PROMOTING THE GROWTH OF MICRO AND SMALL ENTERPRISES THROUGH BUSINESS LINKAGES IN THE NORTHERN PROVINCE

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FDK Anim and CL Machethe
University of the North
Department of Agricultural Economics
Sovenga, South Africa

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FOREWORD

Professor Tom McEwan
Professor Don Mead
University of Natal
Pietermaritzburg
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The six studies on Small, Medium and Micro Enterprise (SMME) Development: **1.** Enhancing Economic Development by Fostering Business Linkages between Pharmaceutical Companies and the Traditional Medicines Sector by E.C. Bbenkele, **2.** Promoting the Growth of Micro and Micro and Small Enterprises through Business Linkages in the Northern Province by C.L. Machete and F.D.K. Anim, **3.** Business Linkages Involving SMMEs with Umgeni Water and Hulett Aluminium in KwaZulu-Natal by T. McEwan, D.C. Mead and N.M. Ndlovu, **4.** Linkage Promotion in South Africa: Insights from Research Conducted in Durban and Richards Bay: An Exploratory Study by F.O. Skae, **5.** The Role of Business Linkages in Restructuring the Footwear Industry in the Greater Pietermaritzburg Metropolitan Area by B. Strydom, and **6.** Small Enterprise Growth through Business Linkages in South Africa by D.C. Mead were carried out between September 1997 and March 1998. Five of the studies were carried out in KwaZulu-Natal Province under an agreement between the University of Natal, Pietermaritzburg, the United States Agency for International Development, and Harvard University, through a sub-agreement with Michigan State University. The final study was arranged between the same American principals and the University of the North, Sovenga, Northern Province, in South Africa.

The choice of where to carry out these studies on SMME developments was not entirely accidental. The Northern Province, for example, was found to be the poorest of South Africa's nine provinces in the 1996 census with an average income of R17,900 (approximately US$3,000) and 46 percent of its 4.9 million population unemployed, which is the second highest after Eastern Cape (49 percent) in South Africa.

Third in terms of high unemployment (with 39 percent), was KwaZulu-Natal Province, which has the largest population (8.4 million) of South Africa's 40.8 million population. The average income is barely R24,3000 (approximately US$4,200), despite the large contribution made by the Durban Greater Metropolitan Area to the South African and Provincial economies. Because the principal source of investment in the past has come from South Africa's white population, large disparities still exist which distort average income calculations, according to the 1996 census. Among unemployed Africans, for example, the average income for women is R12,000 and R16,000 for men. This compares with an annual income for men of R30,000 and R20,000 for women across the whole working population in South Africa.

There are also daunting development backlogs in both provinces. For example, nearly one million people in KwaZulu-Natal have received no formal education, and a further 700,000 are classified as "functionally illiterate". A further half a million households live in traditional housing with no direct access to electricity or potable water supplies. (The Sunday Times Report, 25 October 1998,

p.5). The Income Distribution for the province (Gini Coefficient) is 0.7 which indicates the same skewness as for the rest of South Africa, compared with an ideal coefficient zero. However, the Human Development Index for the province, which measures life expectancy, income and literacy rate, etc., was 0.59 when data was last collected in 1991, compared with 0.69 for the rest of South Africa and an ideal index of 1. (Source: Industrial Development Report on the Pietermaritzburg Spacial Development Initiative, 1997).

Northern Province is the least urbanized province in South Africa and 90 percent of its population still live in traditional housing or shacks in the rural areas on the outskirts of towns. It also has the highest proportion of women (54 percent of the population) compared with 52 percent across South Africa. The highest population of uneducated or "functionally illiterate" people live in this province, and over 60 percent of households still use wood for cooking and heating purposes.

As if high unemployment, illiteracy and restricted rural development are not burdens enough for any province to have to carry in the New South Africa, KwaZulu-Natal and Northern Province have also still to come to terms with the added problems of HIV/AIDS and, in the case of KwaZulu-Natal, politically-motivated crime and violence.

Accurate data on HIV/AIDS infection is hard to come by, notwithstanding the commendable efforts of specialists and other experts in the field, because the full extent of the problem only attracted full media attention in South Africa earlier this year when the Deputy-President, Thabo Mbeki, made an eloquent plea for more sympathetic understanding of those infected, and also called for rapid action plans of contain the spread of this pandemic. If forecasts are accepted, they make chilling reading as 53 percent of the beds in the University of Natal's Medical School hospital are already occupied by HIV/AIDS patients. Over one in four people in KwaZulu-Natal is probably HIV/AIDS positive and, nationally, South Africa is already planning to cope with an estimated two million orphans, or abandoned children, as well as one-third of all women attending ante-natal clinic being infected with HIV/AIDS, over the next 10-15 years.

It would be out of place to comment much further here about a subject of which we possess no expertise. Two things which are relevant to the SMME studies need to be stated. Firstly, a major consequence of South Africa's economic and political history up to 1994 was the gradual decline of the "Lobola" system, whereby families were started before the African version of Western "marriage" took place. Women remained in rural areas with their families to raise new off-spring, whereas the men left to find work in urban/industrial areas so that they could raise the money to pay off the "Lobola" dowry to the woman's parents and support their families. Since then, the 1996 Census reveals that the migration of men to rural areas has become a permanent feature of the South African economy. For example, 63 percent of African males under the age of 20 live in rural areas but this figure declines to only 40 percent by the age of 30. This trend begins to reverse itself after the age of 55, with almost 70 percent of males returning to their rural homelands by the age of 70 years.

Secondly, in view of this cycle of male migration, the prominence given to SMME development in the South African economy is easily justifiable since, although African women are also becoming

more urbanized, this occurs at the lower rate. For example, 63 percent of African women are born in rural areas yet almost three-quarters remain at home throughout the most economically active period of their working lives. Raising the living standards of African women and their children through SMME development is an obvious way of combating HIV/AIDS in rural and urban communities since less migration and greater discrimination against African women, in terms of equal pay and job opportunities, means that over 50 percent are unemployed, compared with a national average of less than 30 percent. Starting up SMMEs is even less common and, in the six studies performed we experienced great difficulty in finding more than a few SMMEs in KwaZulu-Natal which were owned and run by women.

Politically-motivated crime and violence have also retarded economic development in South Africa and nowhere more so than in KwaZulu-Natal. Recent statistics indicate that more people have been killed in KwaZulu-Natal since 1994 than in the whole of the former Yugoslavia (SABC News Report, 3 November, 1998). Again, the reasons are far too complicated for detailed discussion in this report. However, that the Zulu nation is the largest ethnic group in South Africa, yet has failed to secure what might be regarded as an equitable share of political and economic power, because of divided support for the two largest political parties, provides part of the explanation why political-motivated crime and violence has brought economic development (eg. tourism) almost to a halt in some regions of KwaZulu-Natal. It also reinforces the argument for learning more about SMME development in the expectation that, if ever political differences can be reconciled, then the expansion of appropriate economic activity among African people in particular should proceed far more rapidly in KwaZulu-Natal.

This research project attempts to explore the business interests of two very different sets of South Africans. On the one hand, there are the senior and middle managers employed by two well-known, undoubtedly successful organizations in Pietermaritzburg. Mostly, but not solely white, these represent the buyers and include well-informed managers, trained in modern business practices, who see their primary functions as raising productivity and expanding their markets in ways which will eventually benefit all of the expanding population of the Greater Pietermaritzburg Metropolitan Area. As part of how they go about achieving these aims, the managers of both companies are committed to purchasing goods and services from Small, Medium and Micro Enterprises (SMMEs) amongst the historically disadvantaged Zulu Community in particular.

On the other hand, the “sellers” in the list of companies provided by “buyers” included a mixture of successful white-owned SMMEs alongside a wider range, in terms of financial performance, of entrepreneurs from the Zulu Community. In passing, it should be noted that Indian SMMEs were deliberately excluded because these were already being studied in a separate survey. The Zulu entrepreneurs could be divided into a small portion of successful medium-sized enterprises, as defined by the South African Department of Trade and Industry (DTI), which are clearly well-run and trade regularly with the largest companies in KwaZulu-Natal without need of any assistance from third parties, including government agencies.

