UNIVERSIDADE DE ÉVORA

DEPARTAMENTO DE ECONOMIA

DOCUMENTO DE TRABALHO Nº **2006/01**
January

Understanding the microenterprise sector to design a tailor-made microfinance policy for Cape Verde

José A. G. Baptista [1]
Banco de Cabo Verde

Joaquim J. S. Ramalho
Universidade de Évora, Departamento de Economia, CEMAPRE

Jacinto Vidigal da Silva [2]
Universidade de Évora, Departamento de Gestão de Empresas

[1] Banco de Cabo Verde, CP 50, Avenida Amílcar Cabral, Praia, Cabo Verde
[2] Corresponding author. Tel.: +351 266740894; fax: +351 266740809.
E-mail address: jsilva@uevora.pt (J. Vidigal da Silva).

UNIVERSIDADE DE ÉVORA
DEPARTAMENTO DE ECONOMIA
Largo dos Colegiais, 2 – 7000-803 Évora – Portugal
Tel.: +351 266 740 894 Fax: +351 266 742 494
www.decon.uevora.pt wp.economia@uevora.pt

Resumo/Abstract:

Two of the central challenges faced by Cape Verde at the present are the high level of unemployment and the increasing proportion of the population that lives below the poverty line.
Microenterprise development can be an effective means of addressing both problems in a developing country like Cape Verde, where microenterprises account for about 50% of employment. In this paper we provide a detailed profile of micro firms' owners and investigate the relationship between their characteristics and the resort to outside seed capital. We find a cluster of factors - the microentrepreneur's age, gender, level of education and reason for being self-employed - which influence significantly the probability of being in need for external startup capital. The policy implications of these findings for the design of a specific microfinance program for Cape Verde are discussed.

Palavras-chave/Keywords: Cape Verde; Microfinance; Microenterprise; Microcredit; Poverty

Classificação JEL/JEL Classification: O18; G32

1. Introduction

Cape Verde is a small developing country whose development has been hindered by poor natural resources, prolonged cycles of drought, a narrow productive base, small domestic markets and costly communications. Notwithstanding, mostly due to substantial emigrants' remittances and financial and technical aid received from various international institutions and bilateral donors, during the last 15 years significant improvements have been made in many areas. Indeed, according to the latest Human Development Report available (UNDP, 2004), all the three items of the human development index (the life expectancy, education and GDP indexes) for Cape Verde are now above the average for developing countries and well above the average for Sub-Saharan Africa. In contrast, unemployment remains high and a recent report from the Cape Verde National Institute of Statistics (INE) shows that the proportion of Cape Verdeans officially deemed to be living in (relative) poverty increased from 30.2% in 1989 to 36.4% in 2002 (INE, 2003b). As stressed by Bourdet (2000), the Achilles heel of the Cape Verdean economy is the (un)employment and poverty situation.

Over the last twenty years, many scholars and policymakers around the world have argued that an important tool for reducing unemployment and eradicating poverty is to provide financial assistance to microenterprises, since they represent the 'backbone' of the local economies in less developed countries, contributing substantially to the overall employment level. Namely, as the formal credit institutions are neither prepared nor interested to attend this type of clientele, improving access to credit by microentrepreneurs is one of the principal ways of guaranteeing (self-)employment to the poorest population and, as a consequence, of reducing its level of poverty. In Cape

Verde, where 89.7% of Cape Verdean firms may be classified as microenterprises[1] (INE, 1999), the economic importance of the microenterprise sector has been recently recognized by the government, which intends to intensify and expand the microcredit programs initiated some years ago. Therefore, several of the credits received from international donors are now being directed to support the promotion of microentrepreneurs within the framework of a self-employment strategy (see, for example, IMF's, 2005, 'Cape Verde: Poverty Reduction Strategy Paper', pp. 61-63).

Assuming that the lack of start-up capital and access to external funding are the primary impediments for the poor to start and sustain their businesses, microcredit seems to be indeed the most promising way of promoting the creation and expansion of their microenterprises. However, some recent studies (e.g. Glackin, 2002) suggest that lack of credit demand is as important as lack of supply, since there exist several program and client-related barriers that discourage or prevent potential borrowers of participating in microcredit programs (see *inter alia* Evans et al., 1999, for an example of a program that failed to achieve a significant outreach due to a lack in demand for loans offered). Moreover, despite the difficulty in evaluating the merits of a given microcredit program, several of them seem to have failed as agents of poverty alleviation for many of their participants (see for example the impact assessment studies by Copestake et al., 2001, Mosley, 2001, and Shaw, 2004). Also in Cape Verde some microcredit experiences with diverse successes have occurred in the past (see UNDP, 2002, p. 35).

Clearly, no single microcredit policy is likely to exist that is adequate for all the different segments of the poor of all countries and, hence, merely trying to replicate lending strategies that were successful in other places will most likely fail to achieve any significant results. Instead, in order to increase the rates of participation and success

[1] In this paper we classify as microenterprises all firms with five or less employees, including the owner.

in microcredit programs, it is essential to have a deep understanding of the main characteristics of local microentrepreneurs and design microcredit schemes tailored to them. Therefore, in this paper, based on a comprehensive survey questionnaire conducted by one of the authors in Cape Verde in 2003, we examine the main characteristics of the potential demand side of the microcredit process in Cape Verde and analyze their policy implications. In particular, we provide a detailed profile of Cape Verdean microenterprises and microentrepreneurs, analyze the major financing sources available to start-up microenterprises in Cape Verde, investigate the relationship between the resort to borrowed seed capital and both the owner's socioeconomic background and the microenterprise specific characteristics, and show the usefulness of the results obtained in the paper for defining appropriate microfinance strategies to support the creation, development and survival of Cape Verdean microenterprises.

