Global Entrepreneurship Monitor
South African Report 2005

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Our thanks go to Retha Scheepers for her chapter and to Don Shay for his co-authored chapter.

The GEM project is dependent on the enormous effort of the GEM global team at the London Business School and Babson College. The South African team thanks them and acknowledges their contribution.

Most importantly, to the South African entrepreneurs without whom this study would have no meaning, thank you for what you do.
New business creation is fundamental to the growth of the South African economy and to our future socio-political stability. Education and experience are key elements in successful venture creation. South Africa needs a growing pool of potential entrepreneurs who have the motivation and the ability to identify and to realise new business opportunities.

In 2001 the Graduate School of Business at the University of Cape Town established the UCT Centre for Innovation and Entrepreneurship, with financial assistance from Liberty Life, the World Bank Group and the Gatsby Charitable Foundation. The ambition was bold – to make the Graduate School of Business Africa’s leading tertiary institution in entrepreneurship teaching and research, and to become internationally recognised as an authority in this field in developing economies. The Centre, building on initiatives started in the mid-1990s, was organised around three distinct and mutually reinforcing sets of activities: teaching and material development, research and public policy, and business creation and growth.

The core focus of the Centre is on the delivery of quality entrepreneurship education at academic and all other levels of society. The Graduate School of Business’s philosophy of entrepreneurship education is that to be effective, it must be practical. Our students therefore have meaningful interactions with entrepreneurs, are involved in actual entrepreneurial projects, work in multi-disciplinary project teams and are evaluated by entrepreneurs and investors, as well as by academic staff. The entrepreneurship courses delivered by the Centre are closely integrated with new venture activity in the local business and investment communities. The intention is not to compete with incubators or other business promotion projects, but to seek partnership with the most successful of these for mutual benefit. The Centre’s core activity of ‘quality entrepreneurship education’ has significantly enhanced its ability to establish such partnerships.

The Centre is involved both in high value-added and high-potential new ventures and in township and other community-based enterprises. Since its establishment, the Centre has assisted over 70 township enterprises by providing practical business advice and access to finance and training, with the objective of enabling them to become independent, sustainable businesses with greater potential for expansion.

The Centre is currently involved in numerous other activities including:
- research that aims to develop a better understanding of the capacities and needs of all the different categories of entrepreneurs in South Africa so that advisory services and finance can be more precisely targeted;
- advising academics on the commercialisation of their intellectual property;
- assembling a group of high-profile entrepreneurs in the Western Cape in order to finance and assist high-growth business ventures;
- offering coaching and mentoring services to entrepreneurs; and
- assisting large companies in nurturing innovative and entrepreneurial behaviour in their organisations.

The Centre is proud to be a participant in the international GEM project. We believe that the research spearheaded by GEM is essential to the development of global entrepreneurial activity and we are committed to that purpose in South Africa.
The Global Entrepreneurship Monitor 2005 South Africa Report is a collaborative effort. Mike Herrington is the team leader of GEM South Africa. The principal author of the report is Marlese von Broembsen and the principal editors were Marlese von Broembsen and Eric Wood. Retha Scheepers and Don Shay each contributed a chapter.

Mike Herrington

Mike Herrington is the Director of the UCT Centre for Innovation and Entrepreneurship at the Graduate School of Business. He is a recognised entrepreneur having started four businesses – one in New Zealand and three in South Africa. He was responsible for starting the CIE and is keenly interested in entrepreneurship and all levels of business creation. His leading activities are in the areas of entrepreneurship, business planning, internationalisation of businesses and venture capital.

Eric Wood

Eric Wood is the Liberty Life Associate Professor of Entrepreneurship at the UCT Graduate School of Business. He has been involved in entrepreneurship research for over 10 years. After completing his PhD, he spent three years with the Centre for Business Research at the University of Cambridge and joined the Graduate School of Business UCT in 1998. His primary research and teaching activities are in the areas of entrepreneurship, innovation and strategy. Eric has played a key role in GEM South Africa since its inception. He is collaborating with researchers at London Business School in a study of the internationalisation of young entrepreneurial companies in emerging markets. Eric is a Director of two technology-based companies.

Marlese von Broembsen

Marlese von Broembsen has worked in the small business sector since 1993. She managed a consultancy for the Triple Trust Organisation (TTO), which pioneered a model that empowered unemployed people to start their own businesses. She has worked as a consultant for eight years, two of which were as a partner with South Consultancy, which has offices in South Africa and Kenya. She worked at a grassroots level for a number of years and for the last eight has concentrated on policy-related research. Marlese is a qualified attorney, has a Masters in Development Studies and lectured Social Policy to Masters students at the University of the Western Cape, for three years. Marlese joined the UCT Centre for Innovation and Entrepreneurship in 2005 and is the principal author of GEM 2005.

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Don Shay

Don Shay spent 10 years – primarily as the Research and Development Manager – with the Triple Trust Organisation, a leading entrepreneurship promotion and small business development non-profit group based in Cape Town, South Africa. Don has been actively involved in applied small business research projects, impact evaluations of SME support programmes and social and ethical accounting work in South Africa, Namibia, Tanzania, Nigeria and Bangladesh. He currently runs an export business and does entrepreneurship research and small business development consulting.
Executive summary

While the role of new venture creation – and specifically its potential to solve the unemployment crisis – enjoys academic attention in South Africa, there is a serious dearth of empirical data, specifically longitudinal data, to inform debate and ultimately to inform policy. The GEM South African 2005 Report makes a critical contribution in this regard.

Global comparisons

South Africa’s Total Early-stage Activity (TEA) rate in 2005 is 5.1%. This means that we estimate that for every 100 adults in South Africa between the ages of 18 and 64, approximately five own and manage a start-up business (a business that has not paid salaries for three months or more) or a new business (a business that has paid salaries for between three and 42 months), either with others or by themselves. While a slightly higher figure of 5.4% was recorded for South Africa in 2004, the difference is not significant. However, South Africa’s position in the GEM rankings has dropped from 20th position out of 34 in 2004 to 25th position out of 35 in 2005.

Comparisons with other developing countries

Comparisons with other developing countries that participated in GEM 2005 show that:
● South Africa has the lowest entrepreneurial activity rate of all the developing countries.
● South Africa’s low TEA rate is attributable not only to our low rate of necessity entrepreneurship (2.05%), but, more importantly, also to our low opportunity entrepreneurship activity rate (2.95%), which is the lowest of all the developing countries.
● The established firm rate (i.e. the percentage of adults who are owner-managers of businesses that have paid wages for more that 3.5 years) is 1.3%. This figure is the lowest of all the developing countries, and one of the four lowest of the GEM countries sampled in 2005.
● With the exception of Mexico, South Africa’s start-up businesses are least likely of all the eight developing countries sampled to mature to the new firm stage. This indicates a lower success rate of new ventures in South Africa by comparison with most other developing countries.

Who are our job creators?

In previous GEM reports we asked the question ‘Who are our entrepreneurs?’ We sketched the demographic profile of the individuals most likely to engage in entrepreneurial activity. In this report we ask, ‘Who are our job creators?’

An analysis of GEM data (Autio 2005) suggests that, worldwide, the primary job creators are firms that employ 20 or more people. Therefore, we are specifically interested in understanding which groups of entrepreneurs are most likely to be the owner-managers of businesses that employ 20 or more people.

Our findings are as follows:
● A tiny fraction (less than 3%) of necessity businesses create six or more jobs. This calls into question the notion that the informal sector is likely to be able to contribute much in the way of job creation.
● Likewise, only a tiny minority of firms (3.9%) in the start-up phase employ any staff. The findings that follow therefore exclude start-up businesses.
● While women are as likely as men to start a business in South Africa, men are the primary job creators. We estimate that for every 100 adult men in the population, the owner-managers among them employ on average 10 people. By contrast, for every 100 women, the owner-managers among them employ on average an estimated 4.5 people. Therefore, GEM estimates suggest that the job creation potential of men is on average 2.3 times that of women.
● The more educated a person, the more likely they are to start a business and the more people they are likely to employ. The potential of tertiary educated adults to create employment is 2.5 times greater than for adults who have only completed secondary education, and 11
For blacks, coloureds and whites, the employment potential rises dramatically with educational achievement. In all three race groups, the employment potential is greatest among those with tertiary education, and is at least seven times higher than for those who have not completed secondary education.

For every 100 adults with tertiary education, the owner-managers among them employ on average 29.3 people; by comparison with 11.9 people employed by adults who have completed secondary education; and 2.6 people employed by adults who have not completed secondary education.

Indians and whites are more likely to be the owner-managers of new and established firms. The data also shows that Indian- and white-owned new and established businesses tend to employ more staff on average, by comparison with businesses managed by their black and coloured counterparts.

For blacks, coloureds and whites, the employment potential rises dramatically with educational achievement. In all three race groups, the employment potential is greatest among those with tertiary education, and is at least seven times higher than for those who have not completed secondary education.

How innovative are South African owner-managers?

For the first time, we have sufficient data to analyse the characteristics of new and established firms in more detail. In 2005 we examine how innovative South African firms are.

GEM measures innovation in three ways: customer-, competitor- and technology-orientated innovation. Our findings are as follows:

- Innovative businesses (that have a high customer-orientation, are differentiated from competitors and are technology orientated) constitute a tiny percentage of new and established firms. In this respect South Africa is no different to other GEM countries.
- There are two areas where there has been a significant shift in the last three years. They are the following: (a) Fewer firms offer products or services that are differentiated from their competitors. Whereas in 2003, 11.3% of owner-managers operated in markets where they had no competitors, this declined to 1.8% of owner-managers in 2005. (b) Fewer firms use the latest technology for products or services.

In 2003, 28% of South African owner-managers indicated that they used the very latest technologies (developed less than one year ago). In 2005, 0% of the sample reported that their firms used the latest technology.

The impact of education on entrepreneurship: a comparison of developing countries

We build on the foundation of a 2003 analysis that suggested that South Africa’s low rate of entrepreneurship can be attributed to the low proportion of South Africans that have completed secondary school. In this analysis we investigate the extent to which the South African education system prepares learners with the necessary skills to start a business, relative to seven other developing countries.

Our findings are as follows:

- South Africa’s tertiary education system prepares young adults relatively well with the knowledge and skills required to start a business. Young South African adults with tertiary education are almost as likely to start an opportunity-motivated business as are their peers in other developing countries.
- South African adults who do not have tertiary education are significantly less likely than their counterparts in other developing countries to be able to sustain an opportunity-motivated new business venture. This implies that South African schools are doing far less than schools in other developing countries to develop the skills required for entrepreneurship.
- Despite the fact that in Uganda and Brazil the proportion of adults that have not completed secondary schooling is higher than in South Africa, this does not translate into low levels of entrepreneurial activity, as is the case for South Africa.

Are South African schools developing entrepreneurial skills?

We surveyed 4 625 Grade 5 and 7 learners in 41 schools from two provinces to evaluate the impact of entrepreneurial training on learners. We explore the extent of entrepreneurial skill development across different school groups, and show that the level and pace of such skill development is highly uneven across South African schools.

Our findings are as follows:

- The probability of learners in predominantly black schools acquiring critical entrepreneurial skills and attitudes is as much as 50% lower than is the case for
their counterparts in predominantly white schools. The gap between predominantly white schools, on the one hand, and coloured and Indian schools, on the other, is smaller but nevertheless sizable.

- The gap in performance appears to grow larger over time. In relative terms, learners in black, coloured and Indian schools are falling further behind their counterparts in predominantly white schools.
- The area of greatest weakness in black, coloured and Indian schools is financial arithmetic, a finding which is consistent with previous findings that indicate that the mathematics skills of South African learners are poor.
- The majority of staff across all schools would value further training in the teaching of entrepreneurship. The need for further training appears to be greatest in black schools.
- We conclude that entrepreneurship is a valuable component of the primary school curriculum and, if taught with appropriate materials, can enhance the development of fundamental skills in areas such as arithmetic. By making dedicated entrepreneurship teaching materials, such as Business Ventures, Enterprise Dynamics, Hands-on Enterprise and Standard Bank financial literacy programme, available to all schools, we will increase the acquisition of entrepreneurial skills.

Policy implications

Based on empirical evidence, this edition of GEM has attempted to underline the following:

- There are several possible policy objectives for small business. Broadly they can be conceived of as support of small business to:
  - achieve economic growth;
  - contribute to job creation;
  - alleviate poverty; and
  - redistribute access to opportunity and wealth.
- Currently it would appear that these policy objectives are being pursued concurrently, using the same policy instruments to achieve different policy objectives.
- The implementation of these policies often leads to conflicting outcomes. For example, to achieve the policy objective of redistribution we may choose to target certain groups of entrepreneurs (for example, those who are historically disadvantaged, women, youth or disabled people) for support. Yet, as the analyses of data show, the legacy of apartheid, and specifically unequal access to education, means that none of these categories of people is likely to create many jobs. Consequently by targeting these groups of entrepreneurs (or potential entrepreneurs) and allocating resources to support their businesses, one may be achieving the redistribution objective, but frustrating the job creation objective.
- Responsible policymaking requires an assessment of the respective trade-offs. More research is needed in this critical area. In addition, government needs to establish a hierarchy of objectives, rather than trying to implement all the objectives at once, often with conflicting results.
- While redistribution of wealth and opportunity may be the long-term objective of small business development, we would argue that, in the short term, given high levels of unemployment and the indisputable relationship between unemployment and poverty, job creation should be paramount.
- Irrespective of which policy objective is pursued – be it economic growth, job creation, redistribution or poverty alleviation – improving primary and secondary education is critical.
The Global Entrepreneurship Monitor (GEM) was started in 1999 by academics at the London Business School and Babson College in the United States.

The raison d’être behind the study was to:
- compare countries in terms of their entrepreneurial activity;
- establish which factors encourage entrepreneurship;
- determine whether the rate of entrepreneurship in a country affects national economic growth; and
- identify policies that encourage entrepreneurial activity.

Teams from 43 countries around the globe have participated in GEM. It is the largest and most rigorous longitudinal study of entrepreneurship in the world. South Africa joined GEM in 2001, which means that this is South Africa’s fifth year as part of GEM.

How does GEM differ from other studies of entrepreneurship?

Traditional analyses of economic growth tend to emphasise the role of large corporations and to overlook the contribution of newer and smaller firms in the economy. GEM’s focus is different. While it acknowledges the economic contribution of large corporations, GEM’s specific focus is on the little-studied and little-understood economic contribution of two sets of businesses: those that are new and generally small – until 2005 the primary focus – and those that are established, i.e. those that have been in business for at least three and a half years, but are owned and managed by entrepreneurs who are still ‘innovative, competitive and growth minded’.

Value of GEM to South Africa

While the role of new venture creation – and specifically its potential to solve the unemployment crisis – enjoys academic attention in South Africa, there is a serious dearth of empirical data, specifically longitudinal data, to inform debate and ultimately to inform policy. GEM makes a critical contribution in this regard.

GEM is a monitor, which allows for international comparative analysis. The purpose of the research is not to provide the annual definitive analysis of the small business sector. Rather, it is to understand trends – both internationally and within nations – to create benchmarks and to provide a rich source of longitudinal data for researchers and government departments.

In keeping with its monitoring function, each annual South African GEM report analyses and reports on the most recent data. We report on the data in section one. Each report also has a unique focus. This year the focus is on youth and young adults, which we cover in section two.

Section 1: The adult population survey

In section one, we analyse the population survey data, which allows us:
- to estimate the percentage of adults between the ages of 18 and 64 that are engaged in entrepreneurial activity;
- to rank South Africa relative to other countries;
- to analyse the characteristics of business; and
- to analyse the demographic profile of entrepreneurs, specifically of entrepreneurs that create the most employment.

Rather than compare the prevalence of early-stage entrepreneurial activity – as measured by the Total Entrepreneurial Activity (TEA) rate – in South Africa with that of other developing countries, we disaggregate the TEA data. In chapter one we assess the extent to which each country’s TEA rate is comprised of necessity versus opportunity entrepreneurship and the ratios of start-up, new and established firm activity. In chapter two we update the entrepreneurial activity rates reported in GEM 2004.

In chapter three we ask ‘who are our job creators?’ We use three years’ data to show that the categories of people...
who are most likely to engage in entrepreneurial activity are not necessarily the categories of people who create jobs. To our knowledge, this analysis has not been done in South Africa before. While small data sets have enabled researchers to make policy recommendations regarding job creation, our analysis provides the first national benchmark. The policy implications are numerous.

For the first time we have sufficient data (2003–2005) to analyse the innovative propensity of new and established firm, which we do in chapter four.

**Key informants confirm previous years’ findings**

Every year we conduct and report on face-to-face interviews with individuals, referred to as ‘key informants’, who represent government, the private sector and entrepreneurs themselves. The purpose is to gain an informed view of the extent to which the social, economic, political and cultural features that promote entrepreneurship (see the GEM conceptual model) are part of the South African socioeconomic landscape. In addition to the interview, each expert completes a detailed questionnaire. This standardised questionnaire was e-mailed to all the experts that have been interviewed since 2001. A list of the key informants interviewed in 2005 is contained in the appendix.

The three inhibitors of entrepreneurship most frequently cited by the 2005 key informants remain: government policy (specifically overly complex regulation and taxation); difficulty of access to finance; and poor primary and secondary education. Key informants praised government for its efforts to open markets; higher education bodies for their commitment to entrepreneurship training; and the media for highlighting role models and making these accessible.