Outside of this small apex of successful, largely self-made, black enterprises lies a large phalanx of Zulu-run SMMEs which are owned and operated by up to three, but mostly one, individual. Of the

original list of over 1,200 SMMEs provided by both corporates, more than 80 were invited to participate in view of the limited time available. Of these, over one-third finally took part in the survey.

The research questions we sought to answer were based on the premise that around the world, modern, forward-looking businesses interact with other enterprises through a complex web of commercial relationships. This is because many efficient mangers find it cost-effective not to try to do everything themselves "in-house". Instead, they purchase some of the goods and services they require for their production activities from other enterprises that specialize in particular aspects of the production process. These purchases and sales, which we refer to as business linkages, are a pervasive characteristic of efficient and productive economies.

South Africa is expanding the scope of these commercial transactions. Many large corporations are moving toward a lower degree of vertical integration; many are reaching out more beyond their traditional corporate patterns, sometimes to smaller suppliers. While there is a long tradition of support for small business in South Africa, much of the energy in the past has been devoted to the promotion of small, white-owned businesses. In recent years, there has been considerable discussion of the way in which that process can be opened up to newly-established enterprises that had been excluded under the old Apartheid regime.

A research project at the University of Natal and the University of the North, in cooperation with Michigan State University, funded by the US Agency for International Development, set to examine the nature of these business linkages, as well as the extent to which they currently provide opportunities for improvement for historically disadvantaged small enterprises, and the kinds of steps that can be taken to expand such opportunities in the future.

In the first of these studies**,** Professor Bbenkele set out to identify existing and potential business linkages between the traditional medicines sector and registered pharmaceutical companies in South Africa. He also investigated how these business transactions could be developed to create an estimated 1,000 jobs per year in Durban, plus a smaller number of job opportunities in Pietermaritzburg.

His findings indicate that it cannot be assumed that expansion of the traditional medicine sector is straight-forward or a foregone conclusion, as different types of business linkages in an increasingly complex chain or network first need to be explored. These linkages involve gatherers, traditional healers, local authorities, National Parks Boards, pharmaceutical companies, the South African Medical Control Council and Ministry of Health, as well as health authorities overseas. All would need to be consulted further before the potential growth in job creation can be achieved. Job creation of this magnitude is of importance not just because it would help to reduce the high unemployment in the two Metropolitan Areas, but also because many of these envisaged new jobs would be taken up by rural women as gatherers of traditional medicine ingredients in the raw material form.

In the second study, Charles Machete and Francis Anim studied business linkages between small

suppliers, in mainly black-owned businesses, and large buyers, in mainly white-owned businesses, and attempted to evaluate their contributions to SMME development in The Northern Province by seeking answers to the following questions: What are the distinguishing characteristics of small suppliers with, and without, business linkages? What are the determinants of business linkages? How can knowledge of these factors promote and strengthen new and existing business linkages? What are the constraints on the establishment of business linkages. Finally, what measures need to be taken to promote successful business linkages in The Northern Province?

In the third study, two interview teams led by professors McEwan and Mead identified existing and potential business linkages by carrying out a detailed study of 29 SMMEs which supply two leading corporates in Pietermaritzburg. These corporates were selected because of their public commitment to assisting historically disadvantaged enterprises, which predates the creation of the "New South Africa" in 1994, but also because the policy of both corporates is directly influenced by national and regional government agencies which seek to act in a beneficial or interventionist manner.

In-depth interviews were carried out with entrepreneurs and managers using a standard survey instrument, which preceded a comprehensive study of the values, objectives, strategic behaviors and the problems encountered by both suppliers and buyers, most of whom were situated in the Natal Midlands along the Durban-Pietermaritzburg corridor of the proposed Eastern Seaboard Spatial Development Initiative project. This study is far from exhaustive an much more needs to be known about other contributing factors affecting the vital task of enabling larger numbers of historically disadvantaged people to participate in business activity in the Natal Midland and play a fuller part in expanding the South African economy.

In the fourth study, Owen Skae studied the existing and potential business linkages of 32 SMME suppliers located in the Durban and Richards Bay Metropolitan Areas and their business linkages with 15 other companies, which are large buyers in the same Eastern Seaboard "corridor".

These suppliers may be regarded as representative of the wide range of SMME activity in both coastal industrial centres, since no fewer than 26 different manufacturing and service sector enterprises have been included in this survey. In-depth interviews were carried out with entrepreneurs and managers using the same standard survey instrument used in the previously-mentioned study, which resulted in a comprehensive analysis of the motivations, aims, strategies, outcomes, and difficulties experienced by both suppliers and buyers. More still needs to be known about how to enable increasing number of historically disadvantaged people to participate in business activity in this region of KwaZulu-Natal, thereby helping to expand the South African economy, but a valuable start has been made in this research project.

In the fifth study, Barry Strydom carried out a detailed analysis of existing and potential business linkages of 32 SMME's and larger companies which make up the declining footwear industry, mostly based in the greater Pietermaritzburg Metropolitan Area. These enterprises either purchase from or supply other companies both in and outside South Africa.

The reasons for the steady decline of the South African footwear industry are complex and probably

came to public attention for the fist time as a result of the lifting of tariffs following South Africa's readmission to the Global Economy in 1994. However, international isolation, the failure to introduce new technology in the past, inadequate training, low productivity, coupled with a genuine concern by the industry to avoid shedding manual jobs carried out by historically disadvantaged people, have all contributed to this loss of market share. More than 4,000 jobs were lost in the Greater Pietermaritzburg Metropolitan Area alone, between 1994-1998, and the situation is likely to deteriorate further as the industry braces itself for the full impact of further cuts in tariffs under the GATT Agreement which are due in 1999. However, many local SMME's and larger companies have shown themselves to be both adaptive and resilient in the face of unavoidable change, and this study succeeds in identifying key forward, backward and horizontal linkages which will have to be evaluated and probably implemented during the next 18 month, if the South African footwear industry is to survive intact into the 21st century.

Special thanks are due to Professor Donald C. Mead, Michigan State University, for helping negotiate these last-minute arrangements; and also for sharing some of the interview load undertaken by Barry Strydom, with further assistance by Professor Tom McEwan. It should be noted that the six papers are a part of an ongoing study, and some analysis has been excluded because it forms part of a Masters dissertation, which has still to be assessed. Since completing this study, however, members of USAID/EAGER team have been invited to carry out an evaluation of the government-backed Workplace Challenge initiative, which will explore ways of improving collective bargaining and introducing new technology into the local footwear industry. A further report on this research is planned for 1999.

In the final study, Professor Mead undertook the task of drawing the disparate research findings together into a coherent whole which will hopefully be useful to all stakeholders with an interest in the successful expansion of the SMME sector in South Africa. Attention should be drawn to the following synopsis of his findings which would seem to have a wider range of application in South Africa outside the provinces of KwaZulu-Natal and the Northern Province.

The research shows that buyers establish business linkages with three principal motivations in mind; namely, either because it is good business to do so; or out of a sense of community service, or because they wish to shift to a production pattern that enables them to escape payment of taxes, or evade the impact of rules and regulations, usually imposed by Government agencies. While the last of these motivations was clearly true in many cases, a number of other suppliers paid all relevant taxes and fees while employing workers who were members of unions and were covered by the standard labor benefits. These enterprises were generally the most efficient of the small suppliers, and the ones that were growing the most rapidly.

Some linkage contracts were much more helpful than others to historically disadvantaged small suppliers. The key determining factors of these arrangements were the characteristics of the contract (size, period covered, stability), and the degree to which the contract provided a channel for the supplier to learn how to do things better. Where the motivation for the contract was based on community service, these factors were much less likely to be present. In such cases, linkages generally resulted in frustrations for the buyer and little development impact for the supplier. In

contrast, where the motivation was commercial, the buyer had an incentive to serve as mentor to suppliers, for example by helping them improve their efficiency and productivity. Unfortunately, our interviews uncovered relatively few cases where the buyers played a significant role in mentoring their suppliers in either KwaZulu-Nathal or the Northern Province.

Since there is considerable interest on the part of both buyers and suppliers in expanding the involvement of historically disadvantaged small enterprises in business linkages, with several initiatives currently under way and others just staring, it is clear form our research that to be most effective, institutional support for the promotion of business linkages needs to be based on a number of clear principles:

Firstly, the driving force must be economic, not a paternalistic goal of community service. All linkage promotion activities must have an orientation that starts from markets and works back to suppliers, thereby helping them take advantage of these identified market opportunities.