The remainder of this paper is organized as follows. Section 2 briefly discusses the Cape Verde social and economic context. Section 3 describes the data used in the study, the main characteristics of Cape Verdean microenterprises, and the alternative financing sources used by microentrepreneurs at the foundation of their firm. Section 4 studies the factors that influence the need for external start-up capital. Section 5 concludes the paper, discussing the policy implications of our results.

2. Cape Verde social and economic characterization

Cape Verde is a small archipelago of only 4033 km^2 made up of ten mountainous islands located about 500 kilometers off the West African coast. Only nine of the islands are populated, with about half of the resident population of about 435 000 living in the main island, Santiago (INE, 2003a). Similarly to most developing countries, the

overwhelming majority of Cape Verdean enterprises is of very small size: in 1997, 89.7% of the total number of firms were microenterprises, which accounted for an estimated 50% of employment (INE, 1999). However, the structure of the Cape Verdean economy differs substantially from most Sub-Saharan countries in terms of the dominant role played by the tertiary sector, which has been the mainstay of the economy, generating most of the economic growth experienced since 1990 and accounting for 72% of GDP and 57% of employment, see Figure 1. The poor natural resource base, particularly with respect to fresh water and arable land (only an estimated 10% of the land surface is suitable for agriculture), together with adverse climatic conditions, with repeated and often long-lasting droughts, explain the poor performance and low productivity of the agricultural sector, whose production covers only a scant 10 to 15% of food requirements in an average year. The industrial base is also rather small due to the absence of important mineral resources, severe localization disadvantages and a very limited home market.

Figure 1 about here

Compared with other countries in Sub-Saharan Africa, most economic and social indicators in Cape Verde are quite impressive, as Table 1 illustrates. However, despite these remarkable achievements, the employment situation remains bad, with high and persistent levels of unemployment (around 20% in recent years) and many precarious jobs in the large informal sector and in the so-called FAIMOs, where an important share of the active population is still working in seasonal, labour-intensive public works.[2] Moreover, a national survey of household income and expenditure conducted between

October 2001 and October 2002 by INE shows clearly that the strong economic growth in the last decade was asymmetrical, not contributing to a proportionate and meaningful poverty reduction. Indeed, according to the results obtained by INE (2003b) using a relative concept of poverty, while in 1989 about 30.2% of the population were poor and 14.1% very poor, in 2002 those figures increased to 36.4% and 19.9%, respectively. At the origin of this situation is the type of growth achieved, which has not created employment in a significant way. Growth has been stimulated from the outside, with foreign aid and expatriate remittances together accounting for 29% of GDP (UNDP, 2002). In 2003, the total external debt increased to 75.5% of GDP from an average of 57.3% during the period 1993-2002 (ADB, 2005).

Table 1 about here

3. Survey questionnaire

3.1. Design

Our study of the microenterprise sector in Cape Verde is based on a structured questionnaire administered directly by one of the authors to 120 microentrepreneurs in May and June 2003. The questions included in the survey are relative to the characteristics of the microentrepeneur and his/her microenterprise both at the time the latter was created and the moment the questionnaire took place. The questionnaires were filled out by the authors during personal interviews with the microentrepeneurs. In fact, after carrying out the survey, we are certain that a direct interview technique is the

[2] The FAIMOs were created by the government of Cape Verde almost thirty years ago with the aim of generating employment in the rural areas to ensure a minimum income to the rural families devastated by

only successful way of conducting a survey of this nature in Cape Verde since, due to the low schooling level of most microentrepeneurs, many questions had to be clarified and suited to their level of education.

All the interviews took place on the two most populous islands of Cape Verde, Santiago and São Vicente, which together account for about 70% of the resident population (INE, 2003a), 66% of the poor population (INE, 2003b) and 65% of micro firms (INE, 1999). To ensure an adequate representation of the target population, the respondents were selected from two location-based categories that reflect approximately their weight in the universe of microenterprises in those two islands: an urban cohort of 77 microentrepeneurs, 44 of whom were drawn from the capital city of Praia (Santiago) and surroundings, and 33 from the city of Mindelo (São Vicente), which are the two largest Cape Verdean cities; and a rural group of 43 microentrepeneurs, located in the Santiago municipalities of Santa Catarina (18), Santa Cruz (14), and São Domingos (11), where most people live in small-scattered villages and work in agriculture, cattle raising and fisheries.[3] From each location, the micro firms were then randomly sampled from the database "Ficheiro de Unidades Estatísticas" managed by INE, who supplied their addresses and phone numbers.

3.2. Profile of microenterprises and microentrepreneurs in Cape Verde

Figure 2 reports summary information about the microenterprises in our sample. The surveyed companies range from those recently founded (21.7% of the firms were created in the last 2 years and 50% in the last 5 years) to 'mature' firms (30% were founded more than 10 years ago and 9.2% are over age 20). The very small firms are

droughts. At the end of the 1990s, some 10% of the active population were still employed in them.

predominant: more than two thirds of the firms have 2 or less employees (including the owner) and in a quarter of the firms the only worker is the microentrepreneur. Half of the respondent firms operate in the trade sector (Fig. 2C) and almost two thirds of them (64.2%) are located in urban areas.