In addition, Black Economic Empowerment was overwhelmingly supported as an important and necessary policy. However, its implementation was criticised. The following comment summarises the dominant views expressed: ‘We cannot discount the need for social redress, but the concept of BEE for entrepreneurs is extremely difficult. Businesses have to take their future demographic profiles into account in order to ensure sustainability. This is an additional risk factor, when starting a business is already a risky endeavour.’

The sample is small and, by implication, not representative. The findings are therefore of a qualitative, indicative nature. But the fact that the same three factors are cited year-on-year as the primary inhibitors of entrepreneurship indicates that these views provide a useful barometer of the environment in which small business in South Africa must operate. As these findings are not new, we do not devote a chapter to the entrepreneurial environment, as has been the case in previous GEM reports.

**Section 2: Special focus on youth and young adults**

In 2003, we compared South Africa to other developing countries that participated in GEM. We found that the most entrepreneurial group globally – men aged 25 to 44 years – is not as entrepreneurially active in South Africa as one would expect. In fact, the low rate of entrepreneurial activity among young men was found to be a primary reason for the low overall rate of entrepreneurial activity in South Africa, which was shown to be significantly lower than in all the other developing countries sampled.

In section two of this report we use these findings as a starting point and focus, in two chapters, on youth and young adults – the generations on which it is incumbent to produce our future entrepreneurs. In chapter five we use more recent data to compare South Africa to other developing nations and extend the analysis of the 2003 study. In chapter six we evaluate the effect of entrepreneurial curricula on Grade 5 and 7 learners.

In the concluding chapter, we discuss the implications of our findings in sections one and two for SMME policy in South Africa.
Traditionally, studies of economic growth emphasise the role and contribution of large corporations. The GEM conceptual model explores the much talked about but little understood contribution of entrepreneurial activity, particularly in the form of new venture creation, to national economic growth. GEM’s conceptual framework is represented in Figure 1.

Figure 1: The GEM conceptual model

General business conditions affect the ability of large corporations to compete effectively and to start new or ancillary businesses. When conditions are such that businesses are able to compete effectively and new or ancillary businesses are started, this in turn creates jobs. These conditions are determined by the openness of the economy in terms of trade, the level of government intervention in the market, the efficiency of financial markets, the sophistication of physical infrastructure, the availability of management skills, the flexibility of labour markets and the extent to which the laws of the country are applied impartially and consistently. The interplay of these conditions is very specific to every country and creates a unique environment in which to do business.

The decision by individuals whether or not to respond to an opportunity and start a business is influenced by an additional set of factors, referred to as entrepreneurial framework conditions. These conditions refer to the following nine factors: access to finance; government policies; government programmes; education and training; transfer of research and development; the commercial, legal and financial infrastructure; the openness of the domestic market; access to physical infrastructure and the extent to which cultural and social norms support the choice of starting a business as a career option.

The relationship between small firms, large corporations and the macro-economic environment is of course not a linear one. ‘Different levels of development determine the environment in which entrepreneurial decisions are taken and, as a result, determine the type, quality and quantity of entrepreneurship in a country. In turn, the type, quality and quantity of entrepreneurship contribute (in a way not yet fully understood) to the growth and development of a country. Thus, a “virtuous circle” characterises the relationship between entrepreneurship and aggregate economic activity’ (Minniti 2005:13).

The primary measure of entrepreneurship that GEM uses is the Total Entrepreneurial Activity (TEA) index. The TEA index measures the percentage of individuals between
The GEM conceptual model

The ages of 18 and 64 that are involved in starting a new business. Individuals may start the business on their own account. They may also start the business in collaboration with or on behalf of an existing business. They do need to own the business, either partly or wholly, and to manage it, either on their own or with others.

The creation of a new business is a process, which GEM sees as a two-phase process.

The first phase is the start-up phase, a three-month period, when (one or more) individuals identify the products or services that the business will trade in, access resources, such as finance, and put in place the necessary infrastructure, which would include staff. When the business is in this phase of development, it is referred to as a start-up firm.

The next phase, a period of 3–42 months, is when this new business begins to trade and compete with other firms in the market place. When the business is in this phase of development, it is referred to as a new firm. The definition of a new firm is a business that has paid salaries or wages for longer than three months. It is therefore possible for a business to be classified as a start-up business indefinitely, if it fails to pay salaries and wages.

Once a business has established itself and is more than 42 months old, it is referred to as an established firm. For the first time since South Africa has participated in GEM, we have sufficient data to analyse characteristics of new and established firms in South Africa – specifically the extent to which they innovate – which we do in chapter three.

The TEA index, the primary measure used to compare the rate of entrepreneurship, both amongst countries and annual variations within a country, measures how many new businesses are started in a given year. The key question in the survey that is used to establish the TEA rate is ‘Are you, alone or with others, expecting to start a new business, including any type of self-employment, within the next three years?’ The TEA rate therefore includes start-up businesses and new firms, but does not include established firms. In other words, it measures early-stage entrepreneurial activity only.

The TEA rate captures individual entrepreneurship, but does not capture another equally important source – the launch of a new business venture by the owner-manager of an established firm. The 2001 South African GEM report shows that the owner-manager of an established firm is 17 times more likely to start a new business than is the average adult. This phenomenon is borne out by GEM data globally. This prompted New Zealand to re-define TEA as ‘Total Early-stage Activity’, rather than Total Entrepreneurial Activity, and the GEM 2005 Executive Report has followed suit. We concur that ‘Total Early-stage Activity’ is a more accurate description of what the index measures than ‘Total Entrepreneurial Activity’. Therefore whenever TEA is mentioned in this report, it is used to describe ‘Total Early-stage Entrepreneurial Activity’.

‘New firms’ describe a continuum of businesses, with a street trader in an informal settlement on the one end of continuum and a business such as a small, structured finance firm on the other. They differ fundamentally, not least in terms of the turnover and the quality of employment generated.

The tool that GEM has identified to distinguish between businesses that generate quality employment for the owner and potentially for others, and businesses that are little more than a survival strategy, is to ask interviewees about their motivation for starting a business. If the individual is starting the business because he/she has no other way of earning a living, then this business is referred to as one motivated by necessity. If, on the other hand, the individual is starting a business in response to an opportunity (be it an opportunity in the market place, or an opportunity to lead a different lifestyle or to earn more money), this business is referred to as one motivated by opportunity. The report therefore refers to opportunity entrepreneurship and necessity entrepreneurship.

From a policy point of view, we want to encourage the start-up and survival of businesses that generate enough income for the business owners) and generate employment for others.

1 Adapted from the GEM 2004 Executive Report.
2 Necessity enterprises refer to businesses usually referred to as survivalists in other literature, i.e. they are businesses established as a strategy to survive, because the person has no employment opportunity.
Data collection and research methodology

GEM relies on three sets of data that are collected annually:

- an adult population survey (APS);
- key informant interviews; and
- questionnaires completed by national key informants.

In addition, GEM uses standardised national data from international data sources such as the World Bank, the International Monetary Fund and the United Nations. These data are used to determine the relationship between entrepreneurial activity and national economic growth.

Adult population survey (APS)

The most important data set is a survey of the adult population, people between the ages of 18 and 64, which is a representative, random sample. In South Africa, the questionnaire was translated into eight languages. We interviewed 2,761 adults between the ages of 18 and 64, in seven provinces. In each province, we sampled three different community sizes. In most GEM countries, interviews are telephonic. However, in South Africa, this would not be representative and interviews are therefore conducted face-to-face.

The data is weighted using adult census survey data. Weights are applied to province, community size (three categories), gender, age (four categories) and language (English and Afrikaans for the white population).

Key informant interviews

We conducted a series of in-depth, face-to-face interviews with key informants. A list of key informants is contained in the appendix. Interviews are semi-structured, with the emphasis on obtaining in-depth, qualitative data on the nature, strengths and weaknesses of the entrepreneurial framework conditions in South Africa. Key informants in six of the nine framework conditions were chosen to represent government, private-sector service providers and entrepreneurs themselves. With respect to the entrepreneurs, we tried to be representative in terms of gender, race and the sophistication of the business. Key informants representing policy makers and service providers were selected on the basis that they have not been interviewed before, that they are experts in a particular framework condition, and are able to comment on other framework conditions. Interviews were transcribed, then summarised and coded, to enable comparison with other countries.

Questionnaires completed by national experts

Each key informant interviewed completed a detailed questionnaire after the interview. This standardised questionnaire was e-mailed to all the experts interviewed since 2001.

Survey evaluating entrepreneurship education

In section two we discuss an independent survey that evaluates the effectiveness of entrepreneurship education in schools. The research methodology of this study is discussed in the introduction to chapter six.

1 Area stratified probability sampling is used.
2 A copy of the questionnaire is available on www.gemconsortium.org. The questionnaire was translated into English, Afrikaans, Xhosa, Zulu, Sesotho, Venda and Tswana and North Sotho.
Section 1: The adult population survey

Introduction

This section of the report is the ‘monitoring’ part of GEM. We analyse and report on the adult population survey data. In 2005, AC Nielsen interviewed 2,761 adults between the ages of 18 and 64 – in seven provinces, in three different community sizes, and in eight different languages. Interviews were structured and conducted face-to-face.

GEM uses the adult population survey data to:

- rank different countries in terms of how entrepreneurial they are;
- analyse trends in individual countries and regions; and
- understand the characteristics of entrepreneurship and entrepreneurs.

Seven years’ of data from 43 countries has contributed to our understanding of the relationship between economic growth and entrepreneurship. In 2004, the GEM international research team established a causal relationship between the GDP per capita of a country and the extent and nature of its entrepreneurial activity. This in turn affects a country’s Total Early-stage Entrepreneurial Activity (TEA) ranking. These findings are confirmed by the GEM 2005 Executive Report.

The relationship between GDP per capita and TEA rates can be summarised as follows:

Developing and transitional economies are characterised by low GDP per capita income and high TEA rates. The low GDP per capita of these economies generally indicates that a large percentage of the population is either unemployed or underemployed (they earn very low wages). Individuals therefore start businesses because they are unable to find employment or to supplement or replace low wages. A relatively high proportion of entrepreneurial activity is therefore motivated by reasons of necessity rather than opportunity, i.e. it is necessity entrepreneurship.

As the GDP per capita increases – in countries such as Spain, UK and Greece – it leads to technological development and economies of scale, that allow ‘larger and established firms to satisfy the increasing demand of growing markets and to increase their relative role in the economy’ (Minniti 2005:14). As a result, large firms create more stable employment and people are less likely to start their own businesses. The TEA rate of these countries is generally low.

A further increase in GDP per capita – as is the case for countries such as the USA, New Zealand and Australia – results in higher TEA rates. The reason for an increase in entrepreneurial activity is that ‘more individuals have the resources to go into business for themselves in an economic environment that allows the exploitation of opportunities’ (ibid). In such high-income economies, lower costs and increased technological development, create opportunities for entrepreneurial firms to enjoy a competitive advantage. Consequently, a much smaller percentage of the TEA rate can be attributed to necessity entrepreneurship. High-income countries are characterised by high TEA rates and specifically by opportunity entrepreneurship.

This analysis means that, based on the GDP per capita, we can, to some extent, predict the level as well as the nature of early-stage entrepreneurial activity. For example, we can predict whether a high percentage of entrepreneurial activity will be in response to opportunities or simply for reasons of necessity or whether start-ups will have access to cutting-edge technology or not.

What would the implications be for South Africa? South Africa has a low GDP per capita, relative to the GEM sample. Based on this information, high levels of entrepreneurial activity would be predicted, of which a fairly high proportion would be motivated by necessity. Yet, South Africa’s GEM reports have consistently shown that our early-stage entrepreneurial rates do not fit this general trend for developing nations. Our overall entrepreneurial activity rate, including necessity entrepreneurship, is the lowest of all the GEM developing nations. Chapter five explores a key explanation for why South Africa’s entrepreneurial activity rates differ from those of other developing countries – the poor quality of our primary and secondary schooling.
In chapter one, we review where South Africa is ranked globally in 2005. We caution against attaching too much importance to the TEA index as an indicator of how entrepreneurial a country is, and ask not simply how much early-stage entrepreneurial activity is taking place, but also what kind of activity it is. Is it the kind that is sustainable, is it the kind that increases economic growth, does it create jobs, or does it simply generate a meagre income for the owner and his/her family? In addition, we reiterate and update South Africa’s indicators of economic activity.

In chapter two, we update the findings of GEM 2004. First, we summarise the key entrepreneurial activity rates since 2002. Second, we establish whether there are trends or whether the indicators of entrepreneurial activity are stable over time and can be used as benchmarks.

In chapter three, we assess South Africa’s entrepreneurial capacity. In previous GEM reports we have asked the question ‘who are our entrepreneurs?’ We have sketched the demographic profile of the individuals most likely to engage in entrepreneurial activity. In this chapter, we ask, who are our job creators? We do so against the backdrop of a discussion on the policy objectives of small business development.

In chapter four, we combine three years of data of South African firms and analyse how innovative they are. Where we compare South Africa to other countries we concentrate on comparisons with other developing nations, rather than on the GEM population at large.

While global comparisons of entrepreneurship are interesting, comparing South Africa with countries that are characterised by a similar GDP per capita and specifically by a dual economy – a formal and an informal economy – is of more value.

Throughout the report we therefore focus primarily on comparisons with other developing countries that have participated in GEM, all of which have a dual economy. For the purpose of this report, a developing country is defined as one that has a per capita income below $10 000\(^3\) and which does not have an extended socialist or communist history. In 2005, the developing countries that participated in GEM were: South Africa, Mexico, Brazil, Argentina, Chile, Jamaica, Thailand and Venezuela.

This ‘monitoring’ section confirms that South Africa does not conform to the expected pattern of entrepreneurial activity for developing countries. In addition, it argues that the quality of our entrepreneurship lags behind that of other developing countries. In section two we explore why this may be so.

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1 The least populated Northern Cape and North-West are not included.
2 See the GEM 2004 Executive Report for a detailed discussion.
Spain and Germany, which were ranked below South Africa, have higher TEA rates in 2005 than they had in 2004.

The TEA rate should be interpreted with caution, as it has several limitations, which are discussed below.

First, the TEA rate measures only how many new businesses are started by individuals and it measures only early-stage entrepreneurial activity. As outlined in the discussion of the GEM conceptual model, another important source of entrepreneurial activity is activity by established firms.

Second, the TEA rate reflects entrepreneurial activity, but does not reflect:

- the percentage of businesses that are motivated by necessity (a survival strategy) versus the percentage of businesses started in response to an opportunity;
- the percentage of businesses that succeed in graduating to the new firm phase; and
- the number of jobs these businesses create.

Therefore, the TEA rate only reflects the fact that entrepreneurial activity is taking place but does not say anything about the quality of that entrepreneurial activity. From a policy point of view, mere ranking of countries in terms of TEA is therefore of little importance without regard to the quality of the entrepreneurship.

Below, we compare the prevalence of established firms...
for all GEM countries sampled in 2005. Thereafter we compare South Africa to other developing countries that participated in GEM in 2005 and examine characteristics of entrepreneurial activity, as outlined above.

Figure 3 shows the prevalence rates of established business owners across countries in 2005. The vertical bars represent the 95% confidence intervals. The prevalence of established businesses in different countries varies enormously. South Africa’s percentages are lowest, at 1.3%. If we take the confidence intervals into account, we are 95% certain that between 0.88% and 1.72% of South African adults between the ages of 18 and 64 own and manage, either on their own, or with others, a business that is older than three and a half years. In Brazil, Thailand, Greece, New Zealand and China, more than 10% of the adult population own and manage an established business.

South Africa is followed by Mexico (1.9%), Hungary (2.0%) and France (2.3%) (Minniti 2005). If we consider confidence intervals, the differences between South Africa, Mexico, Hungary and France are not significant and can be ascribed to sampling error. Nevertheless, our established firm rate remains one of the lowest of all the GEM countries.

Comparison of South Africa and other developing countries

In this section we broadly consider two dimensions of entrepreneurship that are indicators of quality – the rate of opportunity entrepreneurship and the sustainability of start-up businesses.

Unfortunately we do not have complete data for other countries for 2005 to analyse the job creation potential of the respective countries. We do, however, compare developing countries’ job creation potential in chapter five, using 2003 data. And, in chapter three, we analyse the job creation potential of South African firms.

Other dimensions that are indicators of the quality of entrepreneurship and that are possible to analyse with longitudinal data are examined in chapter four. Below we compare South Africa to the seven other developing countries that participated in GEM in 2005.

Quality of entrepreneurship: the prevalence of opportunity versus necessity entrepreneurship

Why is it important to distinguish between necessity and opportunity entrepreneurship? What are the
relative contributions of necessity and opportunity entrepreneurship to economic activity and to job creation?

There are many studies that indicate that necessity – otherwise known as ‘survivalist’ – entrepreneurial activity provides little more than some income for the owner-manager and predominantly unpaid employment for family members. In addition, this meagre income is often not sustainable. We consider these arguments below.

Necessity or ‘survivalist’ enterprises tend to operate in a small number of sectors, primarily in the retail or service industries, selling the same products or services to the same limited market. It helps to think of examples – hawkers, spaza (grocery) shops, small shebeens, hairdressers and people selling sweets, meat or fruit.