Secondly, the institutional structure must be cost-effective, taking account of the limited resources available to support this type of activity. Specialization and focus among promotion agencies can be important in helping achieve this objective. Buyer mentoring , a key factor in many successful linkages, also contributes in important ways to the goal of cost-effectiveness.

Thirdly, there are three specific building blocks which support the promotion of linkages; namely, information, capacity-building, and capital. While each may be needed to bring a particular contract to successful fruition, in general, one organization should not attempt to supply all three because the risk of inefficiency increases.

Fourthly, issues of imbalance between buyers and sellers are important and must be addressed in establishing equitable policies or programmes for linkage promotion, and some of these approaches are discussed in the papers.

Fifthly, much has already been achieved in the expansion of business linkages involving historically disadvantaged small enterprises in South Africa, thanks to the efforts of Ntsike Enterprise Promotion, the Centre for Small Business Promotion and the National Small Business Council. The interviews we carried out make clear that there is a strong will on all sides to do more. With stronger institutional support, there is much more that can be done.

It would be impossible to express thanks to the large number of people who either assisted or participated in this project, but special mention must be made of the contribution of Professor David Maughan Brown, Senior Deputy Vice Chancellor at the University of Natal, who supported the research programme from the start and made it much easier to implement. Mr. Hollie Clarkson and Mrs. Cheryl Pratt from the University Finance Department have to be thanked for their professional monitoring of expenditure which ensured that compliance with rigorous US funding regulations was achieved.

Charmagne Howe, Kathy Acutt, Joy Gauche and Debbie Bowen, from the Department of Business

Administration, must also be thanked for their administrative support, without which many interviews would never have been arranged and the two large workshops in Pietermaritzburg would certainly never have run so smoothly. Special mention must also be made of Nhlanhla Moses Ndlovu, who proved to be an outstanding research assistant, and provided invaluable support in ”breaking the ice” during interviews with Zulu-speaking respondent, and who stored and analyzed data in an accurate way which augurs well for his own future research into SMME developments. We must also express our gratitude to Professor Anthony Lumby, Dean of the Faculty of Economics and Management at the University of Natal Durban Campus, for supporting Owen Skae’s study of emerging SMME activity in the Durban-Richards Bay region of KwaZulu-Natal province; and additional thanks are due to Mel Clarke , KwaZulu-Natal Regional Economic Forum, for “opening doors” which resulted in us gaining quick access to the key players in the local footwear industry. Finally, the patience, helpful advice and insights of Alwyn Pollock, Commercial Manager at Umgeni Water, and his assistant Jill McEwen and Dennis Ndlovu, were much appreciated, along with those of Mervyn Webb, Senior Purchasing Manager at Hulett Aluminium, as was the interest shown by Andrew Layman, Director of the Pietermaritzburg Chamber of Commerce and Industry, and the coverage provided by Johan Beukes, Business Editor of the Natal Witness, South Africa’s oldest daily newspaper.

Special thanks must also be expressed to the various English- and Zulu-speaking entrepreneurs who took part in the various surveys. They ranged from the obviously successful to those who run their fragile businesses on tightly-stretched shoe stings in back gardens, on in houses converted into make-shift workshops, with small children at play in the room next door. Here, in the townships or on run-down industrial estates, we interviewed mostly male respondents, many of whom possessed little knowledge of basic business skills and practices, which are essential in order to survive.

Their dire situation raises fundamental questions about the nature of the “Transformation” process in the New South African civic society. Simply put, in our view, if whatever has been inherited by the more fortunate, as either wealth, health, education, or even as better career opportunities, was at the expense of the near-defeated in society, then natural justice insists that better ways must be found of helping these brave, anxious, inadequately-trained “survivalist” entrepreneurs to place their tiny businesses on a sounder economic footing in the future. Otherwise, for them, “Transformation” and ”Redistribution” will become two long, meaningless words in South African newspapers and dictionaries, which some are unable ro read and most are unable to purchase.

Ever optimistic, some off these respondents asked if they could see our final reports, and it is with this commitment in mind that most of the following studies have been compiled with the minimum number of tables , diagrams and calculations which, for reasons outside their control, most said they might not be able to understand, We hope that better ways of assisting these people to run their small enterprises more effectively occur as a result of the publication of our reports which indicate that their business aims are simple enough and, not surprisingly, very similar. They wish to raise their living standards more rapidly by dint of their own efforts, enjoy better health, educate their children beyond the basic standards they achieved, and take their rightful place in a civic society of which they and all other South Africans can feel justifiably proud.

ABSTRACT

The South African (SA) government puts special emphasis on the promotion of Micro and Small Enterprises (MSEs), particularly in the Northern Province, one of the poorest in SA, suffering some of the highest rates of unemployment. MSEs play an important role in poverty alleviation through development of employment and income generation in the non-farm sector.

This paper examines business linkages in the Northern Province of SA. Areas of focus include the distinguishing characteristics of small supplier businesses and the determinants of business linkages, as well as the constraints to establishing linkages and measures to be undertaken to remove these constraints. Establishing and strengthening linkages between small suppliers and large buyers is one way to promote the growth of MSEs. Large buyers can promote small suppliers by providing "buyer mentoring".

The significance of socio-economic and other differences between buyers and sellers with and without business linkages was tested with a *t*-test. The insight into determining factors of business linkages and the factors limiting or preventing the growth of establishing business linkages were analyzed.

The research found that the linkages between small suppliers and large buyers are few, although interviews revealed that businesses with linkages tend to be more successful. Constraints to linkages identified included limited application of new technologies by small suppliers, lack of incentives promoting business linkages from the government, and poor quality and high prices of products supplied by small suppliers. The paper makes several recommendations to address these constraints including focusing on increasing the amount of support services by organizations such as Agricultural and Rural Development Corporation (ARDC) and Northern Province Development Corporation (NPDC), as well as providing training, skills development and access to new technologies to small suppliers.

Authors:

Francis Anim is a Senior Lecturer in the Department of Agricultural Economics at the University of the North, Sovenga, South Africa.

Charles Machete [machethec@unin.unorth.ac.za] is Dean of the Department of Agricultural Economics at the University of the North, Sovenga, South Africa.

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1. INTRODUCTION

Micro and small enterprises (MSEs) play an important role in development through employment and income generation. Promoting the growth of MSEs in developing countries is an effective way to alleviate poverty. Northern Province is one of the poorest provinces in South Africa and has one of the highest rates of unemployment. Although agriculture plays a crucial role in creating employment and income opportunities, to address the problems of unemployment and poverty adequately requires increased efforts to generate employment and income in the non-farm sector. Hence, the emphasis by the South African government on promoting the growth of MSEs.

One way to promote the growth of MSEs is to establish business linkages between small suppliers (mainly black-owned businesses) and large buyers (mainly white-owned businesses). Where such linkages already exist, efforts should focus on strengthening the linkages. Small suppliers may benefit from linkages in a number of ways. Business linkages can enable small suppliers to obtain loans from financial institutions which would not be possible because of lack of collateral. Small suppliers may gain access to capital provided by large buyers, either by receiving an advance payment for an order or raw materials for processing (Mead, 1994; Machethe et al., 1997). Business linkages also reduce search times for market outlets because the small supplier can target production to an identified market. Large businesses sometimes provide advice to small businesses to overcome the latter's shortcomings in some aspects of the production and distribution system. This is sometimes referred to as buyer mentoring. Business linkages may also entail outsourcing certain activities by large buyers to small suppliers.

Despite the importance of business linkages in promoting the growth of MSEs, empirical research on business linkages in the Northern Province is inadequate. This paper is an attempt to narrow the information gap. The broad objective of this study is to examine business linkages between small suppliers and buyers in the Northern Province. Specific questions addressed in the paper are:

(a) What are the distinguishing characteristics of small supplier businesses with and without business linkages?

(b) What are the determinants of business linkages? Knowledge of factors determining business linkages would point to possible measures that may be taken to promote the establishment or strengthening of business linkages.

(c) Are there any constraints on the establishment or strengthening of business linkages? If such constraints exist, is there any role for development institutions such as the Agricultural and Rural Development Corporation (ARDC) and Northern Province Development Corporation (NPDC) to alleviate the constraints? Identifying possible constraints on the establishment or strengthening of business linkages is an important step in the process of removing such constraints to promote the growth of MSEs through business linkages.

