Involved	a) Rail/car/bus/combi-taxi b) Rail/bus/combi-taxi c) Car/bus/combi-taxi d) Bus/combi-taxi	4 1 1 6
3) Location	a) CBD b) Suburban	6 6
4) Scale	a) Single site	12
5) Land Ownership	a) Public b) Private c) Multiple	6 1 5
6) Perceived Dominant Surrounding Land-Use	a) Commercial retail and office/industrial b) Commercial retail/industrial c) Commercial retail/residential d) Commercial retail and office e) Commercial retail f) Industrial	1 2 5 1 2 1
7) Intensity of Surrounding Land-Use	a) Floor area ratio: 0,2-1 b) Floor area ratio: > 1	7 5
8) Condition of Surrounding Land-Use	a) Good order b) Bad order c) Mixed order	3 6 3
9) Income Group Served by Transport	a) Low b) Low/Medium c) Medium d) Low/Medium/High	4 4 1 3
10) Freeway Accessibility	a) >1km b) <1km	9 3
11) Pedestrian Flow	a) < 10,000 per day b) 10-50,000 per day	[illegible] [illegible]
12) Proximity to Other Commercial or Transport Nodes	a) <1km b) >1km	10 2
13) Potential Deterrents/Obstacles	a) Resistance from property owners b) Losses to business elsewhere c) Resistance within public authority d) Up front costs to public authority e) Legislative changes required	5 3 6 8 1

CHARACTERISTICS OF PROPOSED TRANSPORT PROJECTS CONSIDERED TO HAVE VALUE CAPTURE POTENTIAL
B) NEW RAIL BASED TRANSPORT SCHEMES (3 Projects)

VARIABLE TYPE	VARIABLE CHARACTERISTIC	INCIDENCE OF VARIABLE CHARACTERISTIC
1) Transport Facility Status	a) Existing/Upgrade/New b) New	1 2
2) Transport Mode Involved	a) Rail/light rail b) Light rail	1 2
3) Location	a) CBD/Suburban	3
4) Scale	a) Area wide	3
5) Land Ownership	a) Multiple	3
6) Perceived Dominant Surrounding Land-Use	a) Commercial retail and office/ residential/industrial	3
7) Intensity of Surrounding Land-Use	a) Floor area ratio: < 0,2-0,2-1 - > 1 b) Floor area ratio: 0,2-1 - > 1	2 1
8) Condition of Surrounding Land-Use	a) Mixed	3
9) Income Group Served by Transport	a) Low/Medium	3
10) Freeway Accessibility	a) > 1km / < 1km	3
11) Pedestrian Flow	a) > 50,000 per day (for system)	3
12) Proximity to Other Commercial or Transport Nodes	a) < 1km / > 1km	3
13) Potential Deterrents/Obstacles	a) Resistance from property owners b) Losses to business elsewhere c) Up front costs to public authority d) Resistance within public authority e) Legislative changes required f) Resistance from transport operators	3 2 3 2 2 1

CHARACTERISTICS OF PROPOSED TRANSPORT PROJECTS CONSIDERED TO HAVE VALUE CAPTURE POTENTIAL
C) TRANSPORT SCHEMES AT STATIONS ON TRANSNET OWNED LAND (13 Projects)

VARIABLE TYPE	VARIABLE CHARACTERISTIC	INCIDENCE OF VARIABLE CHARACTERISTIC
1) Transport Facility Status	a) Existing	2
	b) Upgrade	8
	c) Upgrade/New	3
2) Transport Mode Involved	a) Rail/light rail/car/bus/combi-taxi	1
	b) Rail/light rail/car/combi-taxi	1
	c) Rail/light rail/car	1
	d) Rail/car/bus/combi-taxi	3
	e) Rail/bus/combi-taxi	6
	f) Rail/combi-taxi	1
3) Location	a) CBD	9
	b) Suburban	4
4) Scale	a) Single site	10
	b) Area wide	3
5) Land Ownership	a) Public	12
	b) Multiple	1
6) Perceived Dominant Surrounding Land-Use	a) Commercial retail and office/ residential	1
	b) Commercial retail/residential/ industrial	1
	c) Commercial retail/industrial	2
	d) Commercial retail and office	4
	e) Commercial retail	2
	f) Commercial office/industrial	1
	g) Residential/industrial	1
	h) Residential	1
7) Intensity of Surrounding Land-Use	a) Floor area ratio: < 0,2	1
	b) Floor area ratio: 0,2-1	10
	c) Floor area ratio: > 1	2
8) Condition of Surrounding Land-Use	a) Good order	4
	b) Bad order	4
	c) Mixed order	5
9) Income Group Served by Transport	a) Low	7
	b) Low/Medium	5
	c) Low/Medium/High	1
10) Freeway Accessibility	a) >1km	10
	b) <1km	3
11) Pedestrian Flow	a) < 10,000 per day	2
	b) 10-50,000 per day	9
	c) > 50,000 per day	2
12) Proximity to Other Commerical or Transport Nodes	a) <1km	10
	b) >1km	3
13) Potential Deterrents/Obstacles	a) Resistance from property owners	2
	b) Resistance within public authority	3
	c) Up front costs to public authority	3
	d) Political difficulties	3