Figure 2 about here

Regarding the microentrepreneurs, the evidence in some of their characteristics is set out in Figure 3. Some of those characteristics are relative to 2003 and others to the year the firm was created. Most business owners are less than 40 years old (56.7%) and 80.8% became owner of the firm before that age (Fig. 3A and 3B). In both cases the same age category (31-40) is dominant but the proportion of the respondents who became entrepreneurs before age 30 is also considerable (38.3%). More than two thirds (70%) of the microentrepreneurs are married (Fig. 3D) and, somewhat surprisingly, most (53.3%) are women (Fig. 3C). This higher proportion of female microentrepreneurs is certainly related to the higher risk of unemployment faced by the female population, which suggests that women see self-employment as an important means of avoiding unemployment.[4]

Figure 3 about here

Although Cape Verde has registered very positive developments in the sector of education in the last decade, the level of education of most microentrepreneurs is still

[3] Note that about half of the population living in the rural areas of Santiago are poor, which represents 42.5% of the Cape Verdean total poor population (INE, 2003b).

very low. They reported an average of 6.1 years of schooling, 6.7% never attended school and 65.0% only attended the primary education system, which presently consists of six compulsory years (Fig. 3E). Only 7.5% were involved in higher education. Moreover, none of the individuals in our sample has improved his/her schooling level since becoming an entrepreneur, which suggests that the several programs promoting adult education organized in the last decade are not attracting all the strata of the Cape Verdean population.

Only 27.5% of the microenterprise owners became entrepreneurs less than five years ago, while 42.5% have been entrepreneurs for more than ten years (Fig. 3F). Slightly more than one third of the respondents (35.8%) owned other firms before assuming the control of their current enterprise (Fig. 3G). Although most microentrepreneurs (57.5%) started their activity 'voluntarily' (Fig. 3H)[5], an important proportion of microentrepreneurs (42.5%) said that they were forced to do so due to the lack of alternatives for overcoming their difficult economic situation (poverty and/or unemployment). Reinforcing the conjecture made above, note that 51.6% of females started their business 'involuntarily' against only 32.1% of men.

Our survey reveals that there are significant differences in the characteristics of urban and rural microentrepreneurs, as the results reported in Table 2 show clearly. Indeed, from the eleven characteristics analyzed so far, only two are not statistically different at a 5% level. Undoubtedly, on average, rural microenterprises are smaller and more concentrated on the trade sector, and their owners are younger and less educated and have fewer years of experience as entrepreneurs, despite becoming entrepreneurs at

[4] According to IMF, 2005, the economic acceleration occurred in the 90s merely absorbed females entering the workforce without changing their rate of unemployment. In contrast, the unemployment rate among the male population was cut by more than half.

[5] From which 44.1% become self-employed due to their liking for their business idea, 16.2% to complement family income, 14.7% because the expected income from self-employment was greater than the income from a salaried position, 13.2% in order to gain more independence, and 11.8% to follow family tradition.

a younger age. More than two thirds of the rural microentrepreneurs are women, while in urban areas the majority of the micro firms are owned by men. Strikingly, 62.8% of rural respondents created their business only as a last resort to fight their economic problems, while in urban regions more than two thirds (68.8%) are entrepreneurs by choice.

Table 2 about here

Table 2 also compares our results with those obtained by Heino and Págan (2001) for microentrepreneurs located in urban areas of Mexico, which, is, to the best of our knowledge, the only similar study realized so far. The main differences between the urban microentrepreneurs of the two countries (all of them significant at a 1% level) are the much higher proportion of females (44.2% against only 22.4%), 'involuntary' entries into self-employment (31.2% vs. 14.1%), and microentrepreneurs with previous experience (36.4% vs. 11.0%) and the larger average number of employees (2.6 vs. 1.8) in the Cape Verdean case. Obviously, these are key differences that illustrate clearly the importance of taking into account the specific characteristics of local microentrepreneurs when defining microcredit or similar programs for a particular country or region and, thus, highlight the relevance of our paper for practitioners.

3.3. Initial financing

When questioned about their financing preferences, the large majority of respondents (92.0%) said that they would use their own savings in first place and, only if necessary, they would then resort to outside funding (see Figure 4A). However, the actual start-up

financial sources of Cape Verdean microentrepreneurs are evenly distributed between internal and external sources (Fig. 4B), which suggests that most of those who used external funds were forced to do so due to insufficient savings and reinforces the idea that many microentrepreneurs only started their business due to their difficult economic situation.[6]

Figure 4 about here

A slightly higher proportion of the respondents (51.7%) used mainly outside financing, most of which (64.5%) borrowed funds from informal sources such as family members (48.4%) and moneylenders, customers, suppliers and friends (16.1%), see Table 3. Only about one third of the microentrepreneurs who used external financing resorted to formal sources such as banks (21.0%) and microcredit institutions (14.5%). Fear of bankers, high interest rates and lack of collateral were identified as the key constraints to accessing capital in the formal market.

Table 3 about here

Again, there is a clear split between urban and rural areas. As could be expected, since the poverty incidence in Cape Verde is much higher in rural zones (INE, 2003b), while in urban areas the savings of the majority of microentrepreneurs were sufficient to finance the start-up capital of their firm, in rural regions more than two thirds (69.8%) of the respondents were forced to resort to external financing sources. In both cases, loans from family were the main outside initial funding source, but their importance is

[6] Thus, Cape Verdean microentrepreneurs seem to follow the pecking-order model of financing hierarchy that claims that firms use external financing only when internal funds are insufficient. See *inter alia*

substantially higher in rural areas, where the only other important financing alternative is microcredit. In contrast, a considerable proportion of urban microentrepreneurs resorted also to other informal lenders and banks.