Knowledge of these constraints is necessary for policy makers, development institutions or donors to devise interventionist strategies to remove the constraints.

(d) What measures need to be taken to promote business linkages in the Northern Province? While answering (b) and (c) above enables us to understand the likely determinants of and possible constraints on business linkages, answering (d) would point to what policy makers and others need to do to promote business linkages.

2. DATA COLLECTION

Data for this study were obtained from interviews with small suppliers and buyers in the towns of Pietersburg and Potgietersrus, townships of Lebowakgomo, Mahwelereng, Mankweng and Seshego, and rural villages of GaMakanye and Nobody in the Northern Province. All suppliers interviewed are from rural villages or townships and associated with the NPDC. Buyers are located in towns or townships. All the suppliers had received assistance (financial or otherwise) from the NPDC. Quality Chicks, a supplier dealing with the sale of dressed chickens, at Lebowakgomo, was the only supplier associated with the ARDC interviewed. The manager could not be contacted and the information provided by one of the workers was not adequate to be included in the analysis. Buyers and suppliers were selected randomly and the sample included 35 buyers and 49 suppliers. Interviews were also conducted with officials of ARDC and NPDC to get an insight into the business activities of the corporations. In addition, existing documents describing the activities of the corporations were examined.

A list of businesses associated with the NPDC was obtained from the corporation. The small suppliers were sampled from the list. A large number of these small suppliers had access to support services like training, counselling and loans from the NPDC. These suppliers were required to identify a buyer(s) before the support services could be made available. The small suppliers were requested to supply names of buyers they had linkages with and these were included in the sample. A few buyers not necessarily identified by small suppliers were also included in the sample.

The small suppliers included in the sample were selected so as to represent a broad spectrum of business activities (sectors) as indicated in Table 1.

3. BACKGROUND ON THE ARDC and NPDC

The ARDC is a parastatal serving as the development arm of the Department of Agriculture, Land and Environment in the Northern Province. The corporation was established in 1996 when three former homeland corporations were amalgamated. The ARDC's head office is located in Thohoyandou (capital city of the former Venda homeland). The corporation has three regional offices located in Thohoyandou, Lebowakgomo (capital city of the former Lebowa homeland) and Giyani (capital city of the former Gazankulu homeland). Although the corporation itself is young, the

three former homeland corporations had been in operation for decades. Thus, there is a wealth of experience within the corporation which can be tapped on to promote the growth of MSEs in the Northern Province.

The mandate of the ARDC is to promote agricultural and rural development in the Northern Province. Thus, the ARDC's mandate extends beyond the agricultural sector. In addition to managing its own agricultural projects and agribusinesses, the ARDC also manages agricultural projects on behalf of the Northern Province Department of Agriculture, Land and Environment. Services provided by the ARDC include credit, marketing, mechanisation and extension. Although the ARDC does not have a division focussing on MSEs, some of the services it provides are aimed at assisting MSEs (particularly agribusinesses) to expand. In some cases, the corporation participates directly in the processing and marketing of agricultural products. For example, the corporation owns chicken slaughtering and fruit packing facilities. The corporation intends to transfer the ownership of these facilities to black people.

The NPDC is a parastatal serving as the development arm of the Department of Economic Affairs, Trade and Industry in the Northern Province. The NPDC has its headquarters at Lebowakgomo. The formation of the NPDC was the initiative of the Northern Province Government and was established in terms of the Corporation's Act Number 5 of 1994, effective 1 July 1996. The NPDC is an amalgamation of the development corporations which existed within the former homelands of Gazankulu, Lebowa and Venda. Although the objectives of these corporations were similar, various development approaches and governance structures evolved in each of them in terms of the focus that resulted from the strategies that were pursued.

The main objective of the NPDC is to, either directly or indirectly, promote and carry out the development of the Northern Province and its population in the commercial, financial and industrial fields, mining, public transport, tourism, training, housing and community development, and provide for matters incidental thereto. The NPDC is actively involved in promoting the growth of MSEs and has a division responsible for providing services to MSEs. The core activities of the NPDC related to MSEs include the provision of market information, training services, financing, business counselling, technological support, and business planning (NPDC, 1998). Some of these support services are provided directly by the NPDC while others are sub-contracted (e.g. to local business service centres). The aim of local business service centres is to provide non-financial assistance to the business community, particularly the MSE sector.

In addition to providing support services for MSEs, the NPDC also participates directly in the market. For example, the corporation runs a bus company and owns motor garages. The corporation also operates other types of businesses including bakeries and retail shops. Some of the businesses owned by the NPDC have been privatised over the years while others are in the process of being privatised. Ownership of these privatised businesses has been transferred to black people.

4. METHODOLOGY

A *t*-test (with *P*-value) is performed on the means of variables for suppliers with and without business linkages to determine whether there are significant differences between these variables. Discriminant analysis is used to identify factors which determine whether suppliers will have business linkages or not. The results of discriminant analysis should also enables us to identify possible constraints on business linkages.

4.1 *T*-test

A *t*-test is usually used when dealing with small samples, usually fewer than 30 cases. However, according to Behr (1983), it can also be used for large samples with more than 30 cases. Since the sample in this study involves 35 buyers and 49 suppliers, the *t*-test can be considered appropriate.

To test the null hypothesis that variable scores for each group in the sample are the same, the following t-statistic was calculated:

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

X_1 and X_2 = sample means of suppliers or buyers with and without linkages, respectively;
S_1^2 and S_2^2 = variance of sample means of suppliers or buyers with and without linkages, respectively;
N_1 and N_2 = sample size for suppliers or buyers with and without linkages, respectively.

Based on the sampling distribution of the above statistics, the probability that a difference at least as large as the one observed would occur if the two sample means are equal, was calculated. If the observed significance level is small enough (usually P< 0,05, or P<0,001), the null hypothesis is that the sample means are equal is rejected.

4.2 Discriminant analysis

Discriminant analysis is used to predict group membership of small suppliers (i.e. whether they belong to the group with or without business linkages). The independent variables include socio-economic and other characteristics of the small suppliers. Discriminant analysis weighs and combines discriminating variables measuring characteristics on which groups of cases are expected to differ in a linear function that maximizes differences. Information contained in multiple independent variables is summarized in a single score (Norusis, 1990).

To solve for a discriminant function score, the basic formula for the *i*th function is:

$$D_i = \phi_{i1}V_1 + \phi_{i2}V_2 + \phi_{i3}V_3 + ... + \phi_{ip}V_p$$

where

D_i = the *i*th discriminant function,
V_i = predictor variables,
ϕ_i = standardized discriminant function coefficients.

Finding the ϕ_i is basically a problem in canonical correlation, where successive discriminant functions are solved. The ϕ_i are chosen so as to maximize differences between groups relative to differences within groups. Just as in multiple regression, the equation can be formulated on the basis of raw scores as well as standardized scores. A discriminant function score can also be produced by multiplying the raw score on each predictor variable by its associated unstandardized weight, adding the products over all predictor variables, and adding a constant to adjust the means. The score produced in this way is the same D_i as produced in the equation above (Tabachnick and Fidell, 1983).

Since the standardised mean of each of the variables is zero, the mean of each discriminant function, combining data over all cases, will be zero. Furthermore, the standard deviation of D_i is equal to 1. If there are only two groups as in this example, then one discriminant function could be used to classify cases into two groups.

The mean value of D_i can also be calculated for each group. That is, the members of each group considered together will have a mean score on D_i that is the discriminant function. The number of discriminant functions is limited by the number of groups or number of predictor variables -- it is the smaller of either the number of predictor variables.