These businesses trade in low value-added activities, with small profit margins and they face fierce competition. The result is threefold. First, their earnings are generally below the poverty line; Statistics SA records average monthly earnings for informal businesses of R485 for ‘other’, R885 for trade and R1 179 for manufacturing sectors respectively.

Second, as the barriers to entry are low – little skill or capital is required – new necessity businesses are continually established in over-saturated markets, which threaten the existence of existing businesses. This phenomenon is not one where healthy competition stimulates innovation, but one where people are competing for survival. This cycle, whereby the birth of some enterprises results in the demise of others, has been termed ‘involutionary growth’ or churning.

Third, the job-creation potential of necessity enterprises is limited (see chapter three). GEM data has consistently shown that the economic contribution of opportunity-motivated firms is higher than for necessity-based firms.

When we compare South Africa to other developing countries, the question is: to what extent is the TEA rate of developing countries predominantly made up of necessity entrepreneurship? In other words, if most of the disparity in TEA rates between South Africa and other developing countries sampled can be explained by higher rates of necessity entrepreneurship activities in those countries, then the differences may be of little economic consequence.

Figure 4 compares the opportunity early-stage entrepreneurial activity rates with necessity early-stage entrepreneurial activity rates of developing countries. Figure 4 shows that if one excludes necessity entrepreneurship, i.e. if one examines only opportunity entrepreneurship, South Africa’s entrepreneurial activity is still the lowest of all the developing countries.

Below we consider the following: First we disaggregate the TEA rate for developing countries into start-up and new firms. We note the proportion of start-up firms relative to new firms that together constitute the TEA rate. We show that if most of the TEA rate is attributable to high start-up activity, and little new firm activity, we can infer that the
probability of a start-up firm succeeding to pay wages for longer than three months and thereby graduating to become a new firm, is low. Conversely, if the TEA rate is attributable to proportionately higher new firm rates, we can infer that the probability of a start-up firm succeeding to become a new firm is very high.

From a policy point of view, we are interested in whether entrepreneurial activity is sustainable. In other words, if most of the other developing countries have high rates of start-up activity and low new firm rates, relative to South Africa, then the fact that our overall TEA rate is lower is of little consequence.

Second, we consider the probability of early-stage entrepreneurial activity (start-up and new firms) becoming established firm activity. We use a ratio of early-stage business (a combination of start-up and new firms) to established business, as a proxy for the survival chances of the early-stage business, beyond three and a half years.

Success rates of start-up businesses

In order to analyse the sustainability of start-up firms, we distinguish between start-up firms and new firms, as shown in Figure 5. Start-up firms are those firms that have paid salaries for less than three months. New firms are those firms that have paid salaries for more than three months, but for less than 42 months.

Figure 5 indicates that, with the exception of Brazil, South Africa’s start-up rate is lowest. Brazil’s high TEA rate is in fact attributable to its high new firm activity. More importantly, of all the developing countries, only Mexico’s new firm rate is lower than that of South Africa. Mexico’s start-up rate is higher than South Africa’s, but its new firm rate is lower. We can therefore infer that, with the exception of Mexico, South African start-up businesses are least likely of all the developing countries sampled to mature to the new firm stage.

Survival chances of early-stage businesses

Table 1, which is extracted from the GEM 2005 Executive Report calculates the chances of early-stage businesses (a combination of start-ups and new firms) surviving beyond 42 months, to become established businesses. The countries are then ranked accordingly.

The ratio of established business to early-stage business (a combination of start-up and new firms) is used as a proxy for the survival chances of the early-stage business beyond three and a half years. Both the ratio and the rank are sensitive to sampling variation, and must therefore be interpreted with caution. Nevertheless, if one has regard to the global rankings, it is evident from Table 1 that only Brazil, which is ranked 14th, is ranked in the top 50% of all the GEM countries. All the other developing countries are located in the bottom third, and South Africa, Mexico, Chile and Venezuela are the last four countries in the global ranking.

We can infer from the low overall ranking of the developing countries that, with the exception of Brazil and Thailand, the chances of a business surviving beyond three and a half years in a developing country is generally lower than in a developed country. The prognosis of survival – and therefore of establishing sustainable businesses – in South Africa is particularly poor.
The GEM 2005 Executive Report finds that there does not appear to be a global correlation between early-stage entrepreneurial activity, i.e. businesses that have survived for 42 months, and established firms. In other words, ‘having high early-stage rates of entrepreneurship is not a sufficient condition for high rates of established business ownership’ (2005:18).

Commentary

In this chapter, we have compared South Africa to other developing countries and considered two factors that are indicators of the quality of entrepreneurial activity – the extent to which entrepreneurial activity is opportunity- or necessity-motivated; and the sustainability of start-up activity. With the limited cross-country data for 2005, we were unable to consider a third, very important, indicator, namely the potential of firms to create jobs. However, we examine South African firms’ potential to create jobs in chapter three.

A comparison of South Africa’s established firm entrepreneurial activity rate with that of other GEM countries shows that South Africa is one of the bottom four countries in the sample. A comparison of South Africa’s opportunity/necessity ratio with that of other developing countries shows that South Africa has the lowest opportunity entrepreneurship rate of all the developing countries. Likewise, with the exception of Mexico, start-up businesses are less likely to mature to become new firms in South Africa than in any other developing country sampled.

We have the second-lowest new firm rate of all the developing countries. Lastly, our early entrepreneurship-to-established firm ratio is the lowest of all the GEM countries sampled. This means that the probability of a firm surviving beyond 42 months is less likely in South Africa than in any other GEM country sampled in 2005. This suggests, perhaps, that the quality of early-stage entrepreneurship activity in South Africa is somewhat lower by comparison with other countries in the GEM sample. The reasons for this are explored in subsequent chapters.

1 As GEM interviews individuals rather than firms, established firms are only those firms where at least one of the original owners is still an owner-manager. This does mean that the estimated prevalence rates may be lower than those indicated by other statistics on registered firms percentages (Minniti 2005).
2 Statistics South Africa (2002) states that more than two-thirds of ‘non-vat registered businesses’ (69.4%) were found in wholesale and retail trade and in the catering and accommodation sectors. A further 9.2% were active in the manufacturing sector.
4 Rogerson et al (1997) cites eight articles to support this finding.
This chapter is a snapshot of South Africa’s entrepreneurial activity from 2002–2005. We compare the main entrepreneurial activity indices of each year and show that entrepreneurial activity in South Africa is a stable national characteristic.

Like chapter one, this chapter is descriptive and provides the context for the chapters that follow.

Figures 6, 7 and 8 compare South Africa’s entrepreneurship activity rates by year from 2002–2005. We exclude 2001 data because improvements in the survey methodology meant that more accurate (and lower) rates of entrepreneurial activity were recorded in 2002.

Figure 6 depicts the TEA for 2002–2005. To determine whether the differences between the respective years are significant or not, we consider the 95% confidence intervals. Where the confidence intervals overlap, i.e. the upper limit of one year overlaps with the lower limit of another year, we can be 95% certain that the differences between the years are attributable to sampling errors.

If we take confidence intervals into account, we can say with 95% confidence that the differences in the TEA rate for 2002–2005 are not significant, save for the difference between 2002 and 2003.

The TEA rates are disaggregated into opportunity and necessity enterprises as well as start-up and new firm ventures, as shown alongside. These figures give some indication of why the TEA rates in 2002 and 2003 differ.

Figure 7 indicates that annual variation in the TEA rate seems to be attributable to variance in the rate of necessity-motivated entrepreneurship. However, once the confidence intervals are taken into account, we can say with 95% confidence that, with the exception of the differences between 2002 and 2003, the differences are due to sampling error.

What is encouraging is that the opportunity entrepreneurship rate, which makes a far more significant economic contribution than necessity entrepreneurship, is stable.

Figure 8 compares start-up, new firm and established firm activity. The only significant differences we can infer from looking at the confidence intervals is that there is some evidence for saying that the difference between the start-up rate for 2002 and 2003 is significant. The start-up rate in 2003 was significantly lower than was the case in 2002.

This difference in start-up rate provides an explanation for the difference in TEA rate between 2002 and 2003.
New firm and established firm activity rates are very stable, with no significant annual variation.

**Commentary**

Figures 6 to 8 show that opportunity entrepreneurship and new and established firm activity appear to be stable phenomena – an indicator that the political, institutional and macroeconomic conditions for doing business in South Africa are predictable. But we cannot afford to be complacent. With the exception of Mexico, South Africa’s new firm rate is lower than all the sampled developing countries and its established firm rate is the lowest of all the 35 GEM countries sampled in 2005. (Although if we take into account confidence intervals, the differences between South Africa, Mexico and Hungary are not significant).

It appears that the rate of start-up businesses is more prone to fluctuation. This may reflect responses to short-term economic fluctuations.

In the next chapter we assess how much employment is generated by start-up, new and established firms and the profile of entrepreneurs who are most likely to create jobs. In chapter four, we use longitudinal data to examine the innovation propensity of new and established firms in South Africa. In chapter five we embark on a more detailed comparison of South Africa and developing countries, through the lens of education.

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With the exception of Mexico, South Africa’s new firm rate is lower than all the sampled developing countries and its established firm rate is the lowest of all the 35 GEM countries sampled in 2005.

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Chapter 3: Who provides South Africa’s jobs?

By Marlese von Broembsen and Eric Wood

The stated policy objectives of South Africa’s National Small Business Strategy are: economic growth, employment creation and redistribution (of wealth and opportunity). Poverty alleviation, a fourth objective, is not mentioned as one of the objectives of the government’s small business development strategy. Yet, the focus of many of the government’s programmes has been on the informal sector and hence could be construed as having a poverty alleviation focus.

Several academics have argued that these four different objectives require entirely different support strategies for very different constituencies. A single institutional framework, they argue, cannot accommodate such different objectives as poverty alleviation, redistribution and economic growth. Yet, this is currently the case. While each policy objective is valid, Manning (1993) and Rogerson (2003) argue, government has to establish a hierarchy of policy objectives, and has to ensure that the necessary institutional frameworks for each are in place, and capable of achieving the desired results.

The need for careful prioritisation of policy objectives becomes even more critical if different policy objectives are mutually inconsistent or in conflict in any way. Good policymaking thus involves the consideration of possible trade-offs between different policy objectives.

This chapter focuses on one policy objective, that of job creation. We use GEM data collected over three years (2003–2005) to examine the following:
- which kinds of firms provide the most employment;
- the demographic and socioeconomic factors that influence the likelihood of an entrepreneur creating employment; and
- the possibility of trade-offs between job creation and other policy objectives, if government targets different kinds of firms and entrepreneurs.

Which kinds of firms create jobs?

Below we consider two questions. The first is ‘Does the informal sector create jobs?’ We examine the extent to which necessity firms contribute to job creation, compared to opportunity firms. The second is ‘Which firms are likely to create jobs – start-ups, new firms or established firms?’

The informal sector: does it create jobs?

In its annual ‘The State of Small Business’ publication, the Department of Trade and Industry (DTI) articulated the role of the informal sector and its potential for job creation as follows:

In terms of economic development, SMMEs play a crucial role. They enable people to meet their basic needs and survive. Through the growth of the SMME sector, survivalist enterprises can become micro and small enterprises, creating jobs and raising the standards of living for hundreds of thousands and even millions of South Africans in urban and rural areas (Ntsika 2001:38).

This is one of many statements that suggest that the alleviation of poverty is an implicit policy objective of the National Small Business Strategy. The premise is that survivalist or necessity enterprises will firstly meet the basic needs of the owner-managers and then grow into micro- and small enterprises, which not only will increase the income of the owner, but also provide jobs for others.

Below we use GEM data to investigate this notion that survivalist or necessity enterprises become small businesses that create jobs. First we consider the employment created by start-ups, new and established firms respectively. Thereafter we examine the employment created by those necessity and opportunity firms that become new and established firms.

In chapter one, we relied on Statistics South Africa’s findings to argue that necessity businesses produce minimal income for the owner-manager and for any employees. Below we investigate necessity businesses in the GEM database to see how many jobs they create.

### Table 2: Employment levels in start-ups, new firms and established firms

<table>
<thead>
<tr>
<th></th>
<th>Start-up firm (%) of firms</th>
<th>New firm (%) of firms</th>
<th>Established firm (%) of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>No employees</td>
<td>96.1</td>
<td>16.2</td>
<td>27.3</td>
</tr>
<tr>
<td>1–5 employees</td>
<td>3.5</td>
<td>74.3</td>
<td>61.4</td>
</tr>
<tr>
<td>6–19 employees</td>
<td>0.4</td>
<td>7.6</td>
<td>9.1</td>
</tr>
<tr>
<td>20+ employees</td>
<td>0.0</td>
<td>1.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean employees per firm:* 0.1, 3.1*, 3.2*

* This is an estimate based on the following assumptions regarding the mean number of jobs in each employment category: 1–5 employee firms have a mean of 2, 6–19 employee firms have a mean of 9, and 20+ employee firms have a mean of 50.

(a) Indicates that the figure is significantly higher (5% level) than that for startup firms using the LSD test.
Stage of development of the firm

Table 2 provides data on the employment levels of owner-managed firms in the GEM database. The table shows separate data for three categories of owner-managed firms, namely start-ups, new firms and established firms. For each category of firm, the table shows the proportion with the number of employees falling into the following categories: no employees, 1–5 employees, 6–19 employees, and lastly 20 or more employees. Thus, it can be seen that 96.1% of start-up firms in the GEM database have no employees, 3.5% have between 1 and 5 employees, 0.4% have between 6 and 19 employees, and none have 20 or more employees.

Clearly, only a tiny minority of firms in the start-up phase take on any staff at all. Given the high risk and limited resources typical of a start-up firm, this result is entirely expected. The table also shows that the mean number of jobs in start-up firms is 0.1. Thus for every 100 start-up businesses, only 10 people will be employed on average. By contrast, the mean number of jobs in new firms and established firms is 3.1 and 3.2 respectively, or at least 32 times greater than for start-up businesses. Interestingly, the mean number of jobs among established owner-managed firms is only marginally higher than among new firms.

While the proportion of established firms with six or more employees is slightly higher than for new firms, the proportion of established firms with no employees is substantially higher than for new firms. Thus it appears that South African owner-managers are more likely, over time, to reduce the number of staff than to take on additional staff. In addition, it appears that increasing numbers choose not to employ any staff at all. The reasons for this are likely to be complex and are beyond the scope of this discussion.

Given the low probability of there being any employees in start-up firms, it was decided to focus the remaining analysis solely on new and established firms. Table 3 shows the employment created by opportunity and necessity businesses that have graduated to the new firm phase, i.e. businesses that pay employees for three months or longer.

The mean number of employees is 4.4 for opportunity firms and 1.6 for necessity firms. Opportunity firms are more than four times as likely as necessity firms to employ six or more people and almost half as likely not to have any employees. No necessity firms employ 20 or more staff.

On the basis of these results, only a tiny fraction (less than 3%) of necessity businesses – which constitute all ‘survivalist’ businesses and most micro-enterprises in the informal economy – are likely to create significant numbers of jobs. This calls into question the notion that the informal sector has the potential to contribute much to job creation.

The demographic and socioeconomic profile of job creators

In the remaining sections of this chapter, we examine the employment levels among new and established firms. We analyse the impact of demographic and socioeconomic factors – specifically gender, education and race – on the probability of the owner-manager(s) of a new or established firm to create employment.

An analysis of GEM data (Autio 2005) suggests that the primary job creators worldwide, are firms that employ 20 people or more. In both developed and developing countries, these firms are responsible for an estimated 80% of new job creation by entrepreneurs (Autio 2005).

Therefore, in the analysis that follows, we are specifically interested in understanding which groups of entrepreneurs are most likely to be the owner-managers of firms that employ 20 or more people.
Gender

GEM data shows that, worldwide, men are on average twice as likely to start a business as their female counterparts. South Africa is one of a handful of countries where the difference between male and female entrepreneurial activity is statistically insignificant. The other countries are Ecuador, Hungary, Finland, Japan and the United States (Minniti et al 2004). While men are more likely than women to start a business in South Africa, the difference is not significant.

However, men are significantly more likely than women to become a new or established firm owner-manager. Table 4 shows that 2.7% of male entrepreneurs, compared to 2% of female entrepreneurs, succeed in becoming owner-managers of new and established firms and, when it comes to employment creation, men are the primary creators of employment. In this respect, South Africa conforms to the global picture.

As with Tables 2 and 3 above, Table 4 shows the mean number of employees per firm. In addition, Table 4 shows an estimate of the mean number of employees per 100 people. This estimate is based both on the probability of an individual becoming the owner-manager of a new or established firm together with the mean number of employees employed by such owner-managed firms. We take the case of women as an illustration.

Based on GEM research, we know that two in every 100 adult women (2%) become owner-managers of new or established firms. The mean number of employees in such firms is 2.2. Calculating the product of these gives us an average expected number of employees in women-owned new and established firms of 4.5 for every 100 women in the population.

Table 4 shows that the mean number of jobs per 100 adult men is more than double the figure for women at 10.4. In other words, for every hundred men in the population, we estimate that the number of jobs created by male entrepreneurs is a little more than 10 jobs. On average, therefore, GEM estimates suggest that the job creation potential of men is 2.3 times that of women.