4. Econometric analysis of the factors that influence the resort to external start-up capital

We use a probit model to analyze which characteristics of microentrepreneurs are more relevant for explaining the utilization of external funds in the financing of start-up micro firms. For the reasons indicated earlier, these factors will also roughly explain the 'need' for outside seed capital of the existent Cape Verdean microenterprises, since the huge majority of the microentrepreneurs in our sample used external funds only because their savings were insufficient to finance their business. We relate the binary dependent variable (y) of our model, which indicates whether the microentrepreneur resorted to outside start-up capital ($y = 1$) instead of using his/her own savings ($y = 0$), to the set of explanatory variables described next. Relative to the characteristics of the microentrepreneur at the time his/her firm was created, we defined the variables AGE (in years), AGE2 (AGE squared), EDUCATION (years of schooling), FEMALE, MARRIED, OTHER_FIRMS and INVOLUNTARY, where the last four are dummy variables which assume the value 1 if the microentrepreneur is a female, married, owned other firms before and entered involuntarily into self-employment, respectively. Additionally, we defined three other dummy variables: URBAN and TRADE, which have the value of 1 if the micro firm is located in an urban area and operates in the trade sector, respectively, and PRE_1991, which has the value of 1 if the firm was founded in 1991 or before and the value of 0 otherwise. The inclusion of the last variable in the

Myers (1984) and Myers and Majluf (1984) for details on this popular capital structure theory.

model is justified by the important economic reforms that started in 1991 in Cape Verde, which, in order to promote the development of the private sector, included several policies of financing support to small and medium enterprises.[7]

Table 4 reports the estimated results. Considering first the empirical adequacy of our model, it seems that it fits the data well. Indeed, the *LR* test for the joint significance of the ten explanatory variables is significant at the 1% level; Davidson and MacKinnon's (1984) test for the null hypothesis of homoskedasticity is not significant; the RESET test (Pagan and Vella, 1989) provides no evidence of distributional or functional form misspecification; the model correctly predicts the two outcomes 72.5% of the time, being only slightly more successful in the prediction of one of the outcomes; and McFadden´s (1974) pseudo R^2 is 0.217, which does not seem too bad for a cross-sectional study.

Table 4 about here

We find that the majority of the model variables influence significantly the resort to external financing, namely INVOLUNTARY and PRE_1991 (which are significant at the 1% level), AGE and AGE2 (5% level), and FEMALE and EDUCATION (10% level). The others do not seem to affect significantly the need for outside seed capital, including the variable URBAN, which implies that, despite the markedly distinct characteristics of urban and rural microentrepreneurs, it appears that after controlling for their differences, the location of the micro firm is not important for the financing decisions of their owner.

[7] Since 1991, the Cape Verdean government has been steadily reducing its central role in the economy. The several economic reforms implemented gradually created a private-sector-led economy, where, according to the last Enterprise Survey (INE, 1999), in 1997 some 97% of the enterprises were privately owned by Cape Verdeans, 2% foreign-owned, and only 1% owned by the state.

In average terms (see the last column of Table 4), the economic reforms that took place in 1991 increased the probability of micro firms resorting to outside start-up capital by 35 percentage points. Clearly, the policies adopted at that time to promote the private sector in Cape Verde produced a large impact over the microenterprise sector, being fundamental for the rapid and substantial increase in the number of micro firms during the 1990s by motivating many Cape Verdeans without significant savings to resort to external funding in order to create their own enterprise. A well-designed microfinance policy will potentially have similar effects.

As expected, the probability of resorting to outside start-up capital is much higher (by 31.8 percentage points) for the microentrepreneurs that started their businesses due to the lack of other income-generating alternatives, since their savings were certainly smaller. Also probably due to their insufficient savings, since the female unemployment rate is higher, female microenterprise owners are more likely to resort to external financing by 23.0 percentage points than their male counterparts.

Well-educated microentrepreneurs are better endowed with technical skills, business acumen, ambition and self-confidence. Moreover, they are less reluctant to expose themselves to the risks associated with large loans due to their better understanding of the functioning of the credit market and of the alternative financing sources available. For all these reasons, their microenterprises tend to be larger and, hence, require more initial funding, which explains the positive relationship found between the microentrepreneurs' need for outside start-up capital and their level of education: according to our model, the probability of resorting to external financing increases by 2.5 percentage points for each additional year of schooling.

Finally, the need for start-up external financing is larger among the youngest and oldest microentrepreneurs in our sample, as illustrated in Figure 5. The former possess

no significant personal wealth accumulation, and, hence, the only means of starting their business is resorting to outside capital, as could be anticipated. Less expected are the results found for older microentrepreneurs, although similar results have been found by Heino and Pagán (2001) for the Mexican economy.[8] A possible explanation for this finding is that most of the microentrepreneurs that start their businesses at older ages reach this phase with no significant savings and, aiming at escaping poverty or avoiding falling into that situation after retirement, see self-employment as their last chance to increase substantially their incomes.

Figure 5 about here

The partial effects presented in Table 4 do not really correspond to a particular individual since they are based on the averages of each dummy variable. Therefore, in Table 5 we present the estimated probabilities of Cape Verdeans microentrepreneurs resorting to outside start-up capital at some interesting values of their characteristics. Namely, to save space, we fixed the explanatory variables found statistically insignificant at their predominant values in the sample and, only for microenterprises created after 1991, computed those probabilities at two distinct values of each one of the other significant variables. The results found clearly illustrate the heterogeneity of Cape Verdeans microentrepreneurs, with the probabilities of resorting to external financing ranging from 6.0% (a male microentrepreneur of age 40 with no education who started his business 'voluntarily') to 96.3% (a well-educated, female, 20 years old - or 55, the results, not reported, are similar - microentrepreneur with no other employment alternatives).