4.2.1 Discriminant analysis model

Selected socio-economic and other variables described in Table 2 are used in discriminant analysis to categorise suppliers as having or not having business linkages. The discriminant model can be specified as:

$$\begin{aligned} BUY = {} & \phi_1 CHILDREN^* + \phi_2 FAMILY^* + \phi_3 SECOND^* + \phi_4 SOLE^* + \phi_5 BPLAN^* + \\ & \phi_6 UNION3^* + \phi_1 COSATU^* + \phi_3 LARGEB^* \ \phi_2 OBUYER^* + \phi_3 MORE^* + \phi_4 FORMAL^* \\ & + \phi_1 ADVICE^* + \phi_2 COUNSEL^* + \phi_3 MANAGERL^* + \phi_4 TECHNICL^* + \phi_5 FINANCIL^* \\ & + \phi_6 EXPECT^* + \phi_1 CREDIT^* + \phi_2 TIME^* + \phi_3 VOLUME^* + \phi_3 LIMITED^* + \\ & \phi_4 POORPROD^* + \phi_1 OTHERS^* + \phi_2 LACKOFTP^* + \phi_3 LACKGVT^* + \phi_4 NOMATCH^* \\ & + \phi_5 INTERMID^* + \phi_6 DONOTK^* + u \end{aligned}$$

where

BUY = supplies product or service to a buyer (yes=1, no=0);

ϕ = weighting coefficients;
u = stochastic error term; and
* = standardized values (coefficients are standardized to adjust for the unequal means and standard deviations of the independent variables).

All other variables in the model are as defined in Table 2.

Rather than using all available variables, only those variables that appeared to be statistically significant in the separate variance analysis of the mean values were chosen as potential discriminating variables (Klecka, 1973). This was done to minimize the influence of irrelevant differences between the two groups. Stepwise discriminant analysis was then used to eliminate the less discriminating variables before performing the final discriminant analysis. Rao's method was used as the stepwise criterion (Norusis,1990).

The following are expected to affect business linkages and, therefore, appear as explanatory variables in the discriminant model:

level of education attained by the business operator/manager/owner (SECOND);
timeliness of delivery to buyers (TIME);
number of family members in the business (FAMILY);
sole proprietorship of the business (SOLE);
drawing up of a business plan (BPLAN);
whether the business has supplied goods or services to a big buyer (LARGEB);
whether the small supplier previously sold to large buyers (OBUYER);
whether buyer provides advice (ADVICE);
business counselling (COUNSEL);
managerial training (MANAGERL);
technical training (TECHNICL); and
volume of sales from the small business (VOLUME).

Other variables were included in the model as control variables.

5. RESULTS AND DISCUSSION

This section presents and discusses the results of the analysis. First, the results of the *t*-test performed to determine whether there are significant differences in the socio-economic and other characteristics of buyers and sellers with and without business linkages are presented and discussed. Second, the results of discriminant analysis providing an insight into what might determine whether small suppliers have business linkages or not are presented. The results of the discriminant analysis also provide an indication of the factors which might limit the growth or prevent the establishment of business linkages involving small suppliers.

5.1 Differences between small suppliers with and without linkages

The small suppliers interviewed are almost equally divided between those with and those without business linkages: 24 had linkages while 25 had no linkages. The separate variance estimates of the means of selected variables for the two groups of suppliers are shown in Table 3 below.

Statistically significant differences between the two groups are in the number of children of the business operator, number of family members employed in the business, level of education achieved by the business operator (primary and secondary education). Factors such as formal management training, business experience (i.e. whether the business operator worked for someone else in a similar business), age, gender and marital status do not seem to be important in differentiating those businesses with from those without business linkages.

Small suppliers with business linkages have a larger number of children and family members employed in the business. This could suggest that these businesses are in a more advantageous position in terms of labour required to produce goods and services sold to buyers than small suppliers without linkages. Employment of more family members in the business could also contribute to small businesses with linkages being more profitable than those without linkages as they do not have to pay high wages. Small suppliers with business linkages have a higher level of education than those without linkages. This suggests that education is positively associated with business linkages.

Table 4 shows the differences in the mean values of variables describing the business details of the small suppliers. Major differences between suppliers with and those without business linkages are in the following: sole proprietorship of the business, having drawn up a business plan, recognition of a trade union by the business[1], and whether the business has supplied products or services to a big business.

There were more entrepreneurs who were sole proprietors in the group with linkages than in the group without linkages. This could mean that linkages are easier to establish in sole proprietorships because of less complex decision-making than in partnerships (i.e. decision-making in partnerships involves higher transaction costs than in sole proprietorships).

The proportion of small suppliers that had drawn up business plans was higher among suppliers with than in those without business linkages. This could suggest that suppliers that drew up business plans were the more successful ones and buyers were interested in establishing linkages with them. Furthermore, selling to other businesses requires some sophistication and the more sophisticated will often have drawn up business plans.

There was a larger proportion of businesses that had a recognition agreement with workers in businesses with linkages than in those without linkages. This could mean that buyers prefer to have

[1] Formal recognition of a trade union by the employer means that the employer considers the union to be the representative of employees that are members of the union. This usually involves both the employer and the trade union to enter into a formal agreement which stipulates inter alia conditions under which a labor strike can be considered legal.

linkages with businesses that have a recognition agreement. Perhaps buyers regard recognition with a trade union as an indication of stability in the supply of goods and services by small businesses.

The results indicate that small businesses with linkages tend to be those that have done business with large businesses before. This suggests that buyers prefer establishing linkages with small suppliers that have had dealings with other buyers. This also implies that once a small supplier starts selling to another business, it becomes easier for the supplier to find an additional buyer. Business linkage experience seems to be an important consideration for buyers in deciding whether to establish linkages with small suppliers.

The majority of small businesses with linkages indicated that buyers provided advice, business counselling, financial training and credit (Table 5). These services were aimed at helping small suppliers to become successful businesses. Although it is not evident from the results presented in Table 5, it was established during interviews that those businesses with linkages tend to be the more successful ones. On the other hand, small suppliers that had linkages (but terminated them) tend to be those that were less successful. This could suggest that buyers prefer to do business with successful small suppliers and are prepared to make them more successful by providing support services because this would also benefit the buyers.

Both small suppliers with and without linkages considered the following factors as important in satisfying buyers: good price, good quality, timeliness of delivery and volume of sales of products (Table 5). However, the proportion of small suppliers that indicated that these factors were important was higher among small suppliers with linkages than in those without linkages.

5.2 Determinants of business linkages

Table 6 presents the results of the discriminant analysis and provides an indication of the factors which might determine business linkages between small suppliers and buyers. Some of the variables were included in the model as control variables and do not necessarily determine business linkages. The results of the analysis indicate that variables which significantly affect business linkages include the number of family members in the business (FAMILY), level of education of the business operator (SECOND), sole proprietorship of the business (SOLE), drawing up of a business plan (BPLAN), whether the business has supplied goods or services to a big buyer (LARGEB), whether the small supplier previously sold to large buyers (OBUYER), whether the buyer provides advice (ADVICE), business counselling (COUNSEL), managerial training (MANAGERL), and technical training (TECHNICL), timeliness of delivery of goods or services (TIME), and volume of sales from the small supplier (VOLUME).

The relatively low Wilk's Lambda (0,39) and high canonical correlation (0,78) suggest that most discriminating information has been extracted by the selected variables (Klecka, 1973). The function classified 89,80% of the overall cases correctly. These results confirm the results obtained in the separate variance analyses.

5.3 Constraints on business linkages

The means of variables representing perceived constraints on the expansion and improvement of linkages are presented in Tables 7 and 8. All suppliers considered limited application of new technology, poor product quality, unreliable delivery of goods or services, and high product prices as important constraints on linkages. The proportion of suppliers who identified the above as important constraints did not differ significantly between those with and those without linkages except for limited application of new technology and poor product quality—the proportion was higher for suppliers with linkages. Among 49 respondents, 88% and 75% of suppliers with linkages considered limited application of new technology and poor product quality as important constraints on the expansion of linkages, respectively. The corresponding proportions for suppliers without linkages are 60% and 30%.

Most suppliers with linkages (67%) considered the matching of requirements of buyers and suppliers as a constraint on the expansion of linkages when considering the issue of intermediaries in linkages. This is an indication that suppliers consider intermediaries as not helpful in solving their problems. Suppliers also consider the issue of intermediaries not selling their services aggressively as one of their major constraints. In the linkages group, 58% compared with 32% in the no linkage group considered this factor as a constraint. It was not surprising that 83% of the linkage group compared with 48% in the no linkage group indicated that they did not know of any intermediary agency.