In the two categories that are responsible for most employment creation, 6–19 employees and 20+ employees, men are strongly represented. A healthy 13% of male owner-managers create employment for between six and nineteen people. Only 2.8% are likely to be owner-managers of high-growth businesses that create in excess of 20 jobs. By contrast, only 2.4% of women entrepreneurs provide six or more jobs – more than 80% lower than the probability for male entrepreneurs.

The GEM report on Women (Minniti et al 2004), examines why, even when women succeed in becoming owner-managers of new and established firms, they are less likely than men to create many jobs. The report presents the following findings:

First, the study argues that women tend to adopt a more conservative approach to starting a business. Women are more likely than men to start consumer-orientated

### Table 4: Levels of employment for men and women entrepreneurs

<table>
<thead>
<tr>
<th></th>
<th>Male (%) of firms</th>
<th>Female (%) of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>No employees</td>
<td>20.4</td>
<td>22.0</td>
</tr>
<tr>
<td>1–5 employees</td>
<td>63.9</td>
<td>75.6</td>
</tr>
<tr>
<td>6–19 employees</td>
<td>13.0</td>
<td>1.2</td>
</tr>
<tr>
<td>20+ employees</td>
<td>2.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* This is an estimate based on the following assumptions regarding the mean number of jobs in each employment category: 1–5 employee firms have a mean of 2, 6–19 employee firms have a mean of 9, and 20+ employee firms have a mean of 50.

** This is the product of the probability of a new or established firm and the mean number of employees per firm.

(a) Indicates that the figure is significantly higher (10% level) than for females using the Mann-Whitney test.
businesses than service-orientated businesses, where start-up costs are lower, but growth is slower. In addition, women tend to start businesses in established markets, rather than exploring new markets. The data sets are still too small to verify whether this is the case for South Africa.

Second, the study argues that businesses started and managed by women tend to be smaller than those started by men. The report argues that the start-up size of the business has to do with the different managerial styles of the sexes. Women forge relatively strong ties and egalitarian relationships, while men forge relatively weak ties and hierarchical relationships. ‘The hierarchical structure of male organisations allows them to create organisations that effectively monitor large numbers of people and that permit rapid dispersal of information. The stronger ties of female organisations, on the other hand, reduce the need for monitoring and for systems of explicit incentives. This analysis suggests that male and female entrepreneurs will differ in the value attached to start-up size and to business expansion’ (2004:28).

Third, the study argues that the motivation to start a business is far more complex for women than men. Whereas financial reward is a strong driver for men, women are motivated as much by the kind of flexibility that the business will afford them to accommodate family needs and child rearing. Other studies show that irrespective of their socioeconomic background, women are more concerned with security than profits. In other words, women are more risk-averse than men, preferring a lower, but secure income to a higher, insecure income. This has much to do with women being the primary caregivers of children and aging parents.

The trade-off between job creation and other policy objectives

What are the policy implications for South Africa? This is an example of trade-offs between policy objectives. Both a policy objective supporting redistribution and a policy objective aimed at poverty alleviation would support special programmes that target women entrepreneurs. South Africa has several such programmes. However, this analysis of employment data shows that programmes that target women are not optimal if one views them purely from the perspective of job creation. Moreover, such programmes imply a diversion of resources away from interventions that could increase job creation.

Education

Table 5 shows employment levels in owner-managed firms in relation to the educational level of the entrepreneur.

Table 5 shows that there is a strong positive relationship between the level of educational attainment of the entrepreneur and the number of people that he/she employs. Owner-managers with tertiary education employ on average 5.4 people. Owner-managers who

<table>
<thead>
<tr>
<th></th>
<th>Some secondary (% of firms)</th>
<th>Completed secondary (% of firms)</th>
<th>Tertiary (% of firms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No employees</td>
<td>21.1</td>
<td>22.5</td>
<td>15.9</td>
</tr>
<tr>
<td>1–5 employees</td>
<td>76.1</td>
<td>60.6</td>
<td>70.5</td>
</tr>
<tr>
<td>6–19 employees</td>
<td>2.8</td>
<td>14.1</td>
<td>6.8</td>
</tr>
<tr>
<td>20+ employees</td>
<td>0.0</td>
<td>2.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Mean employees per firm*</td>
<td>1.8</td>
<td>3.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Probability of new or established firm (%)</td>
<td>1.5</td>
<td>3.1*</td>
<td>5.4*</td>
</tr>
<tr>
<td>Mean employees per 100 people**</td>
<td>2.6</td>
<td>11.9</td>
<td>29.3</td>
</tr>
</tbody>
</table>

* This is an estimate based on the following assumptions regarding the mean number of jobs in each employment category: 1–5 employee firms have a mean of 2, 6–19 employee firms have a mean of 9, and 20+ employee firms have a mean of 50.

** This is the product of the probability of a new or established firm and the mean number of employees per firm.

(a) Indicates that the figure is significantly higher (5% level) than that for ‘some secondary education’ using the LSD test.

(b) Indicates that the figure is significantly higher (5% level) than that for ‘completed secondary education’ using the LSD test.

Table 5: Employment levels in relation to educational attainment of the entrepreneur
Section 1: The adult population survey

Global Entrepreneurship Monitor South African Report 2005

Entrepreneurs with tertiary education employ, on average, three times as many people as entrepreneurs who have not completed secondary education.

Similarly, there is a strong positive relationship between the level of educational attainment and the probability of an individual becoming the owner-manager of a new or established firm. We estimate that 5.4% percent of adults with tertiary education are owner-managers of new or established firms, compared to 3.1% who have completed secondary education and a small 1.5% who have some secondary education.

The net result is that the potential of tertiary-educated adults to create employment is 2.5 times greater than for adults who have only completed secondary education, and eleven times greater than for adults who have not completed secondary education. For every 100 adults with tertiary education, entrepreneurs in this category employ 29.3 people on average, by comparison with 11.9 for the group who have only completed secondary education and 2.6 for adults who have not completed secondary education.

The more educated the owner-manager, the more likely they will have a business that employs more than 20 people. It must be remembered that these businesses are responsible for most employment creation. A significantly bigger percentage (6.8%) of owner-managers with tertiary education employ more than 20 people, compared to 2.8% of owner-managers who have completed secondary education.

Table 6 shows that, on average, the job creation potential of Indians is the highest. For every 100 Indian adults, 20 people are likely to be employed; and for every hundred Indian

| Race |

Historically, white owner-managers have had greater access to education and finance. An assumption in SMME literature is that they are therefore more likely to be the primary job creators (Kesper 2000).

Table 6 shows the distribution (in terms of number of jobs created) for businesses owned and managed by each population group.

GEM data confirms that Indians and whites are more likely than coloureds or blacks to start a business; their businesses are more likely to mature into new and established businesses; and they are more likely to employ more staff.

The mean number of employees per firm for Indian and white entrepreneurs is more than double the mean number of employees for coloured or black entrepreneurs. Firms owned and managed by Indians employ on average 5.8 people and firms owned and managed by whites employ on average 4.6 people. By contrast, firms owned by black or coloured entrepreneurs employ on average 2.2 and 1.9 people respectively. Indian entrepreneurs are almost twice as likely as white entrepreneurs to employ 20 people or more.

Table 6 shows that, on average, the job creation potential of Indians is the highest. For every 100 Indian adults, 20 people are likely to be employed; and for every hundred

| Table 6: Employment levels by race of entrepreneur |

* This is an estimate based on the following assumptions regarding the mean number of jobs in each employment category: 1–5 employee firms have a mean of 2, 6–19 employee firms have a mean of 9, and 20+ employee firms have a mean of 50.

** This is the product of the probability of a new or established firm and the mean number of employees per firm.

(a) Indicates that the figure is significantly higher (5% level) than that for black category using the LSD test.
whites, 18.5 people are likely to be employed. By contrast, for every hundred black adults, 4.1 people are likely to be employed and for every hundred coloured adults, 5.3 people are likely to be employed.

The obvious inference is that the legacy of unequal access to education, land and therefore collateral to access finance, accounts for the significant discrepancy between white and Indian entrepreneurs on the one hand and black and coloured entrepreneurs on the other. GEM data allow us to explore whether the differences are partly attributable to a differential access to education.

Table 7 shows the mean number of employees in owner-managed firms for every 100 adults in the population. Separate figures are provided for different levels of educational attainment within each race group. It is clear from the table that for blacks, coloureds and whites, the employment potential rises dramatically with educational attainment. In all three race groups, the employment potential is greatest among those with tertiary education, at least seven times higher than for those who have not completed secondary education.

By contrast, the greatest employment potential among Indians does not lie with those who have tertiary education. Instead, Indians who have completed secondary education have the greatest employment potential. It would seem that Indians with tertiary education are more inclined to pursue a professional career than is the case with other race groups.

With the possible exception of Indian entrepreneurs, these results highlight the enormously positive impact on job creation potential of tertiary education, particularly for blacks, coloureds and whites.

These results also reflect the legacy of unequal access to education in South Africa. Even at the same level of education, the potential of black and coloured adults to create employment is dramatically lower than for Indians and whites.

In the category of those who have completed secondary education, the potential to create employment among blacks and coloureds is about 75% lower than that of whites; while in the category of tertiary education, the potential of blacks and coloureds to create jobs is still 40% lower than for whites.

The results imply that secondary schooling for blacks and coloureds is markedly inferior by comparison with that for Indians and whites in terms of its positive impact on job creation potential. This topic is explored in more detail in chapter five.

Concluding comments: implications for policy

All are not equal in employment creation. Employment creation among owner-managed firms is highly skewed towards a relatively small number of firms. The level of educational attainment of the entrepreneur is by far the best predictor of the job creation potential of a firm. The job creation potential rises more than fourfold when an individual completes secondary schooling. And with the completion of tertiary education, it rises nearly threefold again. This pattern is consistent for blacks, coloureds and whites. The pattern for Indians is somewhat different, as the job creation potential appears to be lower among tertiary-educated Indians than among those who have only completed secondary education.

The bulk of new jobs will arise from the tiny proportion of owner-managed firms which create 20 or more jobs. The evidence from GEM is that the likelihood of such firms arising from survivalist entrepreneurial activity, or among entrepreneurs who have not at least completed secondary education, is extremely low.

There are a large number of government programmes that contribute to the development and growth of high-potential firms in South Africa. These include the Manufacturing Advice Centre (MAC) Programme, the Support Programme for Industrial Innovation (SP III), the Innovation Fund, the Incubator Programme formerly run by Godisa, as well
as targeted industry initiatives, such as the government initiative to promote the development of the biotechnology industry.

At the very least, these results imply that such programmes should continue to support high-potential entrepreneurs, as they are likely to impact the most on the net job creation potential of owner-managed firms. These results suggest that there may indeed be real trade-offs between different policy objectives for the business sector. By far the most obvious, and arguably the most important, are trade-offs between the objectives of job creation and redistribution on the one hand, and job creation and poverty alleviation on the other.

These findings clearly demonstrate that tertiary-educated adults have a far greater potential to create jobs than those who have not completed secondary school. From both a redistributive and a poverty-alleviation perspective, it makes perfect sense to shift resources to those who have not had the privilege of good schooling or tertiary education. However, this would run counter to the objective of job creation. Similar trade-offs would seem to exist for shifting resources between entrepreneurs across race groups and between men and women.

To manage the politics around such trade-offs would be difficult, in any country. Given South Africa’s history and fledgling-democracy status, it will be especially difficult. However uncomfortable such trade-offs might seem, it will be better to acknowledge that they exist and manage them in an informed way. The best policy choices will be made with a clear understanding of the potential conflicts that exist between different policy objectives. Ultimately, though, policy will be most effective if a limited number of achievable objectives are set. There needs to be a willingness to make the tough decisions that will result in the achievement of priority objectives.

As others have pointed out, given South Africa’s apartheid legacy of discrimination, more especially the legacy of a skewed education and skills base, ‘it is unlikely, in the short-term, that strong and competitive enterprises will emerge in large numbers from the historically disadvantaged groups of the population’ (Qualmann 2000:ii). In light of this conclusion, it is contended that the goal of employment creation through the SMME economy may only be achievable ‘at the expense of economic empowerment and income redistribution’ (Kesper 2000:8). Job creation at socially desirable levels would constitute a form of redistribution. Given the association between unemployment and poverty (May et al 1997), job creation is key to any poverty alleviation strategy. It has been shown that the potential of necessity businesses to create jobs or to generate income above the poverty line is low. We would argue, therefore, that the most appropriate use of SMME resources to alleviate poverty would be to focus SMME support on job creation.

In our view, it would be optimal to prioritise job creation in the short to medium term. Social justice demands that redistribution is also prioritised, but perhaps its realisation through SMME policy should be a long-term rather than a short-term objective.

1 The Local Business Service Centres – SEDA’s predecessor’s flagship programme; Khula-Start; Khula’s Retail Financial Intermediaries.
2 Manning 1977; Rogerson 2003 (Dorfling 2001 in Rogerson); Qualmann 2000.
3 Hilhorst and Oppenooth 1992; Nquelo and Malan 1998; Berger 1989; Wright 1999; Downing 1990
4 The social benefits of encouraging female entrepreneurs are numerous. First, studies in South Africa concur that female spending patterns are different to male spending patterns. (Bertrand et al 2000; Duflo 2000; Ardington and Lund 2005). Females tend to spend money on food and education for children and very little on their own personal needs, while men spend substantially more on their personal needs. Second, greater economic independence of women facilitates more egalitarian domestic relationships between men and women, which challenges power relations in households. This in turn has a range of important social implications. These include women having more control over their bodies, including reproductive implications. In addition, economic independence facilitates women exercising greater decision-making power over the allocation of household resources (Duflo 2000, UNDP/SEPED 1999).
5 SA Women’s Entrepreneurship Network; Gender and Women Empowerment Programme; Technology for Women in Business (TWIB) and Khula-Start
6 While Indians were historically as disadvantaged as blacks and coloureds by legislation, many Indians were able to afford private schools. Indians were therefore generally less educationally disadvantaged than the other two race groups.
Chapter 4: How innovative are South African firms?

By Retha Scheepers

It has been widely acknowledged that innovation is of great importance for economic growth and job creation. As early as in the 1950s, Nobel Prize winning economist Robert Solow showed that only half of economic growth can be accounted for by increases in capital and labour. He attributed the other half – now called the ‘Solow residual’ – to technological innovation.

Today academics and the popular business press tell us that we are living in a new age with a new economy. In this new economy, all businesses, regardless of their size, need to innovate to satisfy the changing needs of their markets, both local and global.

In the literature, innovation is often considered to be an integral part of entrepreneurship. Outcomes of innovation include: introducing new products or services; competing in new ways; and using technology in new and creative ways to create value for customers. It is important to remember that innovation is context-specific, and that what is seen as innovative in one country may not necessarily be seen as innovative in another.

In this chapter we analyse three years of GEM data to explore the following:

- the extent to which owner-managed South African firms are innovative; and
- whether the prevalence of innovative activity has changed over the last three years.

As shown in chapters one, two and three, the high failure rate of start-up businesses means that their contribution to economic growth and to job creation is very limited. In this chapter we therefore analyse only new and established firms. We analyse data for 2003, 2004 and 2005.

The analyses that follow are valuable in three ways. First, this chapter focuses on the innovation propensity of new and established businesses, something we have not done before. Second, there is now sufficient data available for us to do a longitudinal analysis over a three-year period. This allows us to investigate whether innovative activity among owner-managed firms is stable over time. Third, this is a valuable contribution to research in South Africa. Very little literature is available and few empirical studies have previously been conducted that focus on the innovation propensity of South African firms.

GEM measures customer-, competitor- and technology-orientated innovation by asking entrepreneurs and business owners to rate their firms on these three aspects. Customer-orientated innovation explores the novelty of products and services. Competitor differentiation asks owner-managers to compare how different or similar their products are to those of their competitors. Technology-orientated innovation focuses on the newness of technologies or procedures required for products and services. These three aspects of innovation will be discussed below.

Customer-orientated innovation

The first indicator of an enterprise’s propensity to innovate is customer-orientated innovation, also called product novelty. An enterprise’s inclination to product novelty is shown by continuous product development, with aspects of novelty. In the GEM adult population survey, product novelty is determined by asking respondents: ‘Will all, some or none of your potential customers consider this product or service new and unfamiliar?’ Depending on the response, firms can then be classified according to whether they offer products that are (i) not new to any, (ii) new to some, or (iii) new to all their customers. Figure 9 compares the customer-orientated innovation of South African owner-managers over three years (2003–2005).

The majority of businesses innovate relatively little. Only a small fraction of owner-managers claim that what they offer is new to all customers. Owner-managers who offer products that are new to all customers have increased from 9% in 2003 to 15% in 2005. However, this increase is not statistically significant and may merely be a fluctuation. More years of data would be needed to determine whether this is an upward turn that will continue.

Owner-managers who claim that their products are new to some of their customers (moderately innovative) have increased slightly from 20% in 2003 to 26% in 2005. This difference is also not statistically significant.
The majority of businesses innovate relatively little. Only a small fraction of owner-managers claim that what they offer is new to all customers. Owner-managers who offer products that are new to all customers have increased from 9% in 2003 to 15% in 2005.

The proportion of owner-managers who claim to offer products that are not new to any of their customers has declined over the three-year period. This group offering mature (not new to any) products to their customers has declined from 71% in 2003 to 59% in 2005.