[8] Actually, despite obtaining the same signs for the variables AGE and AGE2 (both of which were significant at the 1% level), Heino and Pagán (2001) mistakenly concluded that, whatever the

Table 5 about here

5. Concluding remarks and policy implications

In this paper we provided a detailed profile of the microenterprise sector in Cape Verde. Some key features emerge from our survey. First, most Cape Verdean microentrepreneurs are females, created their firm before age 40, work alone or have only one employee, operate in the trade sector in urban areas, have a very low level of education, and started their business 'voluntarily'. Second, micro firms located in rural areas are significantly different from those established in urban areas: they are smaller and more concentrated in the trade sector, their owners are younger and less educated and a larger proportion are females and entered involuntarily into self-employment. Third, although the huge majority of microentrepreneurs had preferred to finance their firm using their own resources, most of them were forced to resort to outside start-up capital due to insufficient savings. Informal founts, particularly family members, are the major sources of external financing.

The strong association between certain endogenous characteristics of the microentrepreneurs and the resort to outside start-up capital warrants special consideration. In our econometric analysis we identified a cluster of risk factors - the microentrepreneur's age, gender, level of education and reason for becoming self-employed - which influences significantly the probability of being in need for external capital. Namely, the resort to outside start-up capital is higher when the owner of the micro firm is relatively young or relatively old, is a woman, possesses more years of schooling and entered into self-employment involuntarily. The profound economic

---

microentrepreneur's age, it influences negatively the resort to outside start-up capital.

reforms implemented after 1991 also appear to have been decisive for the expansion of the number of microenterprises that resort to outside start-up capital.

Given their importance in the Cape Verdean economy, providing better conditions for the creation and growth of microenterprises will be crucial for the success of any political strategy aiming at reducing unemployment and poverty in a sustainable way. In such a strategy, the development of adequate financing mechanisms designed specifically for Cape Verde will be an essential instrument for promoting economic activity and creating employment. However, given the particular and heterogeneous characteristics of Cape Verdean microentrepreneurs, the chances of success of a rigid and minimalist microfinance policy based exclusively on microcredit are very low. To increase its probability of success, such policy should be tailored to the characteristics of the specific segment of the population being targeted and a notable portion of its budget should be expended in the delivery of training and technical assistance. Our study identifies some factors that deserve direct attention in the design of a microfinance policy for Cape Verde insofar as they may function as important determinants of microcredit access and success.

First, the low level of education of most Cape Verdean microentrepreneurs may compromise their ability to understand the benefits of credit, assert their desire to join the program and successfully utilize credit, as argued by Evans et al. (1999) in their study relative to Bangladesh. Thus, the adult education programs that have been organized in Cape Verde in the last few years should be intensified and, in order to attract a larger number of individuals, some of them should be directed to specific classes of the population. Indeed, as our survey shows, none of the microentrepreneurs in our sample has improved his/her level of education since founding his/her firm. Moreover, a very important role in the microcredit programs should be reserved for

nongovernmental organizations (NGOs), since they know better the local realities, are closer to the populations, have more flexibility of action, and, hence, are clearly more capacitated to really reach the eligible beneficiaries with low education and promote the appropriate follow-up. However, so far, NGOs have been weakly involved in the poverty reduction programs undertaken in Cape Verde (see UNDP, 2002).

Second, our survey reveals that a considerable proportion of micro firms owners have become self-employed only because they had no alternatives. These microentrepreneurs, who are typically females living in rural areas that where forced to resort to outside start-up capital to create their firms, are more likely to be poorly-motivated, to operate in businesses where they can barely subsist, and to lack technical expertise in business operations and management. For such individuals, the primary challenges for any poverty reduction program will be to ensure that they operate in the sectors of activity where their probability of succeeding is higher and to build their motivation, entrepreneurial spirit and capacity to become real entrepreneurs. Thus, at least in these cases, microfinance programs should start by conducting an accurate assessment of the entrepreneurial capacity of micro firms' owners and to determine their business feasibility in order to prevent the financing of firms that are very likely to fail. Then, potential successful entrepreneurs should be provided with technical assistance and taught appropriate management skills in order to be able to make the right investment and business decisions by themselves. Only after this process should microcredit become available to support further growth of their firms. For those lacking entrepreneurship spirit and skills and/or operating in sectors of activity where markets are either saturated or lacking, microcredit is unlikely to be the solution. Instead, priority should be given to their professional training and specialization in higher-value activities. In these cases, the microfinance institutions should take a proactive role in

identifying and promoting higher-value occupations suitable for them and provide personal services such as individual business advice and assistance in developing linkages with markets and suppliers.

Third, our investigation confirms that micro firms owned by females need to resort more often to outside start-up capital due to insufficient savings. As their illiteracy rate is clearly higher than men's (32.0% vs. 14.6% in 2002, see UNDP, 2004), greater resources should be directed toward female education activities as they facilitate the uptake of microcredit opportunities. Additionally, some employment and professional training policy mechanisms should be directed specifically towards women, since in Cape Verde half of the female employment is concentrated in food retailing and catering (see Bourdet, 2000).

Fourth, our econometric model estimates that the probability of resorting to external financing is higher in the case of young and old microentrepreneurs. Relative to the former, provided they possess appropriate education and skills, the first concern of microfinance institutions should be the provision of intensive entrepreneurial training programs and access to microcredit. Otherwise, instead of credit, the financial support of measures aiming at improving their level of education and at creating a professionalizing alternative for the youths who abandon the school system in order to facilitate their entry in the job market (the unemployment rate in Cape Verde is clearly higher among youths than among adults) should be the priority of microfinance policymakers. In contrast, providing credit, technical assistance and some basic management skills should be the focus of microfinance programs directed specifically to older microentrepreneurs.

Finally, if microcredit policies for Cape Verde are designed in function of the microentrepreneurs' characteristics analyzed in the preceding paragraphs, no specific

policy for rural areas seems to be necessary. Indeed, our econometric analysis indicates that after taking into account those characteristics, the location of the firm does not affect significantly the need for outside start-up capital. However, since the majority of the neediest microentrepreneurs live in rural zones, a good coverage of these areas has to be guaranteed.