As regards buyers, it seems that certain factors impede them from establishing linkages with small suppliers (Table 8). The majority of buyers that indicated that they did not have linkages with small suppliers do have linkages with large suppliers. Although the same issues that were identified as important constraints by small suppliers were also identified by buyers, limited application of new technologies by small suppliers was mentioned by most buyers (with and without linkages) as a constraint on business linkages. The proportion of buyers without linkages with small suppliers that considered limited application of new technologies as an impediment to business linkages was 62%. The majority of buyers (89%) with linkages with small suppliers also indicated that limited application of new technologies by small suppliers was an impediment to linkages.

It is worth noting that issues of product quality, price and delivery are important for suppliers with linkages but less important for suppliers without linkages and buyers. This could suggest that these issues become important as suppliers get involved in linkage activities.

Lack of incentives (e.g. tax rebates and subsidies) on the part of the government was mentioned by a little over half the buyers without linkages with small suppliers as an important constraint on linkages; but is viewed as unimportant by most of the buyers with linkages with small suppliers. This could suggest that lack of incentives on the part of government is not the real reason for buyers not to have linkages with small suppliers. .

6. CONCLUSIONS AND RECOMMENDATIONS

Although the businesses included in the sample in this study may not be representative of buyers and small suppliers in the Northern Province, it seems reasonable to suggest that linkages between small suppliers and buyers (especially large ones) are few. Large buyers tend to do business with suppliers other than small supplier businesses owned by blacks. A number of constraints on linkages between buyers and small suppliers have been identified by both buyers and suppliers interviewed in this study. These include limited application of new technologies by small suppliers, lack of incentives from government promoting business linkages with small suppliers, poor quality of products from small suppliers, and high prices for products supplied by small suppliers. Therefore, it may be concluded that linkages between small suppliers and buyers have had a limited impact on development in the Northern Province and more efforts need to be directed at promoting such linkages. Promoting the growth of MSEs through business linkages will require that constraints on linkages be removed.

The following recommendations, if implemented, could address some of the constraints on business linkages in the Northern Province:

1) **Access to support services.** The majority of small businesses with linkages indicated that they received support services such as business counselling, credit, financial training, managerial training and technical training. These services seem to have contributed to the success of the suppliers and this, in turn, encouraged the establishment of linkages. Therefore, it may be argued that the provision of support services to small suppliers in the Northern Province could contribute indirectly to the establishment and strengthening of linkages by making such suppliers more successful. However, for the support services to have the desired impact on linkages, it is important that these services be targeted to those suppliers that are likely to be successful in using them. Thus, organizations such as the ARDC and NPDC should not only focus on increasing the amount of support services, but should also ensure that the services go to those that are likely to achieve success.

2) **Policy initiatives for encouraging business linkages.** Although lack of incentives on the part of government to encourage large buyers to establish linkages with small suppliers was identified as one of the constraints on linkages, we are not convinced that such incentives would promote linkages between large buyers and small suppliers. Government efforts should rather be directed at helping small suppliers to be successful businesses. This could be achieved through the provision of support services such as training.

3) **Access to improved technologies.** The use of new technologies is important for small suppliers to deliver products of the right quality to buyers. Since the limited use of improved technologies was considered to be a major constraint on linkages with small suppliers, the ARDC and NPDC could play a much more meaningful role in ensuring that such technologies are available to the small suppliers. This could be achieved by providing support services as indicated above. Delivering products of the right quality to buyers could assist in strengthening existing linkages by raising the demand for products from small suppliers.

Application of improved technologies would also help small suppliers to reduce prices of their products by reducing production costs.

4) **Improving the level of education of suppliers.** The findings of the study indicate that operators of small supplier businesses with linkages have a higher level of formal education than those without linkages. Therefore, it would seem that efforts to raise the level of education of operators of supplier businesses would make a positive contribution to the establishment of business linkages. The ARDC, NPDC in conjunction with government and large buyers could make a meaningful contribution in this regard. Through such efforts, owners of supplier businesses would be able to draw business plans which appear to be important in the establishment business linkages.

5) **Awareness of buyers' requirements.** Poor quality of products from small suppliers was identified as one of the constraints on business linkages. A possible reason for this could be that small suppliers are not aware of the requirements of buyers regarding the quality of products. Besides improving the quality of the products from small suppliers by ensuring access to improved technologies, the ARDC and NPDC could contribute to improved product quality by bringing together suppliers and buyers. This would ensure dialogue between buyers and small suppliers regarding the expectations of buyer on product quality. The ARDC and NPDC could use their limited resources to provide support services that would assist suppliers who have potential markets but not the skills or abilities to strengthen their ability to meet the demands of those markets. The success of such efforts to meet the demands of large buyers could attract more resources from these buyers to augment those provided by the ARDC and NPDC.

7. SUMMARY

The main objective of the study was to examine business linkages between small suppliers and buyers in the Northern Province. Promoting the growth of micro and small enterprises is an effective way to generate employment and income.

Data for the study were collected from interviews with supplier business entrepreneurs associated with NPDC and buyers not associated with the corporation. Some of the information used in the study was gathered from interviews with officials of the ARDC and NPDC and from existing documents at the two corporations. The sample included 35 buyers and 49 suppliers and represented a broad spectrum of business activities.

The analysis of the data involved the use of a t-test and discriminant analysis. The results of the study indicate that there are few linkages between large buyers and small suppliers. Thus, the extent of linkages can be considered inadequate to promote the growth of micro and small enterprises. A number of constraints are considered to be responsible for the limited success achieved in establishing and strengthening business linkages

To promote the growth of micro and small enterprises through business linkages, it is recommended that the constraints be removed through (a) targeted access to support services from government, parastatals or private sector; (b) improved small suppliers' access to improved technologies; (c) raising the level of education of small business entrepreneurs; and (d) improved awareness of small suppliers of the requirements of buyers regarding the quality of products.

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Appendix I

Information on buyers (n = 35)

Locality	Trading name	Core activity	Employment
Pietersburg	World Meat Butchery	Meat	28
Pietersburg	Foschini	Clothing	6
Pietersburg	Smileys	General Goods	4
Pietersburg	Pep's Store	General Goods	6
Pietersburg	Sonpras	General Goods	5
Pietersburg	Power Sales	General Goods	4
Pietersburg	Tiptoze	Shoe store	3
Pietersburg	Happy Homes	Building Materials	18
Potgietersrus	Ismail Wholesales	General Goods	88
Potgietersrus	Power Sales	General Goods	8
Potgietersrus	Amsons	Building Materials	16
Potgietersrus	Makapane Bottle Store	Liquor	10
Potgietersrus	Santa Lu Butchery	Meat	11
Potgietersrus	Lusitance	Fruits & vegetables	6
Potgietersrus	G.Ps Cafe & Take Away	Food and Drinks	2
Potgietersrus	Tan Butchery	Meat	7
Potgietersrus	Pick A Light & Bath Centre	Plumbing materials	6
Potgietersrus	Score Supermarket	General Goods	37

Information on buyers (continued) (n = 35)

Locality	Trading name	Core activity	Employment
Lebowakgomo	Super Meat	Butchery	6
Lebowakgomo	Pick a Pair	Shoe Store	2
Lebowakgomo	Just Bread	Baking Bread	8
Lebowakgomo	Kings Dry Clean	Sewing	2
Lebowakgomo	Action Plastics	Plastics	3
Lebowakgomo	Modipadi	Fast Foods	5
Lebowakgomo	Lebowakgomo Wholesalers	Confectionery	5
Lebowakgomo	Buscuit King	Baking	4
Lebowakgomo	Anda Braaikuikers	General Goods	6
Lebowakgomo	Pep Store	Clothing	10
Lebowakgomo	King Pie	Baking	3
Lebowakgomo	Josa Bloemiste	Florist	3
Lebowakgomo	Katlego Dressmaker	Sewing	4
Lebowakgomo	Mokopane Tombstone	Tombstones	4
Nobody	Mathibaskraal Hardware	Hardware	25
Nobody	Mankweng Ice Cream	Dairy Products	1
Mankweng	Turfloop Butchery	Butchery	4

Appendix II

Information on suppliers (n = 49)