This decrease is statistically significant at the 10% significance level. Thus, the picture has changed slightly from 2003 to 2005. There has been a shift from offering older, mature products to customers to a situation where owner-managers of new and existing firms offer products that are moderately to highly innovative. However, we need more data to be sure that these changes are not merely fluctuations and that they will translate into long-term trends of improved capacity for customer-orientated innovation.

Globally, no matter what a country’s average level of per capita income is, customer-orientated innovation is relatively rare. In the GEM 2005 Executive Report, customer-orientated innovation of developing countries is recorded as 14% for early-stage entrepreneurial activity and 9% for established businesses. In developed countries the picture looks very similar. Early-stage entrepreneurs report that 12% of their products are highly innovative, while 9% of established businesses share this view. There are no significant differences between developing and developed countries in terms of customer-orientated innovation (Minniti 2005). Therefore, South Africa’s level of customer-orientated innovation is not unusual by international standards.

Differentiation from competitors

A second way in which enterprises can innovate is by differentiating themselves from their competitors. In the GEM survey, owner-managers were asked: ‘Are there many, few or no other businesses offering the same products or services to your potential customers?’ Depending on the response, firms could then be classified into those that had many, some and no competitors. Figure 10 illustrates the different levels of competitor differentiation of South African firms over three years (2003–2005).

Most owner-managers report that they experience intense competition, and this seems to be increasing. The proportion of owner-managers who face many competitors, and thus potentially more intense competition, has increased from 44% in 2003 to 55% in 2005. The proportion of owner-managers that operate in markets with ‘some competitors’ fell in 2004 before returning to its previous level of 44% in 2005.

No significant differences exist with regard to these changes. However, these findings underline an important point: If those owner-managers who face many or some competitors are combined, we can infer that competition has intensified over the last three years. In 2003 an average of four in ten owner-managers reported little differentiation from their competitors, compared to five in ten in 2005.

These findings are supported by the fact that the number of owner-managers who had no competitors has declined significantly. In 2003, 11.3% of owner-managers operated in markets where they had no competitors. In 2005, this declined to a mere 1.8% of owner-managers. This trend is highly significant at the 1%-significance level. In other words, in 2003, eleven in 100 owner-managers were highly differentiated from their competitors. This has declined to two in 100 owner-managers in 2005.

Accordingly, most entrepreneurs experience high levels of competition and correspondingly low levels of differentiation from their competitors. Increased competition functions as a two-edged sword. On the one hand, the need for firms to defend market share in the face of intense competition may result in shrinking profits. On the other hand, more competition increases efficiency.
in markets. Therefore, in local markets, customers should benefit from more enterprises competing for their disposable income.

It is beyond the scope of the GEM data to determine whether the owner-managers surveyed are referring to local competitors only, or if they are referring to international competitors entering the local market as well. However, another study conducted by Edwards (2002) indicates that the market share of small firms is largely unaffected by international competitors.

Globally, the number of entrepreneurs who state that they have no competitors is small. In developing and developed countries, only 10% of early-stage entrepreneurs and 6% of established business owners say that they have no competitors. Thus, it appears that South African owner-managers face a somewhat more competitive situation than in other GEM countries. This might suggest that rates of innovation among our owner-managed firms are lower than the global norm.

In conclusion, new and established businesses in South Africa face intense competition. There is a significant decline in the number of firms who are able to differentiate themselves from competitors, from 11 in 100 owner-managers in 2003, to only two in 100 in 2005.

But South African owner-managers are not alone in these seas of intense competition; globally the situation is also very competitive, but a higher proportion of owner-managed firms in other countries appear to be able to differentiate themselves effectively from their competition. It seems that most new and established enterprises in South Africa employ strategies of imitation and not differentiation.

The ability to incorporate new technology into products and services is one way of differentiating from competitors. In the discussion that follows, we assess the extent to which South African owner-managers incorporate new technologies into their product offerings.

**Incorporation of new technology**

The use of new technology is the third indicator of how innovative business owners tend to be. Respondents were asked: ‘Were the technologies or procedures required for this product or service generally available more than one year ago?’ GEM considers technologies that are less than one year old as the ‘very latest technology’.

So, for the purposes of this study, entrepreneurs who use technologies that became available less than one year ago (the very latest technologies) are seen as being technologically highly innovated. Entrepreneurs who use technologies that are more than a year old, are seen to have a low technology orientation.

Figure 11 compares the technology orientation of South African owner-managers for the three-year period (2003–2005). Significant differences can be observed over the three-year period.

Figure 11 shows that a minority of South African owner-managers uses the very latest technologies (those developed less than one year ago). This proportion has declined from 28% in 2003 to zero in 2005. In line with these results, a greater proportion of firms report using technologies that are older than one year. In 2003, 72%
Section 1: The adult population survey

of firms said that they used technologies developed more than one year ago. This figure increased significantly (at the 1% significance level) to 100% in 2005. In other words, in 2003, seven in ten owner-managers said that they used technologies more than one year old, while in 2005 ten out of ten – all the owner-managers (in the sample) – say that they use technologies that are more than one year old.

In view of the significant strengthening of the Rand since 2003, imported technology should have become cheaper and thus more accessible to smaller firms since then. Therefore, it is surprising that the proportion of owner-managed firms that use the latest technology has declined significantly. This finding should be viewed with some caution.

There are a number of possible reasons for the decline in owner-managers’ use of the latest technology. First, the high cost of new technology is often prohibitive for small and medium-sized enterprises (National R&D Strategy 2002). This can cause owner-managers to adopt a ‘wait-and-see’ attitude, rather than embrace risky, unproven, expensive technologies.

Second, the lack of science and technology skills of the majority of the South African population could be a major reason for the low levels of technology use. GEM data has consistently shown that the educational level and poor quality of education in South Africa has significant effects on entrepreneurship (see chapter five).

Third, as pointed out in Australia’s 2004 GEM report, building innovative new technology into products and services takes time and may not occur, or need to occur, for every product offering, every year (with the exception of a very few specialist organisations).

Globally, higher levels of use of new technologies are reported by early-stage entrepreneurs in developing countries (30%) than by their counterparts in developed countries (13%). This suggests that owner-managed firms in South Africa are significantly less likely than entrepreneurs both in developed and developing countries to use the latest technology. Once again, this is consistent with somewhat lower levels of innovation in South Africa by comparison with international norms.

To conclude, South African owner-managers show relatively low levels of use of the very latest technologies. The proportion of firms using older technologies has increased significantly over the three years from 2003 to 2005. As with enterprises in other developing countries, the growth potential of South African enterprises is enormous if they are able to apply the very latest technologies to their products, services and technologies. However, skills will also need to be transferred in the process.

Summary

This chapter focused on the extent to which new and established South African firms are innovative. A three-year trend analysis was presented. In summary, we can conclude that innovative businesses (that have a high customer orientation, are differentiated from competitors and are technology orientated) are in the minority globally. South Africa is no exception. The data reflects that only a small number of owner-managers offer products and services that are new to all customers. Most entrepreneurs in South Africa report high levels of competitor activity, with correspondingly low differentiation from their competitors. Most entrepreneurs’ use of new technology is very limited.

The characteristics of South African businesses over a three-year period have changed significantly in several areas:

- The proportion of owner-managers with products that are not new to any customers has declined significantly.
- The proportion of owner-managers who do not have any competitors has declined significantly to well below the international norm.
The proportion of owner-managers who report using the latest technologies has declined significantly to well below the international norm.

**Policy implications**

As discussed in the GEM 2004 Executive Report, targeted policy interventions are needed to promote entrepreneurship, growth and innovation. It is doubtful that a ‘one size fits all’ approach would deliver the needed results (Acs et al 2004). The needs of a small hawker are quite different from a small technology business. Suitable criteria should be identified to enable programmes to target ‘clusters’ of enterprises with similar needs.

Selective policies should be formulated to support those new and established businesses in South Africa that have the potential to develop into high-growth enterprises. The suggestion is not that high-potential entrepreneurs are better or more deserving than entrepreneurs with no or low growth intentions. However, high-growth enterprises should be recognised and supported as those with the most potential to have an impact on economic growth and job creation (Auito 2005).

Some current tax regulations and labour legislation encourage small businesses to stay small, since the advantages of being small are greater and the administrative burden less. It is recommended that the regulatory framework should be amended to encourage high-growth enterprises to expand their businesses.

As part of the government’s drive to promote innovation, policies and programmes should be developed to encourage the diffusion, adoption and application of the very latest technologies. Skills and technology transfer should be important cornerstones of such programmes. A lot of growth potential exists in developing countries, such as South Africa, to ‘import and adapt’ technologies developed in industrialised countries.

Another policy instrument that has been highly successful in other countries is the development of a tax incentive scheme for research and development (R&D) for the promotion of science, technology and innovation (Pouris 2003). Tax incentives are one of the tools a government can use to influence the intensity and the related impact of R&D in the economy. Many countries use tax incentives to promote innovation and boost industrial growth. Such a system would benefit enterprises of all sizes in addition to delivering social benefits.

Closer co-ordination is needed between the Department of Science and Technology (DST) and the Department of Trade and Industry (DTI). The DST is responsible for some innovation and SME support initiatives and the DTI is responsible for some export and SME support. Therefore, there is some overlap between these two departments that can be managed jointly.

These policy guidelines should contribute towards enhancing the innovation propensity of new and established businesses. However, as we have argued in the past, the implementation and effect of government policies is a long-term process. It is therefore important that the innovation propensity of enterprises is monitored annually.
Section 2: Special focus on youth and young adults

Introduction

In 2003, we showed that the rate of entrepreneurial activity in South Africa was significantly lower than in other developing countries—India, Brazil, Mexico and Argentina—and that the differences were largest among young people.

The findings of the 2003 study were the following:

- **South Africa has a much lower TEA rate for men, especially 25–44-year-olds.** Men in South Africa were far less likely to start a business than men in other developing countries. Specifically, this referred to a particular group, namely men between the ages of 25 and 44. Throughout all the countries participating in the GEM study, people in this age group are the most likely to be involved in entrepreneurial activity. The low rate of entrepreneurial activity among young men was found to be a primary reason for the low overall rate of entrepreneurial activity in South Africa, which was shown to be significantly lower than that of all the other developing countries.

- **South Africa’s 25–44-year-olds do not believe they have the skills to start a business.** People who believe that they have the skills to start a business are far more likely to start a business than people who do not believe they have the skills. This is true in South Africa, as it is for all countries participating in GEM.

In South Africa, only 35% of young men between the ages of 25 and 44 believe that they have the skills to start a business. This compares poorly with the approximately 60% of young men in India and almost 70% of Brazilian and Argentinian young men who believe that they have the requisite skills to start a business.

- **Education is the key.**
  The report concluded that the lower proportion of men who believe that they have the skills to start a business is partly due to the relatively low proportion of South Africans that have completed secondary school.

2005: A focus on youth and young adults

The findings of the 2003 study provide the context for this section, which focuses on youth and young adults. Irrespective of how favourable the political and socioeconomic environment may be for business, without the entrepreneurs themselves, without what GEM refers to as a country’s entrepreneurial capacity, there are no businesses. Our future entrepreneurial capacity depends on how well we are equipping young people to start their own businesses and to provide employment both for themselves and for others. This section asks that question from two different perspectives.

In chapter five, the first of two chapters, we use more recent data to compare South Africa’s young adults (18–34-year-olds) to their cohorts in other developing countries. Building on the foundation of the 2003 study, we examine whether the low rate of entrepreneurial activity in South Africa is linked to the quality of education in this country. We focus on the rates of entrepreneurial activity at three levels of educational attainment, namely not completed secondary schooling, completed secondary schooling and tertiary education.

In chapter six, we evaluate the impact of entrepreneurial training on learners. We examine whether we can see a progression in the development of entrepreneurial understanding and skills among learners in South African schools. We explore the extent of entrepreneurial skill development across different school groups, and show that the level and pace of such skill development is highly uneven across South African schools.
Chapter 5: Young adults in developing countries – the links between levels of formal education and entrepreneurial activity

By Eric Wood and Marlese von Broembsen

Each of the previous four South African GEM executive reports has provided compelling evidence that there are strong links between levels of formal education and entrepreneurial activity. In particular, it was found that in South Africa, the more formal education a person has, the more likely it is that he/she will start and sustain a business (GEM 2004).

In this chapter, we take that analysis a step further. We compare various indicators of entrepreneurial activity among young adults, at different levels of formal educational attainment, across a sample of developing countries. Specifically, we compare South Africa to five other developing countries – Argentina, Brazil, Chile, China and Uganda. These countries participated in GEM in 2003. Full data sets for each country are released to other countries 24 months after they have been collected. The 2003 data is therefore the most recent data available that allows for detailed analysis.

The benefit of this analysis is that it allows us to examine how the level of entrepreneurial activity in South Africa compares with developing countries, for each level of educational achievement. Levels of educational attainment are categorised into the following three broad categories: not completed secondary schooling; completed secondary schooling and tertiary education.

The goal of this analysis is to investigate the relative effectiveness of different components of the South African education system, particularly the extent to which each component is equipping South Africans with the knowledge and skills necessary for entrepreneurial activity.

### Educational attainment and the probability of necessity and opportunity entrepreneurship

We start by examining the role of education in opportunity- and necessity-motivated entrepreneurial activity across the sample countries. It is clear from Table 8 that the level of educational attainment plays an important role in the probability of both necessity and opportunity entrepreneurship, but that the effect of the level of educational attainment works in the opposite direction in each of the categories. The table shows that the probability of individuals being involved in opportunity entrepreneurship rises significantly with increasing educational attainment.

The reverse is true for necessity entrepreneurship: The lower the educational attainment of the individual, the greater the probability of him/her being involved in entrepreneurial activity motivated by necessity.

These results are exactly as one would expect. At lower levels of educational attainment, access to good employment opportunities is expected to be lower and hence we would expect proportionally more necessity-motivated entrepreneurial activity.

The table also shows that while the total amount of entrepreneurial activity (necessity and opportunity combined) is higher among young adults with tertiary education, there is only a marginal difference in the total rate of entrepreneurial activity between those who have completed secondary schooling and those who have not.

We know that necessity entrepreneurship does not produce sufficient income, either for the owner-manager or for potential employees, to constitute much more than a strategy to alleviate poverty (see chapter one). Given that the objectives of the National Small Business Strategy are economic growth and job creation, and not explicitly poverty alleviation, our focus must therefore be on opportunity entrepreneurship.

In the remaining analysis, therefore, we restrict ourselves to examining the relationship between the level of educational attainment and opportunity-motivated entrepreneurial activity.

### International comparison of opportunity entrepreneurship among young adults

In this section, we focus the analysis on new firms as opposed to start-up businesses. The reason for this choice is that the GEM definition of a new firm requires that the business must have paid salaries for at least three months,
Section 3: Special focus on youth and young adults

Table 9 shows opportunity-motivated new firm activity rates among young adults by highest educational attainment

<table>
<thead>
<tr>
<th>Country</th>
<th>Not completed secondary schooling (%)</th>
<th>Completed secondary schooling (%)</th>
<th>Tertiary education (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>0.1</td>
<td>1.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Argentina</td>
<td>2.3</td>
<td>6.6†</td>
<td>7.9</td>
</tr>
<tr>
<td>Brazil</td>
<td>4.0†</td>
<td>5.2†</td>
<td>6.3</td>
</tr>
<tr>
<td>Chile</td>
<td>4.0†</td>
<td>3.4</td>
<td>6.5</td>
</tr>
<tr>
<td>China</td>
<td>2.5†</td>
<td>4.7†</td>
<td>5.1</td>
</tr>
<tr>
<td>Uganda</td>
<td>7.4†</td>
<td>12.9†</td>
<td>12.0</td>
</tr>
</tbody>
</table>

(s) Indicates that the figure is significantly larger by comparison with that for South Africa at the 5% level of significance (LSD test)

These results strongly imply that, by the standards of other developing countries, the tertiary education system in South Africa prepares young adults relatively well with the knowledge and skills required to start a business.

By contrast, the schooling system in South Africa does not prepare students adequately to be able to sustain an opportunity-motivated new business venture. In many other developing countries, the probability of secondary school leavers owning and managing a new firm is almost as high as for those with post-secondary education. In South Africa, the proportion is 77% lower for secondary school leavers compared to those with tertiary education.

In other words, while completing secondary schooling is almost as good a preparation as tertiary education for new business creation in other developing countries, secondary schooling in South Africa provides a far less satisfactory preparation for starting a business than does tertiary education. It is only those young South Africans who have tertiary education who are likely to be as well prepared as their international counterparts to create a new business.

The situation for those in South Africa who have not completed secondary schooling is considerably worse. This particular comparison is subject to the greatest uncertainty, as our data do not allow us to differentiate between someone who has completed one year of secondary schooling and someone who has completed four years of secondary schooling. As will be shown below, however, the school dropout rate in South Africa is lower than in some other developing countries in the sample. We have no reason, therefore, to expect that there is a higher likelihood of South African learners dropping out of secondary school early than learners in other developing countries.

Some might think that it is unfair to judge how effectively the education system prepares learners to start a business by using new firm rates as an indicator. Unique circumstances in South Africa might make it much harder to sustain a new business venture here, even for a fairly capable entrepreneur, in comparison to in other developing countries. This being the case, it is probably fairer to judge how effectively the education system prepares students to start a business by examining the views of young adults who have completed secondary schooling, the proportion involved in new firm activity in South Africa is only 1%, whereas in other developing countries it is at least three times higher. The differences are even greater for those young adults who have not completed secondary schooling. The figure for South Africa is only 0.1% which is 23 times lower than in Argentina, the country with the next lowest figure.