Acknowledgements

The authors gratefully acknowledge financial support from Banco de Cabo Verde and Fundação para a Ciência e Tecnologia, program POCTI, partially funded by FEDER.

References

African Development Bank, 2005. Selected statistics on African countries, Vol. XXV. African Development Bank, Tunis.

Bourdet, Y., 2002. Cape Verde: putting new life onto reform policy, and then…. Country Economic Report 2000:8, Swedish International Development Cooperation Agency, Stockholm.

Copestake, J., Bhalotra, S., Johnson, S., 2001. Assessing the impact of microcredit. Journal of Development Studies 37(4), 81-100.

Davidson, R., MacKinnon, J.G., 1984. Convenient specification tests for logit and probit models. Journal of Econometrics 25, 241-262.

Evans, T.G., Adams, A.M., Mohammed, R., Norris, A.H., 1999. Demystifying nonparticipation in microcredit: a population-based analysis. World Development 27(2), 419-430.

Glackin, C.E., 2002. What does it take to borrow? A framework for analysis. Journal of

Microfinance 4(1), 115-135.

Heino, H., Págan, J.A., 2001. Assessing the need for microenterprises in Mexico to borrow start-up capital. Journal of Microfinance 3(1), 131-144.

International Monetary Fund, 2005. Cape Verde: poverty reduction strategy paper. IMF Country Report No. 05/135, Washington DC.

Instituto Nacional de Estatística, 1999. 1º Recenseamento Empresarial 1997, 1ª fase, INE, Praia.

Instituto Nacional de Estatística, 2003a. Censos 2000. INE, Praia.

Instituto Nacional de Estatística, 2003b. Inquérito às Despesas e Receitas Familiares. INE, Praia.

McFadden, D.L., 1974. Conditional logit analysis of qualitative choice analysis, in: Zarembka, P. (Ed.), Frontiers in Econometrics. Academic Press, New York, pp. 105-142.

Mosley P., 2001. Microfinance and poverty in Bolivia. Journal of Development Studies 37(4), 101-132.

Myers, S.C., 1984. The capital structure puzzle. Journal of Finance 39(3), 575-592.

Myers, S.C., Majluf, N., 1984. Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have. Journal of Financial Economics 13(2), 187-221.

Pagan, A., Vella, F., 1989. Diagnostic tests for models based on individual data: a survey. Journal of Applied Econometrics 4, S29-S59.

Shaw, J., 2004. Microenterprise occupation and poverty reduction in microfinance programs: evidence from Sri Lanka. Journal of Development Studies 32(7), 1247-1264.

UNDP, 2002. Cape Verde: local governance in the perspective of poverty reduction. UNDP, Maputo.

UNDP, 2004. Human development report 2004: cultural liberty in today's diverse world. UNDP, New York.

Table 1. Socio-economic indicators for Cape Verde (2002)

	Cape Verde	Sub-Saharan Africa	Developing countries
GDP per capita (PPP US$)	5000	1790	4054
GDP per capita annual growth rate (%, 1990-2002)	3.4	---	2.8
Annual population growth rate (%, 1975-2002)	1.8	2.7	1.9
Urban population (%)	55.1	35.0	41.4
HDI index	0.717	0.465	0.663
Life expectancy (years)	70.0	46.3	64.6
Infant mortality rate (per 1000 live births)	29	108	61
Adult literacy rate (%)	75.7	63.2	76.7
Combined primary, secondary and tertiary gross enrolment ratio (%)	73	44	60

Source: UNDP (2004)

Table 2. Sample characteristics of surveyed urban and rural respondents in Cape Verde and urban respondents in Mexico

Variable	Cape Verde				Mexico[c]	
	Total	Urban	Rural	p-value[a]	Urban	p-value[b]
Microenterprises						
	(mean values)					
Age	8.7	9.5	7.3	0.1417	10.6	0.3048
Number of employees	2.3	2.6	1.8	0.0000	1.8	0.0000
	(%)					
Trade sector	50.0	39.0	69.8	0.0006	34.7	0.4490
Microentrepreneurs						
	(mean values)					
Age (2003)	41.9	45.0	36.3	0.0001	43.5	0.2613
Age (start)	33.2	35.5	29.0	0.0002	---	---
Years of schooling	6.1	6.9	4.8	0.0020	7.5	0.1628
Years of experience (2003)	11.7	12.9	9.6	0.0356	---	---
	(%)					
Women	53.3	44.2	69.8	0.0048	22.4	0.0001
Married	70.0	79.2	53.5	0.0042	70.8	0.0727
Owned other businesses	35.8	36.4	34.9	0.8721	11.0	0.0000
Involuntary entry into self-employment	42.5	31.2	62.8	0.0006	14.1	0.0014

[a] Relative to the significance of the difference between sample means or proportions of urban and rural respondents.
[b] Relative to the significance of the difference between sample means or proportions of urban Cape Verde and Mexican micro firms.
[c] See Heino and Págan (2001).

Table 3. Distribution of initial financing sources of respondents by location

	Total	Urban	Rural
External sources	51.7%	41.6%	69.8%
Internal sources	48.3%	58.4%	30.2%
Alternative external sources:			
- Family	48.4%	37.5%	60.0%
- Banks	21.0%	31.3%	10.0%
- Microcredit	14.5%	6.3%	23.3%
- Other informal lenders*	16.1%	25.0%	6.7%

* Includes local moneylenders, customers, suppliers and friends.