Locality	Trading name	Core activity	Employment
Pieterburg	Budget Building	Hardware	11
Pietersburg	The Boxer	Hardware	3
Pietersburg	Bonanza	General Goods	4
Pietersburg	Masakhane	Hardware	8
Pietersburg	Bargain	General Goods	8
Pietersburg	Imsons	Hardware	3
Pietersburg	Limpopo	Hardware	8
Pietersburg	Bonds	General Goods	4
Mahwelereng	K. Betty	Hand Crafts	1
Mahwelereng	Skhasimbe	Steel Works	1
Mahwelereng	Big Moss	Electrical	6
Mahwelereng	Velly	Fruits & Vegetables	2
Mahwelereng	Aphane	Tailoring	2
Mahwelereng	Noko	Butchery	3
Mahwelereng	Maringa	Sewing	1
Mahwelereng	R.T. Welding	Welding	2
Mahwelereng	Azael	Fruits & Vegetables	2
Mahwelereng	Kopanang	Bricks Making	2
Seshego	Rapholo	Sewing	1
Seshego	Mpho	Sewing	1
Seshego	Kgobu	Metal Works	4
Seshego	S & Enterprise	Book Keeping	3
Seshego	Lebowa	Uphostery	8
Seshego	Ledwaba	Dress Making	2
Seshego	N.J. Ngwasheng	Sewing	1
Seshego	The Sky is the Limit	Sewing	5
Seshego	R.R. & Daughters	Sewing	4
Lebowakgomo	Ledwaba	Coffins	12

Information on suppliers (n = 49)

Locality	Trading name	Core activity	Employment
Lebowakgomo	Lebowa Retreaders	Retreaders	43
Pietersburg	Lucky Discount	Hardware	4
Nobody	Mathibaskraal Auto Elec.	Auto Electrician	5
Nobody	Setswika Glass work	Glazing	4
Nobody	Sekitla Scrapyard	Rebuilding Cars	2
Nobody	Mathibaskraal Hardware	Hardware	25
Nobody	Village Cobbler	Shoe Repairs & Seat Covers	2
Nobody	D.K's Welding Works	Welding	2
Nobody	Alpha Furniture Manufacture	Wood work	4
Nobody	Bahlalerwa Cane	Basket Making	4
Nobody	Kgomo - a- Ngata	Wood work & Welding	10
Nobody	T.K. Steel works	Welding	8
Nobody	Brick Manufacturing	Bricks manufacturing	6
Nobody	Thobela Hardware	Hardware	4
Nobody	T.K. Classmaster	Glazing	1
Nobody	Sophy's Hair Salon	Hair Dressing	2
Nobody	Ga-Makanye Panelbeaters	Welding and Panel beating	6
Nobody	M.M Enterprise	Fabrics	2
Nobody	Mokgobu Supermarket	General goods	34
Nobody	Mankweng King Pie	Trading/Confectionery	3
Mankweng	Sovenga Hot Bread and take-aways	Bakery	10

TABLES

Table 1: Business sectors and number of suppliers

Economic sector	Number of suppliers
Manufacturing	**18**
Services	**14**
Trade	**9**
Construction	**8**
Total	**49**

Table 2: Definitions of variables used in the discriminant analysis

Variable name	Variable description	Variable type	Variable range
	1. Personal background of the business operator/owner/manager:		
CHILDREN	Number of children	Continuous	0-14 Children
FAMILY	Number of family members in business	Continuous	0-6 Persons
SECOND	Highest education attained: Secondary education	Dichotomous	1=Yes; 0= Otherwise
COSATU			
	2. Business details:		
SOLE	Legal entity: Sole proprietor	Dichotomous	1=Yes; 0=Otherwise
MORE	Sell to more than 4 buyers	Dochotomous	1=Yes; 0= Otherwise
BPLAN	Ever drawn up a business plan	Dichotomous	1=Yes; 0=Otherwise
UNION	Workers unionised	Dichotomous	1=Yes; 0=Otherwise
COSATU	COSATU affiliated	Dichotomous	1=Yes; 0= Otherwise
LARGEB	Supply product/service to a big company	Dochotomous	1=Yes; 0=Otherwise
OBUYER	Previously sell product/service to other large buyers	Dichotomous	1=Yes; 0=Otherwise
FORMAL	Prefer formal arrangement with big buyers	Dichotomous	1=Yes; 0= Otherwise
ADVICE	Buyer provide advice	Dichotomous	1=Yes; 0=Otherwise
COUNSEL	Buyer provide counselling	Dochotomous	1=Yes; 0=Otherwise
MANAGERL	Buyer provide managerial training	Dichotomous	1=Yes; 0= Otherwise
TECHNICL	Buyer provide technical training	Dichotomous	1=Yes; 0=Otherwise
FINANCIL	Buyer provide financial service	Dichotomous	1=Yes; 0=Otherwise
EXPECT	Any expectations	Dochotomous	1=Yes; 0= Otherwise
CREDIT	Buyer provide credit (e.g. Loans)	Dichotomous	1=Yes; 0=Otherwise
TIME	Timeliness of delivery	Dichotomous	1=Yes; 0=Otherwise
VOLUME	Volume of sales	Dichotomous	1=Yes; 0= Otherwise
	3. On Linkages generally: Impediments to the expansion of linkages:		
LIMITED	Supplier issue: Limited application of new technology	Dochotomous	1=Yes; 0=Otherwise
POORPROD	Poor product quality	Dichotomous	1=Yes; 0= Otherwise
OTHERS	Other factors	Dichotomous	1=Yes; 0=Otherwise
LACKOFTP	Buyer issue: Lack of top mgt commitment and support	Dochotomous	1=Yes; 0= Otherwise
LACKGVT	Lack of government incentives	Dichotomous	1=Yes; 0=Otherwise
NOTMATCH	Intermediary issues: Not matching requirements	Dichotomous	1=Yes; 0=Otherwise
INTERMID	Not selling their services aggressively enough	Dochotomous	1=Yes; 0= Otherwise
DONOTK	Do not know	Dichotomous	1=Yes; 0=Otherwise

Table 3: *T*-test of means of variables: suppliers with linkages and with no linkages with big buyers

(i) Personal background of business operator/owner/manager

	Mean of responses	Mean of responses	Separate variance estimate	
Variable*	Linkages (n = 24)	No Linkages (n = 25)	t-value	P-value
Males (%)	7.9486e + 32	6.844e + 32	-0,88	0,39
Age (years)			-1,36	0,18
Married (%)			1,27	0,21
Number of children (number)			-2,47	0,19
Number of family members employed in business (number)			-2,43	0,02
Primary education (%)			-2,59	0,01
Secondary education (%)			-2,05	0,05
Tertiary education (%)			-0,40	0,69
Formal management training (%)			0,19	0,85
Employed before starting business (%)			-0,90	0,38
Worked for someone else in the same business (%)			-0,30	0,77

* Percentages do not add up to 100 because respondents gave more than one answer.

Table 4: *T*-test of means of variables: suppliers with linkages and with no linkages with big buyers

(ii) Business details

	Mean of response	Mean of response	Separate variance estimate	
Variable	Linkages (n = 24)	No Linkages (n = 25)	t-value	P-value
Duration of business (years)	-	-	-	-
Legal entity:				
Sole proprietor (%)	0,90	0,36	-2,43	0,02
Partnership (%)	0,10	0,64	1,35	0,18
Close corporation (%)	-	-	-	-
Gender of owners:				
Males only (%)	0,70	0,64	-0,50	0,61
Females only (%)	0,09	0,06	-1,09	0,28
Husband and wife (%)	0,05	0,02	-1,16	0,25
Males and females (%)	0,16	0,28	-1,27	0,21
Number of management staff (number)	1,46	1,44	-0,07	0,94
Number of supervisors (number)	0,95	0,86	-0,29	0,77
Number of workers (%)	9,92	6,36	-1,50	0,14
Number of workers when business started (number)	-	-	-	-
Ever drawn up a business plan (%)	0,63	0,24	-2,89	0,00
Negotiated financing facilities at a commercial bank (%)	0,63	0,40	-1,58	0,12
Ever been successful (%)	0,88	0,69	-1,22	0,24
Business registered as:	-	-	-	-
Provisional taxpayer (%)	-	-	-	-
VAT (%)	0,67	0,68	-1,61	0,12
PAYE/SITE (%)	0,33	0,32	-0,71	0,48
JSB levies (%)	-	-	-	-
Industrial council (%)	-	-	-	-
Workers unionised (%)	-	-	-	-
Recognition with a Trade Union (%)	0,54	0,20	-2,59	0,01
COSATU affiliated (%)	0,16	0,13	-0,34	0,73
Supply products or service to big company (%)	0,50	0,20	-2,17	0,03
Previously sold products/services to other large buyers (%)	0,50	0,20	-2,27	0,02
Sell products/services to:	0,56	0,08	-3,93	0,00
One buyer (%)	-	-	-	-
2-3 buyers (%)	0,25	0,14	0,44	0,66
More than 4 Buyers (%)	0,75	0,86	-2,93	0,00
Prefer formal arrangement with big buyers (%)	0,96	0,53	-3,46	0,00
Prefer informal arrangement with big buyers (%)	-	-	-	-

* Percentages do not add up to 100 because respondents gave more than one answer.