CHARACTERISTICS OF PROPOSED TRANSPORT PROJECTS CONSIDERED TO HAVE VALUE CAPTURE POTENTIAL
D) ALL PROJECTS (Total of 28)

VARIABLE TYPE	VARIABLE CHARACTERISTIC	INCIDENCE OF VARIABLE CHARACTERISTIC
1) Transport Facility Status	a) Existing	2
	b) Existing/Upgrade/New	1
	c) Upgrade	15
	d) Upgrade/New	3
	e) New	7
2) Transport Mode Involved	a) Rail/light rail/car/bus/combi-taxi	1
	b) Rail/light rail/car/combi-taxi	1
	c) Rail/car/bus/combi-taxi	7
	d) Rail/bus/combi-taxi	7
	e) Rail/light rail/car	1
	f) Rail/light rail	1
	g) Rail/combi-taxi	1
	h) Light rail	2
	i) Car/bus/combi-taxi	1
	j) Bus/combi-taxi	6
3) Location	a) CBD	15
	b) CBD/Suburban	3
	c) Suburban	10
4) Scale	a) Single site	22
	b) Area wide	6
5) Land Ownership	a) Public	18
	b) Private	1
	c) Multiple	9
6) Perceived Dominant Surrounding Land-Use	a) Commercial retail and office/ residential/industrial	3
	b) Commercial retail and office/ industrial	1
	c) Commercial retail and office residential	1
	d) Commercial retail/residential/ industrial	1
	e) Commercial retail/residential	5
	f) Commercial retail/industrial	4
	g) Commercial retail and office	5
	h) Commercial retail	4
	i) Commercial office/industrial	1
	j) Residential/industrial	1
	k) Residential	1
	l) Industrial	1

continued overleaf

VARIABLE TYPE	VARIABLE CHARACTERISTIC	INCIDENCE OF VARIABLE CHARACTERISTIC
7) Intensity of Surrounding Land-Use	a) Floor area ratio: < 0,2	1
	b) Floor area ratio: < 0,2-0,2-1 - > 1	2
	c) Floor area ratio: 0,2-1	17
	d) Floor area ratio: 0,2-1 - > 1	1
	e) Floor area ratio: > 1	7
8) Condition of Surrounding Land-Use	a) Good order	7
	b) Bad order	10
	c) Mixed order	11
9) Income Group Served by Transport	a) Low	11
	b) Low/Medium	12
	c) Low/Medium/High	4
	d) Medium	1
10) Freeway Accessibility	a) >1km	19
	b) <1km	6
	c) > 1km/< 1km	3
11) Pedestrian Flow	a) < 10,000 per day	5
	b) 10-50,000 per day	18
	c) > 50,000 per day	5
12) Proximity to Other Commercial or Transport Nodes	a) <1km	20
	b) <1km/>1km	3
	c) > 1km	5
13) Potential Deterrents/Obstacles	a) Resistance from property owners	10
	b) Losses to business elsewhere	5
	c) Up front costs to public authority	14
	d) Resistance within public authority	11
	e) Legislative changes required	2
	f) Political difficulties	3
	g) Resistance from transport operators	1

Author: Freeman Mark Julian.
Name of thesis: An Investigation Into Value Capture And Favourable Conditions For Its Use In Helping To Finance Transportation Projects In South Africa.

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