Among young adults who have completed secondary schooling, the proportion involved in new firm activity in South Africa is only 1%, whereas in other developing countries it is at least three times higher.
Section 2: Special focus on youth and young adults

on their own entrepreneurial abilities. GEM provides such a measure, by asking respondents whether or not they believe they have the knowledge, skills and experience to start a business. The results are shown in Table 10.

The pattern that emerges from Table 10 is broadly consistent with that for Table 9. Among young adults with tertiary education, the proportion in South Africa who believe that they have the knowledge and skills to start a new business (62%) is middle of the range for this sample of developing countries. It is higher than the corresponding figures for Brazil (54%), Chile (61%) and China (55%). By contrast, in the lower two categories of educational attainment, the proportion of young adults who believe that they have the knowledge and skills to start a new business is lowest for South Africa. Among those who have completed secondary schooling, the figure for South Africa is significantly lower than for Argentina, Brazil and Uganda. Among those who have not completed secondary schooling, the figure for South Africa is significantly lower than for all other developing countries in the sample.

This evidence suggests, at the very least, that in terms of preparing students with the skills and knowledge required to start a new business, South African schools appear to perform poorly in comparison to those in other developing countries. For those who have not completed secondary education, one can draw a stronger conclusion – that the South African school system fails spectacularly to prepare most students to be able to start their own business.

For those students who have completed secondary school and have not proceeded to tertiary education, the extent of the failure of the school system is clear but arguably less spectacular. There can be little doubt, however, that education in South Africa is responsible to some extent for the country’s low rates of entrepreneurial activity. In addition, it is clear that the failure lies with the schooling system rather than with the tertiary education system.

The distribution of educational attainment among young adults

Given the correlation between the level of formal education and the probability of opportunity entrepreneurial activity in South Africa, it would appear that the distribution of educational attainment has major implications for the overall rate of entrepreneurial activity. The greater the proportion of the population that has attained post-secondary education and, correspondingly, the smaller the proportion that has not completed secondary education, the better for the overall rate of entrepreneurial activity.

Yet, when we compare the distribution of educational attainment in the six countries, it would appear that the correlation between educational attainment and entrepreneurial activity in South Africa is not mirrored in the other developing countries. Table 11 compares the distribution of highest educational attainment among young adults (18–34-year-olds) by country.

This evidence suggests, at the very least, that in terms of preparing students with the skills and knowledge required to start a new business, South African schools appear to perform poorly in comparison to those in other developing countries. For those who have not completed secondary education, one can draw a stronger conclusion – that the South African school system fails spectacularly to prepare most students to be able to start their own business.

Education in South Africa is responsible to some extent for the country’s low rates of entrepreneurial activity. The failure lies with the schooling system rather than with the tertiary education system.
in the sample, with 55% of young adults not having completed secondary education and only 9.5% having tertiary education. Only Brazil and Uganda have a higher proportion of young adults that have not completed secondary education and, of all the countries, only Uganda has a lower proportion of young adults with tertiary education than South Africa. Brazil, Uganda and South Africa are the three countries where the percentage of youth that have not completed secondary education not only outweighs any of the other education categories, but constitutes more than half of the population of young adults. The distribution is markedly better by one or both measures in Argentina, Chile and China.

Despite the fact that in Uganda and Brazil the proportion of adults that have not completed secondary schooling is higher than in South Africa, this does not translate into low levels of entrepreneurial activity, as is the case for South Africa.

It is clear, therefore, that while the distribution of educational attainment is an enormous challenge in South Africa, the country is not unique. A more distinctive feature of the South African school system is its relative inability to provide the knowledge and skills necessary for opportunity-motivated entrepreneurial activity.

The question we have to ask is why is this the case? One distinguishing feature could be the effect of HIV/AIDS. The HIV/AIDS pandemic is more widespread in Africa than it is in other continents and the effect of HIV/AIDS on education is well documented. Not only are teachers incapacitated by HIV/AIDS, but the demands on learners to care for sick parents and to parent younger siblings has an impact on their school attendance and performance. Uganda has been one of the continent’s stars as, unlike South Africa, it has managed to curb the infection rate. However, with regard to HIV/AIDS, South Africa is not unique. HIV/AIDS is prevalent in other African countries too. Botswana has an even greater percentage of its population infected with the virus.

Yet, the recent SACMEQ II (Southern African Consortium for Monitoring Educational Quality) surveys show that South African schools perform poorly compared to schools in thirteen other African countries. Grade 6 learners, teachers and principals were surveyed in fourteen countries in southern and eastern Africa to assess reading and mathematical skills. South Africa’s mean scores for both reading and mathematics locate it in the bottom half of the countries. As reflected in Table 12, the mean scores for both reading and mathematics locate it in the bottom half of the countries. As reflected in Table 12, the mean scores for both maths and reading in South Africa are below the average score of 500 for SACMEQ (van der Berg 2005).

SACMEQ categorises learners in terms of their socioeconomic status (SES) – the poor having a low SES and the wealthy having a high SES. SES is a proxy for relative affluence, which is ascertained with reference to the learners’ household possessions. Table 12 shows that the poor in South Africa are ranked eleventh in respect of both their reading mathematics skills and the rich in South Africa are ranked joint fifth for reading and seventh for mathematics. Stated differently, only three of the African countries in the survey are worse off educationally than South Africa in terms of the quality of education provided.

<table>
<thead>
<tr>
<th>Reading (countries arranged by mean score)</th>
<th>Mathematics (countries arranged by mean score)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low SES</strong></td>
<td><strong>High SES</strong></td>
</tr>
<tr>
<td>Seychelles</td>
<td>561.8</td>
</tr>
<tr>
<td>Kenya</td>
<td>525.3</td>
</tr>
<tr>
<td>Tanzania</td>
<td>528.8</td>
</tr>
<tr>
<td>Mauritius</td>
<td>508.3</td>
</tr>
<tr>
<td>Swaziland</td>
<td>519.1</td>
</tr>
<tr>
<td>Botswana</td>
<td>502.5</td>
</tr>
<tr>
<td>Mozambique</td>
<td>510.5</td>
</tr>
<tr>
<td>South Africa</td>
<td>440.2</td>
</tr>
<tr>
<td>Uganda</td>
<td>472.3</td>
</tr>
<tr>
<td>Zanzibar</td>
<td>468.1</td>
</tr>
<tr>
<td>Lesotho</td>
<td>449.2</td>
</tr>
<tr>
<td>Namibia</td>
<td>421.5</td>
</tr>
<tr>
<td>Zambia</td>
<td>423.6</td>
</tr>
<tr>
<td>Malawi</td>
<td>422.9</td>
</tr>
<tr>
<td><strong>SACMEQ average</strong></td>
<td><strong>500.0</strong></td>
</tr>
</tbody>
</table>

Source: van der Berg 2005

Table 12: Reading and mathematics scores of Grade 6 learners
Section 2: Special focus on youth and young adults

to the poor. Surprisingly, for the more affluent, four other countries have a higher reading score, and six a higher mathematics score, than South Africa.

SACMEQ results show that the difference between schools with predominantly upper middle class learners – ‘rich schools’ – and schools with learners from predominantly lower socioeconomic homes – ‘poor schools’ – is significantly bigger than are the differences in all other countries sampled (van der Berg 2005).

Van der Berg poses the key question: ‘What drives the systematically poorer performance of historically disadvantaged schools: is it characteristics that attach to the average learner that enters these schools (such as socioeconomic status, parents’ educational level and access to resources at home) or are there factors that attach to the school (such as facilities, average teacher quality and school organisation) that can explain the differential performance?’

The study finds that middle class learners, despite their superior socioeconomic status, fail to perform at ‘poor’ schools. Van der Berg concludes that while learners’ socioeconomic status fundamentally affects educational outcomes (the level of reading and mathematics used as proxy), particularly at primary school level, the extent to which SES predetermines educational outcomes depends more on the school than is the case for any other country in southern or eastern Africa.

Some ‘poor’ schools in South Africa are able to use resources to impact on educational outcomes, whereas the majority are not. Clearly, the failure of the South African schooling system is most spectacular among poor communities.

Conclusion and policy implications

The inescapable conclusion of these findings is that the South African school system is failing to provide the vast majority of its students with the basic knowledge and skills required to start a business. By comparison, schools in other developing countries appear to perform considerably better in this regard.

The strong implication is that this problem can only be effectively addressed at the source, namely in schools. Fewer than 10% of young adults in South Africa will be able to access tertiary education and this is unlikely to change. The remaining 90% of young adults, who cannot access tertiary education, will remain dependent on the quality of education available in schools. All the evidence suggests that the overwhelming majority of young adults do not and historically have not received education of an adequate quality, even by the standards of developing countries that are far poorer than South Africa.

The poor performance of the South African schooling system, as demonstrated in this chapter, is entirely consistent with the extremely high rates of unemployment among school leavers. The failure to improve the quality of education, therefore, is also likely to mean continued poor employment potential for school leavers who cannot access tertiary education. In addition, the failure to address the shortcomings in South African schools will have serious negative implications for the country’s potential to increase the quantity and quality of entrepreneurial activity. In the following chapter, we investigate more closely the performance of different South African schools in developing a basic understanding of business and entrepreneurial skills.

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1 Strictly speaking, China is normally referred to as a transitional country, rather than a developing country. However, it can be argued that it represents a useful comparison for our purposes. Like all the other countries in this sample, China’s GDP per capita was below $7,000 in 2003. In addition, key components of China’s socialist system – for example farm collectivisation – were shorter lived than in many other Socialist countries and scrapped by the socialist authorities themselves. The Chinese version of socialism appears to have been somewhat less destructive of entrepreneurial initiative. It could be argued that the suppression of entrepreneurial initiative among blacks in Apartheid South Africa was far more extensive and enduring than in China. This view of China is consistent with the fact that the TEA rate in China in 2003 was similar to those of developing countries such as Brazil, Chile and Argentina. All of these countries appeared in the range 12 –17% which was well above the rates for transitional countries such as Croatia (2.5%) and Slovenia (4%).

2 The finding that tertiary education is associated with reduced probability of entrepreneurial self-confidence in Brazil and Argentina is not expected. One possible explanation is that those with tertiary education who might consider starting a new business would tend to be interested in more sophisticated, technology-based businesses which are more complex and difficult to launch.
Chapter 6: Are South African schools developing entrepreneurial skills?*

By Eric Wood and Don Shay

The low proportion of young South Africans who believe that they have the skills to start a new business was noted in the GEM 2004 South African Report and again in chapter five in this report. We saw that among young South African adults who have no tertiary education, the proportion who believe that they have the skills to start a business is significantly lower than in several other countries at similar levels of development. We also reached the conclusion that the international comparative evidence points strongly to problems with the quality of education in South African schools.

The shortcomings in the general skill levels of South African learners have been thoroughly investigated. This chapter focuses specifically on entrepreneurship education in South African schools. Surprisingly little is known about the extent or quality of entrepreneurship education in South African schools. Interviews with senior representatives of the Department of Education in 2004 and 2005 indicated that for the majority of schools, the Department does not know how the economic and management science (EMS) curriculum is being implemented. The Department of Education has expressed particular concern about the large proportion of schools where teachers lack adequate training to implement new learning areas such as EMS and entrepreneurship.

The development of entrepreneurial skills is the last of four outcomes required by the national curriculum for EMS. We explore the development of entrepreneurial skills and attitudes in South African schools, in an effort to identify where the key problems lie, what the causes might be, and how these might be addressed. The goals of this study are to investigate the following questions:

- Can we observe progression over time in the development of entrepreneurial attitudes and skills among learners across a broad spectrum of schools in the education system?
- Are some schools failing to develop certain skills or attitudes that are likely to be important for entrepreneurs and, if so, in which areas?
- If problems do exist in the development of entrepreneurial skills, what are the likely causes and what can be done to address them?

Methodology

It was decided to focus the study on Grades 5 and 7. There are several reasons for the focus on primary schools. Government has made entrepreneurship education compulsory from Grade 2. There is not universal support for this among experts in the education system and it is of interest, therefore, to examine whether entrepreneurship education in primary schools is effective. Learners in both Grades 5 and 7 should already have profited from several years of entrepreneurship education. They should, therefore, be demonstrating some competence in the subject area. A further reason for focusing on these grades is that there does not appear to have been any prior research on entrepreneurial attitudes or ability at this level.

The intention was to include a wide spectrum of schools from urban and rural areas and from different communities. In addition, we sought to include schools that used a variety of different materials for teaching entrepreneurship. For this reason, each of the recognised providers of specialised entrepreneurship teaching materials were approached for lists of schools in which their course materials were being used.

A total of 41 schools from two provinces were included in this study. Once permission had been obtained from the head of the school, arrangements were made to survey a sample of learners in Grades 5 and 7. These learners were asked to complete the same nine-page (36-question) questionnaire at the beginning of the year and towards the end of the year. The questionnaires were completed anonymously, but did incorporate some non-identifying personal data that could be used to link the beginning- and end-of-year surveys of each learner. This was necessary to ensure that comparisons between the beginning- and end-of-year data were valid in the sense that they reflected responses from exactly the same set of learners. In addition to the learner survey, educators of the classes were asked to complete a short questionnaire. Among other things, this questionnaire provided information on all the course materials being used to teach entrepreneurship in each of the classes included in the learner survey.

A total of 4 625 learners were included in the beginning-of-year survey. We obtained complete data from the class educator for 3 384 (73.2%) of these. Of these, we were able to link the beginning- and end-of-year learner data for 2 251 (66.5%). The analysis that follows is focused on the data from the beginning- and end-of-year surveys of these 2 251 respondents.

* We gratefully acknowledge the generous support of the DG Murray Trust which financed the research on which this chapter is based.
Findings

This section reports on findings from the survey. We pay particular attention to the evidence for progression of entrepreneurial skills among learners in Grades 5 and 7, and whether the progression of skills is prevalent across a variety of different schools.

Different components of entrepreneurial skills

The survey among learners included 36 separate questions. It is not possible here to report on all of these questions individually. Instead we have selected eleven key variables and combined those into three summary variables, which capture different components of entrepreneurial attitudes and skills. The three areas of entrepreneurial skills and attitudes which we have focused on here are:

1. Level of understanding of basic business concepts (business concepts)
2. Capability in financial arithmetic (financial arithmetic)
3. Confidence in ability to start a business (entrepreneurial confidence)

Financial arithmetic clearly overlaps with the independent subject area of mathematics. However, entrepreneurship education teaches students how to apply financial arithmetic skills to business issues. It could be argued, therefore, that the inclusion of entrepreneurship education in the curriculum may have a positive impact on the development of arithmetic skills, as it provides an opportunity for practical application of these skills. Having strong financial skills is one of the critical success factors for entrepreneurs\(^3\) and was thus included in this study.

Table 13 shows which variables were used to create these summary variables. The areas of business concepts and financial arithmetic were calculated from four variables each and entrepreneurial confidence from three variables.

The development of entrepreneurial skills and attitudes

In this section, we examine the evidence for the development of entrepreneurial skills and attitudes in primary schools. Table 14 shows the results for all of the 2,251 learners from whom we obtained complete and matched responses to both the beginning- and end-of-year surveys. The results indicate significant development of entrepreneurial skills and attitudes in the sample as a whole. The progression is clearest if one compares the findings for Grade 7 respondents with those for Grade 5. In all three areas (business concepts, financial arithmetic and entrepreneurial confidence), the mean scores for Grade 7 are significantly higher than those for Grade 5. The magnitude of the difference is greatest in the area of financial arithmetic, in which the mean score in the end-of-year survey was 0.54 for Grade 7s, 32% higher than the mean of 0.41 for Grade 5s.

There is also significant progression in entrepreneurial skills and attitudes within the Grade 7 year. The mean scores

<table>
<thead>
<tr>
<th>Areas of entrepreneurial attitudes and skills</th>
<th>Indicator variables</th>
</tr>
</thead>
</table>
| Business concepts                           | 1. One of the main reasons businesses have to close down is because the owners do not know how to use their money in the right ways. (true/false)  
2. One kind of market research is going to a market area to find out how other people run their businesses. (true/false)  
3. If you have more customers than you have products to sell, then you could charge higher prices for your products. (true/false)  
4. When a business chooses the selling price for products or services, the owners have to think about: the cost of making the product, what the customer is prepared to pay, a reasonable profit, all of the above. Choose the best answer. (multiple choice) |
| Financial arithmetic                        | Students were presented with information on the cost of ingredients to make a batch of 50 fudge squares and on the selling price of one fudge square. They were then asked the following questions:  
1. How much do the ingredients cost to make one batch of fudge squares? (multiple choice)  
2. How much money would be earned from selling all 50 fudge squares? (multiple choice)  
3. How much money would be left over after subtracting the cost of ingredients from the money earned from selling all the fudge squares?  
4. How much would it cost to make one fudge square (cost of ingredients divided by number of fudge squares)? (multiple choice) |
| Entrepreneurial confidence                  | 1. I have the knowledge, skills and experience required to start a business. (five-point Likert scale from strongly disagree to strongly agree)  
2. I am confident that I can do basic market research on a business idea. (five-point Likert scale)  
3. I feel confident in my ability to evaluate a possible business opportunity (five-point Likert scale) |
for all three areas were significantly higher in the end-of-year survey compared to the beginning-of-year survey. For Grade 5 learners, however, there is no significant positive progression in skills over the year. In fact, in the area of entrepreneurial confidence, the mean score declined, although the magnitude of this decline was small and statistically insignificant.