Table 5: *T*-test of means of variables: suppliers with linkages and with no linkages with big buyers

(iii) Buyer mentoring

	Mean of response	Mean of response	Separate variance estimate	
Variable	Linkages (n = 24)	No Linkages (n = 25)	t-value	P-value
Did/does the buyer provide you with:				
Advice (%)	0,96	0,16	-2,12	0,04
Counselling (%)	0,70	0,36	-2,02	0,05
Financial training (%)	0,58	0,23	-2,07	0,05
Provide credit (%)	0,72	0,31	-2,41	0,02
Provide loans for repayment for raw materials (%)	0,25	0,31	0,35	0,73
Any expectations (%)	0,16	0,07	-0,84	0,41
Does buyer provide settling a/c earlier terms (%)	0,23	0,10	-0,83	0,42
Pay on time (%)	0,43	0,50	0,40	0,69
Factors most important in satisfying big buyer:	0,61	0,62	0,07	0,95
Best price (%)	0,88	0,68	-1,66	0,10
Quality (%)	0,79	0,68	-0,88	0,39
Timeliness of delivery (%)	0,88	0,52	-2,88	0,01
Volume of sales (%)	0,79	0,55	-1,79	0,08

* Percentages do not add up to 100 because respondents gave more than one answer.

Table 6: Estimated discriminant function: suppliers with linkages and with no linkages with big buyers

Discriminating		Group means		
Variable	Coefficient	Linkage ($n_1 = 24$)	No Linkage ($n_2 = 25$)	Univariate *F*-value
CHILDREN	0,14*	5,67	3,68	6,227
FAMILY	0,24*	2,20	1,08	5,317
SECOND	0,27*	0,79	0,52	4,165
SOLE	0,28*	0,92	0,64	5,801
BPLAN	0,39**	0,63	0,24	8,376
UNION	0,30*	0,54	0,20	6,746
COSATU	0,22*	0,50	0,16	5,856
LARGEB	0,35**	0,50	0,00	11,99
OBUYER	0,33*	0,50	0,20	5,180
MORE	0,35**	0,75	0,36	8,532
FORMAL	0,55**	0,96	0,16	22,48
ADVICE	0,25**	0,42	-0,24	8,740
COUNSEL	0,28**	0,25	-0,36	8,155
MANAGERL	0,17**	0,21	-0,40	7,618
TECHNICL	0,26*	0,21	-0,36	6,706
FINANCIL	0,32*	0,29	-0,32	7,083
EXPECT	0,17**	0,21	-0,40	7,618
CREDIT	0,11	0,04	-0,32	3,361
TIME	0,25**	0,88	0,52	8,181
VOLUME	0,31*	0,79	0,36	6,823
LIMITED	0,26*	0,88	0,60	5,046
POORPROD	0,25**	0,75	0,36	8,532
OTHERS	0,20*	0,58	0,28	4,870
LACKOFTP	0,27*	0,63	0,28	6,423
LACKGVT	0,22**	0,67	0,28	8,295
NOTMATCH	0,38**	0,67	0,24	10,59
INTERMID	0,27	0,58	0,32	3,540
DONOTK	0,18**	0,83	0,48	7,505
Business with linkage correctly classified		= 91,70%		
Business with no linkage correctly classified		= 88,00%		
Overall percent of cases correctly classified		= 89,80%		
Eigen value		= 1,58		
Canonical correlation		= 0,78		
Wilk's lambda		= 0,39		
Group centroids:				
	Business with linkage	= 1,26		
	Business with no linkage	= -1,20		

** P < 0,001 ; * P < 0,05

Table 7: T-test of means of variables: suppliers with linkages and with no linkages with big buyers

(iii) On linkages

	Mean of response	Mean of response	Separate variance estimate	
Variable	Linkages (n = 24)	No Linkages (n = 25)	t-value	P-value
Serious impediments to expansion and improvement of linkages with big business:				
Supplier issues:				
Limited application of new technology (%)	0,88	0,60	-2,26	0,03
Poor product quality (%)	0,75	0,36	-2,93	0,01
Unreliable delivery (%)	0,71	0,48	-1,64	0,11
High price (%)	0,71	0,48	-1,64	0,11
Others (%)	0,58	0,28	-2,20	0,03
Buyer issues:				
Lack of top management commitment and support (%)	0,63	0,28	-2,53	0,02
Resistance on the part of corporate's buyers (%)	-	-	-	-
Lack of government incentives (%)	0,67	0,28	-2,88	0,01
Others (%)	0,63	0,44	-1,29	0,20
Intermediary issues:				
Not matching requirements of buyers and suppliers (%)	0,67	0,24	-3,25	0,00
Inappropriate or unqualified staff (%)	0,50	0,28	-1,58	0,12
Intermediary not selling their services aggressively (%)	0,58	0,32	-1,88	0,07
Don't know of any intermediary (%)	0,83	0,48	-2,76	0,01
Others (%)	0,83	0,64	-1,55	0,13
Training issues:				
Training courses don't meet suppliers' needs (%)	0,67	0,64	-0,19	0,85
Don't know of any agencies that offer training (%)	0,58	0,48	-0,71	0,48
Others (%)	0,67	0,48	-1,32	0,19
Government issues:				
Restrictive legislation on small business (%)	0,67	0,48	-1,32	0,19
No incentives to corporates to develop linkages (%)	0,54	0,56	0,13	0,90
Others (%)	0,67	0,68	0,10	0,92
Trade Union issues:				
Block outsourcing, fear of deterioration conditions (%)	0,79	0,44	-2,66	0,01
Block outsourcing, fear of loss of membership (%)	-	-	-	-
Others (%)	0,43	0,48	0,29	0,77

* percentages do not add up to 100 because respondents gave more than one answer.

Table 8: T-test of means of variables: Big buyers with linkages and with no linkages with historically disadvantaged small enterprises

(ii) Impediments to the expansion and improvement of linkages

	Mean of response	Mean of response	Separate variance estimate	
Variable*	Linkages (n = 9)	No Linkages (n = 26)	t-value	P-value
(i) Supplier issues:				
Limited application of new technologies (%)	0,89	0,62	-1,85	0,08
Poor product quality (%)	0,33	0,42	0,46	0,65
Unreliable delivery (%)	0,22	0,19	-0,18	0,86
High price (%)	0,44	0,42	-0,11	0,92
(ii) Buyer issues:				
Lack of top management commitment and support (%)	0,33	0,50	0,86	0,41
Resistance on the part of the corporate's buyers (%)	0,44	0,42	-0,11	0,92
Lack of government incentives (%)	0,33	0,23	-0,55	0,59
(iii) Intermediary issues:				
Not matching requirements of buyers and suppliers properly (%)	0,44	0,31	-0,68	0,50
Inappropriate or unqualified staff (%)	0,67	0,42	-1,26	0,23
Intermediary not selling their services aggressively enough (%)	0,44	0,31	-0,69	0,50
(iv) Training agency issues:				
Training courses don't meet suppliers' needs (%)	0,67	0,23	-2,33	0,04
Don't know of any agencies that offer required training (%)	0,22	0,38	0,86	0,40
(v) Government issues:				
Restrictive legislation on small business (%)	0,44	0,46	0,08	0,93
No incentives given to develop effective linkages (%)	0,11	0,56	2,99	0,01
(vi) Trade union issues:				
Block outsourcing, fear of deteriorating working conditions (%)	-	-	-	-
Unions try to block outsourcing, fear of loss of membership (%)	0,44	0,38	-0,34	0,72

* Percentages do not add up to 100 because respondents gave more than one answer.