Table 4. Probit model

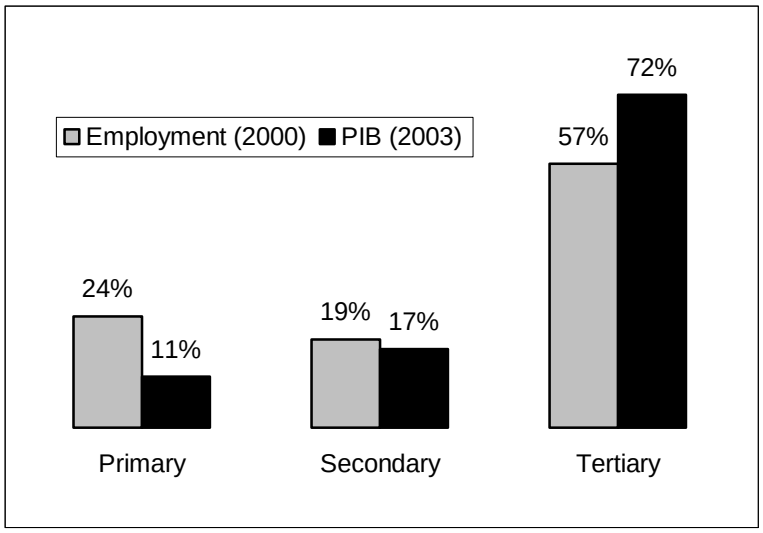
Independent variable	Coefficient	St. error	p-value	Partial effects
AGE	-0.216	0.086	0.012	-0.009
AGE2	0.003	0.001	0.013	
FEMALE	0.586	0.323	0.070	0.230
MARRIED	0.286	0.303	0.346	0.114
EDUCATION	0.064	0.037	0.089	0.025
OTHER_FIRMS	-0.189	0.298	0.526	-0.075
INVOLUNTARY	0.825	0.298	0.006	0.318
URBAN	-0.412	0.325	0.204	-0.162
TRADE	-0.050	0.321	0.875	-0.020
PRE_1991	-0.916	0.318	0.004	-0.350
CONSTANT	3.138	1.452	0.031	
Number of observations	120			
Log-likelihood value	-65.071			
LR test	36.08		0.000	
Pseudo R^2	0.217			
RESET test	0.458		0.795	
Heteroskedasticity test	4.094		0.943	
Percent correctly predicted				
- total funding	72.5			
- external funding	75.8			
- internal funding	69.0			

Notes: For the RESET and heteroskedasticity tests applied, see Pagan and Vella (1989) and Davidson and MacKinnon (1984), respectively. The pseudo R^2 is that suggested by McFadden (1974). The partial effects are measured at the averages of each variable and, in the case of the dummy variables, correspond to their change from 0 to 1.

Table 5. Probabilities (in percentage) of resorting to outside start-up capital for different profiles of variables

AGE	20	20	20	20	20	20	20	20	40	40	40	40	40	40	40	40
EDUCATION	0	17	0	17	0	17	0	17	0	17	0	17	0	17	0	17
FEMALE	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
INVOLUNTARY	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
PRE_1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MARRIED	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OTHER_FIRMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
URBAN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TRADE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Prob(y = 1)	24.1	64.8	45.4	83.3	54.9	88.6	76.1	96.3	6.0	31.9	16.7	54.6	23.3	63.8	44.3	82.7

Figure 1. Structure of employment and GDP by sector of activity



Sources: IMF (2005) and ADB (2005).