If one considers each of the three skill and attitude areas as necessary components in an entrepreneur's skill set, then it is interesting to examine whether the learners in this sample are equally strong in the different areas. The findings in Table 14 suggest that the skill area in which the learners in this sample are weakest is that of financial arithmetic. The mean scores for financial arithmetic are lowest in the beginning- and end-of-year surveys for both Grades 5 and Grade 7. As will be seen below, however, these aggregate figures mask significant variation within the sample. In certain schools, problems in the area of financial arithmetic are severe, while in others there does not appear to be a problem.

### Table 14: Development of entrepreneurial skills in Grade 5 and 7 learners

<table>
<thead>
<tr>
<th></th>
<th>Grade 5</th>
<th>Grade 7</th>
<th>Tests of differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year begin B</td>
<td>Year end C</td>
<td>5th year G5b–G5a B–A</td>
</tr>
<tr>
<td>All respondents</td>
<td>0.55 (mean)</td>
<td>0.56</td>
<td>0.200</td>
</tr>
<tr>
<td></td>
<td>0.40</td>
<td>0.50</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>0.54 (mean)</td>
<td>0.52</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>0.53</td>
<td>0.55</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>0.27</td>
<td>0.32</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>0.50</td>
<td>0.49</td>
<td>0.58</td>
</tr>
<tr>
<td>Black schools</td>
<td>0.55 (mean)</td>
<td>0.55</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>0.42</td>
<td>0.50</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>0.56</td>
<td>0.56</td>
<td>0.57</td>
</tr>
<tr>
<td>Coloured and Indian</td>
<td>0.56 (mean)</td>
<td>0.61</td>
<td>0.73</td>
</tr>
<tr>
<td>Indian schools</td>
<td>0.55</td>
<td>0.74</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>0.56</td>
<td>0.58</td>
<td>0.65</td>
</tr>
<tr>
<td></td>
<td>0.56</td>
<td>0.76</td>
<td>0.85</td>
</tr>
<tr>
<td>White schools</td>
<td>0.56</td>
<td>0.76</td>
<td>0.85</td>
</tr>
</tbody>
</table>

(a) Wilcoxon test
(b) Mann-Whitney U test;
* Statistically significant at the 10% level
** Statistically significant at the 5% level
*** Statistically significant at the 1% level

This section examines the progression of entrepreneurial skills and attitudes in schools according to the predominant race group of the school. Table 14 shows separate data for three categories of school: black, coloured and Indian, and white. The sample of Indian schools was too small to examine on its own and so these were combined with coloured schools. The reason for combining Indian with coloured schools is that their results were most similar. It should be noted that these school groupings correspond to the predominant race group of the pupil population. In practice, many of the schools in the sample are racially mixed. Nevertheless, the grouping of schools relates to their apartheid history and, therefore, is an important basis for evaluating relative school performance.

There are some important differences between the groups. Most obviously, the mean scores for financial arithmetic in black schools (0.40) and coloured and Indian schools...
(0.51) are significantly lower than the mean score in white schools (0.80). The differences in the magnitude of mean scores for financial arithmetic are far larger than those for either business concepts or entrepreneurial confidence. Not only are these differences large, but the gap in financial arithmetic skills appears to get larger and not smaller over time. The rate at which learners in white schools are developing skills in financial arithmetic is greater than for those in black and coloured and Indian schools.

The absolute increase in the mean score between the beginning-of-year Grade 5 mean and end-of-year Grade 7 mean was 0.13 in black schools, 0.09 in coloured and Indian schools, and 0.25 in white schools. This implies that on average learners in black and coloured and Indian schools have little hope of catching up with their counterparts in white schools, but rather that they will tend to fall further and further behind. This clearly has extremely serious negative implications for learners in black, coloured and Indian schools.

An examination of the entrepreneurial skill set of Grade 5 and 7 learners in white schools shows that the mean level of entrepreneurial confidence is supported by similar or higher mean scores in the areas of business concepts and financial arithmetic. This suggests that the mean level of entrepreneurial confidence may be a reasonable reflection of an individual’s overall capacity for entrepreneurship. However, the same is not true for black and coloured and Indian schools. Among Grade 7s in those schools, for example, the mean scores in entrepreneurial confidence (0.58 and 0.57 respectively) are considerably higher than those for financial arithmetic (0.40 and 0.51 respectively).

The gap between financial arithmetic skills and entrepreneurial confidence is greatest in black schools. This implies that black learners may be more likely than others not to recognise their limitations in the area of financial arithmetic and to believe, perhaps inappropriately, that they do possess the necessary skills for entrepreneurship.

The progression of skills within Grades 5 and 7 is fairly patchy in black, coloured and Indian schools. It is reassuring to see that there is significant progression of financial arithmetic skills within Grade 7 for black schools. However, there is no significant progression in the area of business concept skills in black schools. The slow and inconsistent progression of financial arithmetic skills in coloured and Indian schools is also cause for concern.

Institutional attitudes toward the teaching of entrepreneurship

The extent of problems facing predominantly black, coloured and Indian schools is clearly beyond the scope of this research. In this section, we examine the attitudes of educators regarding the teaching of entrepreneurship in their schools. Table 15 reports the views of 93 educators who are involved in the teaching of entrepreneurship in the 41 schools that participated in the survey. Separate results are shown for educators from predominantly black, coloured and Indian, and white schools.

The results indicate high levels of agreement among educators regarding the commitment of their institutions to the teaching of entrepreneurship. For the sample as a whole, the mean response to this statement was 4.35 and over 80% of educators responded either ‘agree’ or ‘strongly agree’. Support among these educators for the teaching of entrepreneurship in Grades 5 and 7 is even higher, with average responses of 4.51 and 4.81 respectively. Over 90% of educators responded either ‘agree’ or ‘strongly agree’ that entrepreneurship is an essential part of the education of Grade 5 learners, and 100% of responses were in these categories in the case of Grade 7 learners.

It should be noted that this sample of educators is drawn from schools that were selected on the basis that they were already active in teaching entrepreneurship. It is not known whether this same positive sentiment exists among

<table>
<thead>
<tr>
<th></th>
<th>My school is strongly committed to teaching entrepreneurship* (mean)</th>
<th>Entrepreneurship is an essential part of the education of Grade 5 learners* (mean)</th>
<th>Entrepreneurship is an essential part of the education of Grade 7 learners* (mean)</th>
<th>I would value additional training in the teaching of entrepreneurship* (mean)</th>
<th>The materials we use to teach entrepreneurship are very effective resources* (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All respondents</td>
<td>4.35</td>
<td>4.51</td>
<td>4.81</td>
<td>4.49</td>
<td>3.65</td>
</tr>
<tr>
<td>Black schools</td>
<td>4.28</td>
<td>4.43</td>
<td>4.73</td>
<td>4.84*</td>
<td>3.80</td>
</tr>
<tr>
<td>Coloured and Indian schools</td>
<td>4.37</td>
<td>4.55</td>
<td>4.87</td>
<td>4.48</td>
<td>3.54</td>
</tr>
<tr>
<td>White schools</td>
<td>4.41</td>
<td>4.50</td>
<td>4.75</td>
<td>4.14</td>
<td>3.70</td>
</tr>
</tbody>
</table>

* Respondents were asked to indicate their level of agreement with each of these statements using a five-point Likert scale as follows: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.
(a) Indicates that the figure is significantly higher (5% level) than that for ‘black schools’ using the LSD test.
(b) Indicates that the figure is significantly higher (5% level) than that for ‘white schools’ using the LSD test.

Table 15: Educator attitudes towards entrepreneurship education
educators in schools that have been slower to implement entrepreneurship education.

It is possible that the level of support for entrepreneurship education is lower in such schools, but equally possible that educators in those schools are less well informed of the benefits to learners of including entrepreneurship in the curriculum. What is interesting, nevertheless, is that in terms of the importance attached to entrepreneurship education and the level of commitment of schools to teaching entrepreneurship, the differences between educators from the different school groups is small and not statistically significant. This indicates that there is widespread and strong support for teaching entrepreneurship across the different school groups. It also suggests that the differences in the performance of learners across the schools cannot be explained by differences in the level of educators’ commitment to the teaching of entrepreneurship.

This sample of educators expressed a strong desire for further training in the teaching of entrepreneurship. The mean response was 4.49 with over 80% of educators responding ‘agree’ or ‘strongly agree’ to the statement on additional training. The mean for educators in predominantly black schools is significantly higher than for other educators, with all of the former responding ‘agree’ or ‘strongly agree’. This implies that the need for additional training is perhaps greatest among educators in black schools. This is consistent with the significantly lower levels of progression in entrepreneurial skills observed among learners in black schools.

Educator responses on the quality of materials they use to teach entrepreneurship are somewhat less strongly positive. Only 12% of educators responded ‘strongly agree’ to the statement regarding the quality of materials and over one-third had a neutral or negative response. The differences between school groups are small and insignificant, suggesting that teachers in black or coloured and Indian schools do not perceive the quality of entrepreneurship education materials to be any less good than is the case among teachers in white schools.

However, these results imply that there is scope for improvement of entrepreneurship teaching materials across all school groups. We therefore investigated this issue further in the next section.

Alternative types of material available for the teaching of entrepreneurship

Of primary interest in this survey was the role of materials that are dedicated primarily to the teaching of entrepreneurship as opposed to the teaching of all aspects of the EMS curriculum. The reason for this is that it is possible that materials that were developed for the broader EMS curriculum may not pay adequate attention to the development of entrepreneurial skills and attitudes. The following education materials were developed specifically with entrepreneurship in mind: Business Ventures, Enterprise Dynamics, Hands-on Enterprise and the Standard Bank financial literacy materials. In the table below, we differentiate these from EMS textbooks that were developed with a view to addressing all aspects of the EMS curriculum rather than entrepreneurship specifically.

Table 16 shows that nearly 40% of educators indicated that they use only an EMS textbook for teaching entrepreneurship. A similar proportion use other dedicated entrepreneurship material in addition to an EMS textbook. Only 14% of educators use dedicated entrepreneurship material without an EMS textbook. Encouragingly, only 7.5% of educators report that they lack any recognised materials for teaching EMS or entrepreneurship.

Table 16 also compares the views of educators across these four groups regarding the effectiveness of their materials for teaching entrepreneurship. Those educators that use dedicated entrepreneurship teaching materials are significantly more positive regarding the effectiveness of their materials compared to those that do not. Whether or not they use an EMS textbook in addition appears to make little difference to their views, as the difference between groups 1 and 3 is not significant. Furthermore, the views of teachers who use only an EMS textbook are not

<table>
<thead>
<tr>
<th>Educators (%)</th>
<th>The materials we use to teach entrepreneurship are very effective resources (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS textbook and dedicated entrepreneurship material (1)</td>
<td>38.7</td>
</tr>
<tr>
<td>EMS textbook only (2)</td>
<td>39.8</td>
</tr>
<tr>
<td>Dedicated entrepreneurship material only (3)</td>
<td>14.0</td>
</tr>
<tr>
<td>Neither textbook nor dedicated entrepreneurship material (4)</td>
<td>7.5</td>
</tr>
<tr>
<td>All educators</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(a) Indicates that the figure is significantly higher (5% level) than that for ‘EMS textbook only’ using the LSD test.
(b) Indicates that the figure is significantly higher (5% level) than that for ‘Neither textbook nor dedicated entrepreneurship material’ using the LSD test.

Table 16: Educator views of the effectiveness of different entrepreneurship materials
significantly different from those that use neither a textbook nor dedicated entrepreneurship material.

In the view of teachers, therefore, it appears that the use of dedicated entrepreneurship material is more effective than either using an EMS textbook alone or using no recognised formal materials. Further analysis revealed that black, coloured and Indian schools in our sample are not at a disadvantage in terms of access to dedicated entrepreneurship materials.

It was found that 59% of educators in our sample in predominantly black schools were using such materials, compared to 48% in predominantly coloured and Indian schools, and 46% in predominantly white schools. However, it should be noted that our sample was purposive – we specifically chose schools that were using different kinds of material for teaching entrepreneurship. Therefore, these results may not be representative of the national picture. However, there can be little doubt that there is tremendous scope for such materials to become more widely available to all types of schools.

The evidence above suggests that teachers consider dedicated entrepreneurship materials to be more valuable than both EMS textbooks and no recognised entrepreneurship materials. If they are correct, we would expect to see that the use of dedicated entrepreneurship materials is also associated with a higher pace of progression of entrepreneurial skills among learners.

We explore this question in Table 17 by examining the progression of skills among Grade 7 learners. The reason for focusing on Grade 7 learners is the earlier evidence of more rapid progression of skills and attitudes in this grade (see Table 14).

Table 17 indicates that in the areas of business concepts and financial arithmetic, there is significant progression of skills among learners in classes that use dedicated entrepreneurship materials. By contrast, there is no significant progression in business concepts for learners in classes that do not use dedicated entrepreneurship materials, and a lower pace of progression in financial arithmetic. It is in these two skill areas that learners in black, coloured and Indian schools lag behind their counterparts in predominantly white schools. Therefore, the lower pace of skills progression in the absence of dedicated entrepreneurship materials suggests that learners in black schools that do not have access to these materials are at a particular disadvantage, and are significantly less likely to acquire key skills for entrepreneurship.

These results are consistent with the views of educators. They provide further support for the benefits of dedicated entrepreneurship materials for effective teaching of entrepreneurship. Together these results imply that the use of dedicated entrepreneurship materials will enhance the development of arithmetic skills – an area of obvious weakness in many schools.

It is interesting that in the area of entrepreneurial confidence, there is no attitude progression in classes that use dedicated entrepreneurship material. It is possible that the use of these materials instills learners with greater realism about the challenges of entrepreneurship and thereby ensures that the development of entrepreneurial confidence is adequately complemented by the

<table>
<thead>
<tr>
<th>Course material in class</th>
<th>Mean scores for Grade 7</th>
<th>Difference tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7th year begin</td>
<td>7th year end</td>
</tr>
<tr>
<td></td>
<td>(mean)</td>
<td>(mean)</td>
</tr>
<tr>
<td>Business concepts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dedicated entrepreneurship materials</td>
<td>0.58</td>
<td>0.62</td>
</tr>
<tr>
<td>No dedicated entrepreneurship materials</td>
<td>0.60</td>
<td>0.62</td>
</tr>
<tr>
<td>Financial arithmetic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dedicated entrepreneurship materials</td>
<td>0.49</td>
<td>0.54</td>
</tr>
<tr>
<td>No dedicated entrepreneurship materials</td>
<td>0.52</td>
<td>0.55</td>
</tr>
<tr>
<td>Entrepreneurial confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dedicated entrepreneurship materials</td>
<td>0.59</td>
<td>0.59</td>
</tr>
<tr>
<td>No dedicated entrepreneurship materials</td>
<td>0.52</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Table 17: Entrepreneurial skills and attitude progression in Grade 7 by type of entrepreneurship material

(a) Wilcoxon test
* Statistically significant at the 10% level
** Statistically significant at the 1% level
development of key entrepreneurial skills. The same does not appear to be true for learners who do not have access to dedicated entrepreneurship materials. Their entrepreneurial confidence appears to develop out of kilter with the key entrepreneurial skills.

Conclusion

The probability of learners in black schools acquiring critical entrepreneurial skills and attitudes is as much as 50% lower than for their counterparts in predominantly white schools. The gap between predominantly white schools and coloured and Indian schools is smaller but nevertheless large. Perhaps most troubling of all, the gap in performance appears to grow larger over time. In relative terms, learners in black, coloured and Indian schools are falling further behind their counterparts in predominantly white schools. The area of greatest weakness in black, coloured and Indian schools is financial arithmetic.

The findings of this study provide strong support for the value of entrepreneurship education. The educators who participated report high levels of commitment from their schools towards the teaching of entrepreneurship. There is almost universal backing for entrepreneurship education in primary schools among our sample of educators. It is not known whether this finding is representative of educator views in all primary schools, but we have noted that there is little variation by race in the level of support for entrepreneurship education.

Educators indicate significantly more confidence in the teaching of entrepreneurship if they use dedicated entrepreneurship materials (such as Business Ventures, Enterprise Dynamics, Hands-on Enterprise and Standard Bank financial literacy materials) rather than using EMS textbooks or no recognised materials for the teaching of entrepreneurship. This view is supported by evidence among learners that the use of dedicated entrepreneurship teaching materials enhances the development of key entrepreneurial skills in the areas of business concepts and financial arithmetic. By contrast, the use of EMS textbooks is not as effective in developing these skills, perhaps because they do not give adequate attention to entrepreneurship within the broader EMS curriculum.

The major policy implications of this study are as follows. First, entrepreneurship is a valuable component of the primary school curriculum and, if taught with appropriate materials, can enhance the development of fundamental skills in areas such as arithmetic. Second, it seems clear that making dedicated entrepreneurship teaching materials such as Business Ventures, Enterprise Dynamics, Hands-on Enterprise and Standard Bank financial literacy programme available to all schools will improve the pace of development of entrepreneurial skills. Third, the findings confirm that the majority of educators across all schools would value further training in the teaching of entrepreneurship. The need in this regard appears to be greatest in black schools.

Finally, while more widespread use of dedicated entrepreneurship teaching materials and further training for teachers will certainly help to improve skills development in the area of arithmetic in black, coloured and Indian schools, this problem is so severe that it clearly requires further urgent remedial attention beyond what can be achieved through better entrepreneurship education.

Government’s primary challenges are twofold: first, to determine optimal use of its resources to support the development and growth of small, medium and micro enterprises (SMMEs) and, second, to translate policy into effective delivery mechanisms.

This chapter engages with the first question, which relates to policy. It is not our intention to list policy recommendations, since they would be neither comprehensive nor new. Specialised enquiries into the regulatory costs, access to finance, and the ways in which SMME development complements the industrial strategy have generated detailed recommendations specific to the areas investigated. Moreover, the Department of Trade and Industry is well aware of what the issues are.

This edition of GEM contributes to the broader policy debate by providing an empirical demonstration of some of the theoretical arguments debated in SMME literature. Specifically, this edition has attempted to underline that there are a number of distinct policy objectives that underpin SMME development. These are: to contribute to the economic growth of the country; to create jobs; to act as a vehicle for the redistribution of wealth and opportunity; and to assist in alleviating poverty. Often the implementation of these different policies leads to conflicting outcomes. Chapter three has illustrated that where there is conflict between different policy objectives, there are trade-offs and tough choices have to be made.

We argue, as have others, that government needs to impose a hierarchy of policy objectives for SMME support. This chapter does not comment on the broader national policy objectives. We argue for a differentiation between short and long-term SMME objectives. For example, while redistribution through SMME support may be a long-term objective, we argue that, if it is pursued aggressively, the short-term results in terms of job creation may not be optimal. We develop these arguments in more detail in the discussion that follows.

**Different policy objectives**

Any SMME strategy is underpinned by particular policy objectives or rationales. The different policy objectives may be conceived of as follows:

- **Support for SMMEs to create employment,** which is concerned with creating jobs that match the skills profile of the unemployed – unskilled and semi-skilled labour – and equipping people with the skills necessary to enter the labour force.

- **Support for SMMEs as vehicles of economic growth,** which is motivated by macroeconomic concerns, such as improving the competitiveness of the economy.

- **Support for SMMEs as vehicles of black economic empowerment,** i.e. SMMEs are used as vehicles to redistribute wealth and opportunity. In this instance, equity or social justice is the motivation. We shall refer to this objective as the redistribution objective, which will be conceived of a little more broadly than just as black economic empowerment, and will include the empowerment of women, youth and the disabled
Policy conclusions

If employment creation were the primary policy objective, we would focus on businesses that are most likely to create sustainable jobs, at socially desirable levels. And we would focus on businesses that have the greatest potential to create jobs for unskilled and semi-skilled labour.

Support for SMMEs with the express purpose of alleviating poverty, which is driven by the developmental objective of supporting income generation activities by the poor. These are survivalist enterprises, micro-enterprises and co-operatives.

Depending on the objective, different SMMEs would be targeted for support and different types of interventions would be required.

If economic growth were our primary policy objective, then entrepreneurs operating businesses primarily in high-growth sectors would be targeted for support, specifically those that have potential to achieve international competitiveness. This objective would be supported by programmes that encourage innovation (see chapter four) and exporting.

If employment creation were the primary policy objective, we would focus on businesses that are most likely to create sustainable jobs, at socially desirable levels. And, for reasons discussed in chapter one, we would focus on businesses that have the greatest potential to create jobs for unskilled and semi-skilled labour. GEM data allows us to examine how many jobs various categories of business create, but does not allow us to examine the kinds of jobs created. This kind of enquiry would be important to support a job creation policy objective.2

If redistribution, in the broad sense, were the primary policy objective, then we would target enterprises owned and managed by blacks, females, youth and the disabled, for special support. Redistribution in the narrow sense, meaning black economic empowerment, would translate into programmes that specifically target black entrepreneurs for support.

Conversely, if poverty alleviation were a policy objective, then survivalists, micro-enterprises and co-operatives would be targeted for support.

This would include programmes that provide micro-finance, skills training and demand-side interventions, such as developing markets for these businesses.

The National Small Business Strategy: its policy objectives

The stated objectives of the National Small Business Strategy3 are: economic growth, job creation and redistribution. Poverty alleviation is not included explicitly. In fact, the White Paper states that the appropriate strategy concerning ‘survivalists’ would be to

“help these people – a large percentage of whom are women – to get out of this sector. Since many of the survivalists would rather be in employment than self-employment, improvements in their literacy and skill levels will get priority in the government’s support (2005:23).”

However, as we will argue below, despite the White Paper’s shift away from the objective of poverty alleviation, an emphasis on programmes that target micro-enterprises suggests that the government is, in fact, pursuing a poverty alleviation objective too.

The Department of Trade and Industry (DTI) has made
several statements that stress the importance of micro-enterprises. In addition, several of its institutions have created programmes that support micro-enterprises. Ntsika, now part of the Small Enterprise Development Association (SEDA), provided significant support to micro-enterprises. Through its ‘flagship programme’, the Local Business Service Centres (LBSCs), there was a discernible emphasis on these enterprises. While SEDA plans to supplement LBSC activity with government walk-in centres, the focus on micro-enterprises, primarily necessity businesses, remains likely.

At present, two of Khula’s programmes – the Khula Start-up Fund and Retail Financial Intermediaries (RFI) – support, almost exclusively, micro-enterprises. The newly launched APEX Fund’s micro-credit programme specifically targets rural co-operatives.

In chapter three we showed that it is an unrealistic expectation that necessity businesses will create significant employment. Logically, therefore, support for micro-enterprises is not justified from a job creation policy objective. If one considers their low wage levels and generally poor conditions of employment (see chapter one), one cannot justify support of micro-enterprises from a redistribution objective either.

A focus on support for survivalist and micro-enterprises is therefore only logical if the policy objective is one of poverty alleviation, as their contribution to economic growth is negligible. This view is well articulated by a Trade and Industrial Policy Strategy (TIPS) paper (Berry et al 2002):

> The micro-enterprise economy increases the average productivity of labour in the economy as a whole by ‘pulling into production’ unemployed low-skilled labour, whose skill levels are not sufficient to qualify for employment in larger firms. Although this probably does not raise the average labour productivity of the employed labour force, it makes the most productive use of the unemployed economically active population. This has the effect of raising total output in the economy at little or no opportunity costs. By means of support measures, the average labour productivity of those so employed could be enhanced … while effective policies impact positively on micro-enterprise productivity, they achieve poverty alleviation at the most, but not an expansion of the middle class (2002:10; italics added).

The mid-term review of DTI’s small business strategies and programmes found that ‘the [National Small Business] strategy’s programmes are heavily geared towards the micro-enterprise/survivalist category’ (Carana Corporation 1999:6). This would imply that a poverty alleviation objective was pursued from early on, despite the fact that it was not conceived of as an objective in the White Paper.

We will argue below that it would seem more appropriate to locate the poverty alleviation objective within the broader development strategy, rather than as an SMME policy objective.

**Different policy objectives: how they may be in conflict**

The implementation of these policy objectives may lead to conflicting outcomes.

For example, we may target certain entrepreneurs for support (those who are historically disadvantaged, women, youth or disabled people) to give effect to the policy objective of redistribution. Yet, as the analyses in chapter three show, given the legacy of apartheid and the inequitable access to skills in particular, none of these categories of people are likely to create many jobs now or in the near future. Consequently by targeting these groups of entrepreneurs (or potential entrepreneurs) and allocating resources to support their businesses, one may be achieving the objective of redistribution, but this would be at the cost of directing focus and resources away from job creation.

Similarly, the economic growth objective would include targeting businesses that are most likely to achieve international competitiveness. We have not shown this to be the case with GEM data, but Kesper notes that the businesses that are able to achieve international competitiveness ‘have the lowest propensity to create employment for the unskilled, which constitute the bulk of South Africa’s labour force’ (Kesper 2000:164). In other words, international competitiveness may be achieved at the expense of job creation for the unemployed.
Each policy objective is not only valid, but important. In a world of unlimited resources, this discussion would be superfluous. The White Paper (1995) itself recognises that:

“The scarcity of public resources available for SMME support constitutes a fundamental constraint upon all support policies. It also forces us to constantly weigh up the public-sector cost of specific policies against the expected results of support programmes.”

It becomes critical to rank objectives in order of importance, because financial and human resources are finite, not unlimited. Where these objectives are in conflict, such as in the examples illustrated above, there are trade-offs, sometimes very uncomfortable ones.

If these trade-offs are not recognised, and if the multiplicity of objectives are not carefully prioritised and managed, then we end up weighing down structures and programmes with objectives that they were not designed to implement (Qualmann 2000). The DTI structures have been subject to much criticism, including insufficient synergy between the programmes of different departments; insufficient sharing of resources or information on BEST practice; a high staff turnover; a lack of focus; poor leadership; a lack of capacity; and lack of technical skills amongst staff.

It would seem that these concerns are still being addressed. An approach whereby all the policy objectives are pursued simultaneously, by the same institutions, exacerbates and even creates some of the problems listed above.

Conclusion

The relationship between economic growth and job creation is a complex one and is beyond the scope of this chapter. We have indicated where there are potential conflicts between economic growth and other policy objectives, but, because of the complexity of the interrelationship between economic growth and the other objectives, we limit the remainder of the discussion to a consideration of the other three objectives – poverty alleviation, job creation and redistribution.

At present, considerable resources are spent on programmes that support poverty alleviation, despite the fact that it was not envisaged by the White Paper to be a key objective of SMME development. Chapter three shows that if poverty alleviation were included as an SMME objective, it would be at the expense of job creation, as few necessity enterprises create jobs.

We would suggest that the objectives of poverty alleviation and the reduction of inequality may be realised far more effectively within the government’s broader development or poverty alleviation strategy, as it seems to have been envisaged by the authors of the White Paper.

Improved infrastructure and public transport, are but two non-SMME interventions that would support the income generation activities of the poor. The facilitation of free pre-schools would free women from some of the burden of childcare and make it easier for them to access markets outside the home:

… women felt that having their children with them limits their ability to network, their access to training, and the frequency with which they are able to visit their suppliers (Ruiters et al 1994:147).

Similarly, redistribution is a critical objective. It may be preferable to conceive of it as a long-term SMME objective and that job creation should take precedence in the short term. Other authors have stated this in stronger terms:

Given the country’s history of dualism and discrimination, strong SMMEs and highly skilled labour are unlikely to emerge in substantial numbers from formerly disadvantaged segments of the population. Hence the goal of job creation may only be achieved at the expense of economic empowerment and income re-distribution (Kesper 2000:8).
Irrespective of the policy objective, GEM data show that, in the long term, education is key. The more educated a person, the more likely they are to start an opportunity business, the more likely they are to be the owner-manager of a new or established firm, and the more likely they are to create a significant number of jobs for others.

This edition of GEM has shown that it is not only the number of years of education that is important, but also the quality of that education. In this, South Africa lags far behind its poorer African neighbours and behind any of the other developing countries that have participated in GEM. Brazil, like South Africa, ranks as one of the most unequal countries in the world. A greater percentage of the population of Brazil has not completed secondary or tertiary education than is the case in South Africa (see chapter five). Yet the quality of education is such that young adults who have only completed secondary education are virtually as well prepared as their tertiary educated cohorts to start and sustain an opportunity-motivated business.

For South Africa, to improve the poor quality of our primary and secondary education is our therefore our key long-term challenge to increasing sustainable, opportunity-motivated entrepreneurial activity. The shortcomings in black schools are particularly severe and require urgent and more effective action.

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2 One of the few studies that consider the kinds of jobs created is the World Bank study, Chandra et al (2001), which surveyed business in the greater Johannesburg area.
3 The White Paper A National Strategy for the Development and Promotion of Small Business in South Africa outlines the following key objectives: facilitating greater equalisation of income wealth and economic opportunities; creating long-term jobs; stimulating economic growth; strengthening the cohesion between small enterprises; and leveling the playing fields between big and small business.
5 Given the large number of people involved in survivalist activities, this constitutes a vast challenge, which has to be tackled within the broader context of the RDP (White Paper 1995:23).
### Appendix: Key informants interviewed in 2005

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrahams Christo</td>
<td>Standard Bank</td>
</tr>
<tr>
<td>Ahmed Rashid</td>
<td>Micro Finance Regulatory Council</td>
</tr>
<tr>
<td>Cunningham Shaun</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)</td>
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<td>Dookoo Denise</td>
<td>The Business Place</td>
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<td>Drennan Rob</td>
<td>National Research Foundation</td>
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<tr>
<td>Faul Norman</td>
<td>CAPEMAC and Graduate School of Business, UCT</td>
</tr>
<tr>
<td>Friedman Peter</td>
<td>Entrepreneur</td>
</tr>
<tr>
<td>Goqwana Bulelw</td>
<td>Business coach and entrepreneur</td>
</tr>
<tr>
<td>Joubert Andre</td>
<td>Entrepreneur</td>
</tr>
<tr>
<td>Laubscher Pieter</td>
<td>Entrepreneur</td>
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<tr>
<td>Le Roux Michiel</td>
<td>Capitec</td>
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<tr>
<td>Makhosi Makhosi</td>
<td>Entrepreneur</td>
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<td>Martin Nazeem</td>
<td>Business Partners</td>
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<td>Morris David</td>
<td>Entrepreneur</td>
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<td>Moseneke Sidisi</td>
<td>Encha Property Services</td>
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<td>Motala Anne</td>
<td>Entrepreneur</td>
</tr>
<tr>
<td>Mpulmlwana Loyiso</td>
<td>Entrepreneur</td>
</tr>
<tr>
<td>Nkunyama Nkuli</td>
<td>Wesgro</td>
</tr>
<tr>
<td>Ligwa-Rubela Nolubabalo</td>
<td>Entrepreneur</td>
</tr>
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<td>Nurek David</td>
<td>Investec</td>
</tr>
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<td>Sibusi Sibusi</td>
<td>Council for Scientific and Industrial Research (CSIR)</td>
</tr>
<tr>
<td>Sitole Xola</td>
<td>Khula Enterprise Finance Ltd</td>
</tr>
<tr>
<td>Van Heerden Vanessa</td>
<td>Swedish International Development Cooperation Agency (SIDA)</td>
</tr>
<tr>
<td>Wiese Christo</td>
<td>Pepkor, former chairman of the IDC</td>
</tr>
</tbody>
</table>
References


### Glossary of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adult population survey (APS)</strong></td>
<td>The adult population survey is an annual survey conducted by GEM in order to collect data on entrepreneurial activity in countries participating in the GEM research study. The APS is constructed to be representative of the population aged 18 to 64.</td>
</tr>
<tr>
<td><strong>Entrepreneur</strong></td>
<td>GEM defines an entrepreneur as anyone who is either starting a business that he or she will wholly or partly own or who is managing a business that he or she wholly or partly owns that is less than three and a half years old. The business can be in any economic sector, can be any size and can be formal or informal.</td>
</tr>
<tr>
<td><strong>Established firm</strong></td>
<td>An established firm is an enterprise that has paid wages and salaries for more than 42 months.</td>
</tr>
<tr>
<td><strong>Global entrepreneurship monitor (GEM)</strong></td>
<td>GEM is an international research project, which studies entrepreneurial activity in participating countries. For more information see the website: <a href="http://www.gemconsortium.org">www.gemconsortium.org</a></td>
</tr>
<tr>
<td><strong>Necessity-motivated entrepreneur</strong></td>
<td>A necessity entrepreneur is someone who is engaged in starting or managing a new firm because he or she has no better work alternatives.</td>
</tr>
<tr>
<td><strong>New firm</strong></td>
<td>A new firm is an enterprise which has paid wages and salaries for between 3 and 42 months.</td>
</tr>
<tr>
<td><strong>Opportunity-motivated entrepreneur</strong></td>
<td>An opportunity entrepreneur is someone who is engaged in starting or managing a business in order to take advantage of an opportunity. This may be a life-style opportunity, an opportunity to work for oneself or to make more money.</td>
</tr>
<tr>
<td><strong>Owner-managed enterprise</strong></td>
<td>An owner-managed enterprise is one which is actively managed by someone who partly or wholly owns the enterprise.</td>
</tr>
<tr>
<td><strong>Small and medium enterprise (SME)</strong></td>
<td>In South Africa small and medium enterprises are defined as enterprises with less than 200 or in some cases 250 employees. Small enterprises have less than 50 employees and medium enterprises have between 50 and 199 or 249 employees. In addition, official definitions include threshold revenue and asset levels. The official classification of enterprises also makes provision for very small and micro enterprises, hence small, medium and micro enterprises (SMME).</td>
</tr>
<tr>
<td><strong>Start-up firm</strong></td>
<td>A start-up firm is an enterprise which has paid wages or salaries for less than three months, or has not paid salaries and wages at all.</td>
</tr>
<tr>
<td><strong>Total early-stage entrepreneurial activity (TEA)</strong></td>
<td>The TEA index measures the proportion of people aged 18 to 64 years who are starting or managing new firms less than three and a half years old that they will either partly or wholly own.</td>
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<tr>
<td><strong>Working-aged population</strong></td>
<td>The official working-aged population in South Africa is the population aged 15 to 65 years. Within GEM, however, the working-aged population typically refers to those aged 18 to 64 years.</td>
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</tbody>
</table>