Figure 2. Sample characteristics of surveyed microenterprises

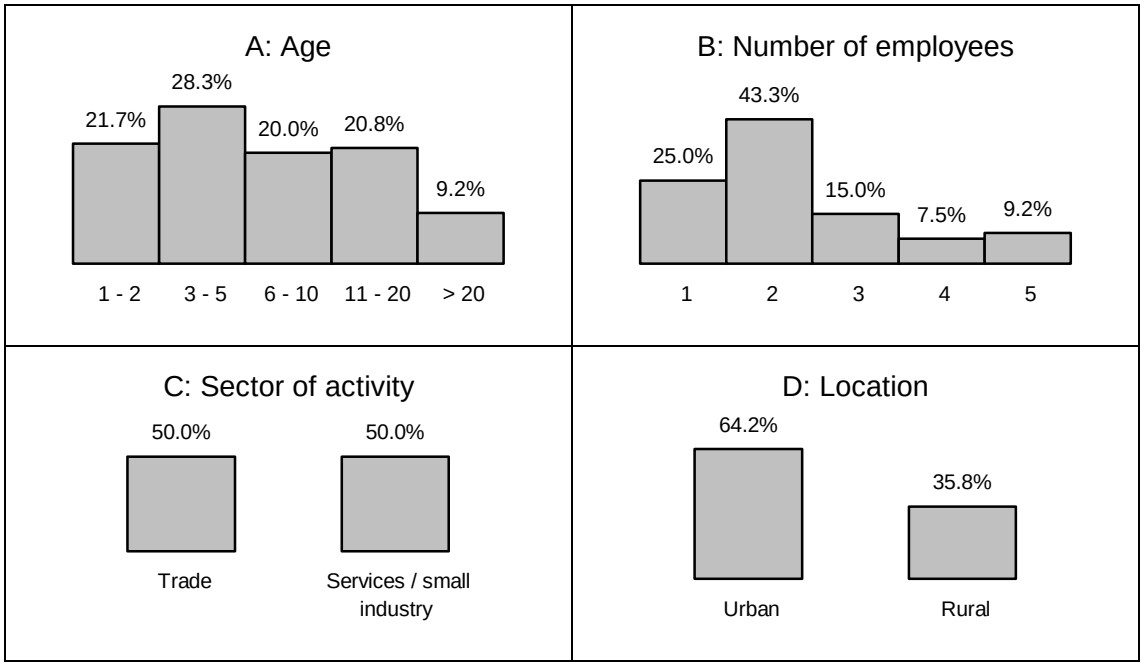
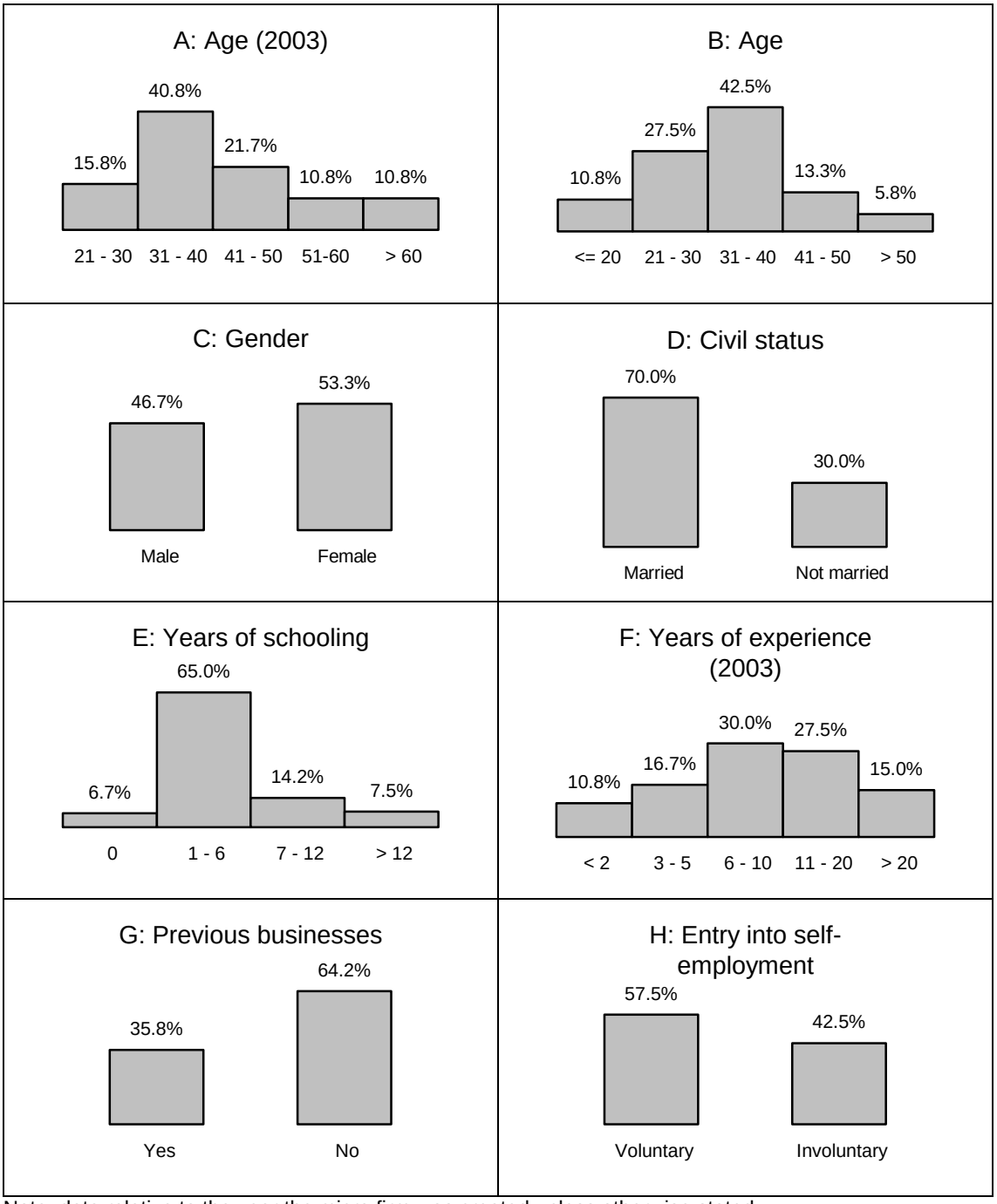


Figure 3. Sample characteristics of surveyed microentrepreneurs



Note: data relative to the year the micro firm was created unless otherwise stated.

Figure 4. Initial financing sources of surveyed microentrepreneurs

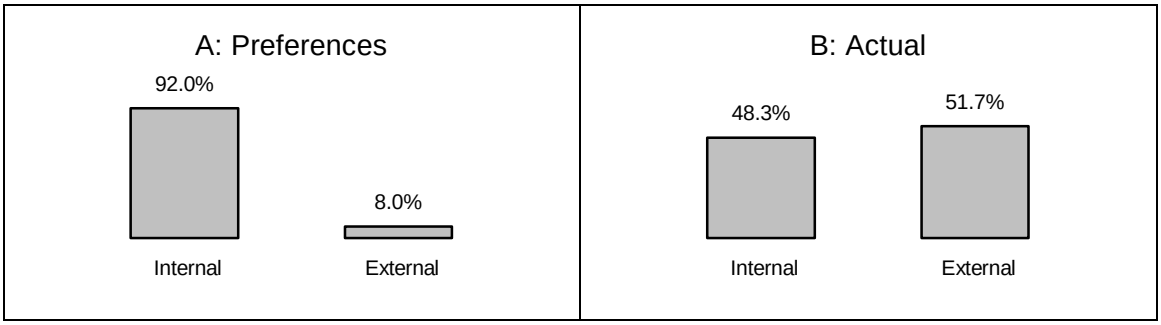


Figure 5. Relationship between the microentrepreneurs' age and the resort to outside start-up capital