An Assessment of the Effectiveness of Small and Micro-Enterprise Finance in Employment Creation

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Abstract

Small-scale and micro enterprises have received a considerable amount of attention in recent development literature and in ongoing development strategies in many developed and developing countries. One of the main arguments in favor of small-scale production highlights its ability to create employment opportunities, a result of SME's tendency to adopt labor-intensive techniques of production. However, despite the evidence of high labor intensity in small-scale activities, the debate over the role of SME in employment creation has not yet been resolved. Furthermore, the role of various financial support programs directed toward small and micro enterprises and their impact on employment creation has not been sufficiently investigated, particularly in developing countries. The following study will attempt to examine how these issues are dealt with in the current literature by analyzing: The relationship between firm size, especially that of small firms, and employment creation; The relation between assistance programs to SME's and employment creation; The employment–stabilizing behavior of SME's; Job creation and SME's in Egypt. It is concluded that providing micro-finance to enterprises would be successful in creating employment, raising productivity and eventually developing the workers' skills

ملخص

لاقت المشروعات الصغيرة والمتناهية الصغر قدراً كبيراً من الإهتمام في دراسات التنمية الأخيرة وفي استراتيجيات التنمية القائمة في كثير من الدول المتقدمة والنامية. وتُبرز أحد وجهات النظر المؤيدة للإنتاج الصغير قدرته علي توفير فرص العمل وذلك نتيجة لميل المشروعات الصغيرة والمتناهية الصغر إلي تبني أساليب الإنتاج تعتمد بشكل أساسى علي العمالة الكثيفة. و على الرغم من أن الكثافة المرتفعة للعمالة تبدو جلية في الأنشطة الصغيرة؛ إلا أن المناقشة الدائرة حول دور المشروعات الصغيرة والمتناهية الصغر في توفير فرص العمل لم تحسم بعد، كما أن دور برامج الدعم المالي المختلفة الموجهة للمشروعات الصغيرة والمتناهية الصغر وأثرها علي توفير فرص العمل لم يتم بحثه بدقة، خاصة في الدول النامية. وتحاول الدراسة التالية أن تبحث كيفية التعامل مع هذه القضايا في الدراسات الحالية وذلك من خلال تحليل العلاقة بين حجم الشركة - خاصة الشركات الصغيرة - وبين توفير فرص العمل. كما أنا تبحث أيضا العلاقة بين برامج لدعم و االمساعدة للمشروعات الصغيرة والمتناهية الصغر وبين توفير فرص العمل، والعلاقة بين إستقرار العمل بالمشروعات الصغيرة ومتناهية الصغر وبين توفير الوظائف وخيرا فهى تبحث أيضا المشروعات الصغيرة ومتناهية الصغر في مصر. وتخلُص هذه الدراسة إلي أن توفير التمويل البالغ الصغر لهذه المشروعات قد ينجح في توفير فرص العمل، وزيادة الإنتاجية، وأخيراً تطوير مهارات العمال.

1. The Relationship between Firm Size, Especially That of Small Firms, and Employment Creation

There is a general belief that if the economy is to achieve sustainable growth in employment, it must rely heavily on its smaller firms. The roots of this belief are based upon the work of David Birch (1979, 1987), which argued that most of net new job creation is among small firms.[1] Furthermore, various publications in Canada, including the *Annual Report on Small Business in Ontario* (1989) and *Small Business in Canada* (1991), ascribed 80 to 90 percent of total net new jobs in Canada to small (under 50 employees) firms.[2]

Another study, based on the US economy, highlighted the important role played by small businesses as an employer to new graduates. It revealed that employment in high tech small enterprises rose by nearly 5% from August 1996 to August 1997, resulting in 118,000 net new jobs. This study projected the job growth rate in the following year (1998) to reach nearly 9%. [3]

However, there is still less agreement about the role of SME in job creation. A study on the Canadian economy indicated that the small firm's share of gross job gains declines while gross job losses increase regardless of which measure is used and whether it is evaluated over the short or long-term. This is true for most of the goods sectors, although the effect is more pronounced in the industrial sector and the different related services than in the more rapidly growing business and consumer services sector.[4]

Also, recent research in the US suggested that both the share and quality of jobs created in small firms have been overstated. A more recent paper by Davis, Haltiwanger and Schuh (1993) went further, arguing that in the American manufacturing sector small firms have not accounted for a disproportionate share of jobs. They maintain that earlier findings were incorrect as a result of the poor quality of data (the use of cross–sectional data, when longitudinal data was required), as well as inaccurate measurement techniques. These findings have cast doubt on the underlying premise that small firms are key primary job creators.[5]

To summarize, there is less agreement among the studies on the relationship between job creation and SME's. This can be explained by:

- The application of different measures of employment, which influence the resulting conclusions.
- The varying definitions of SME's even when the studies relied only on the number of workers as criterion. Some studies considered an enterprise as small when employing less than 500 workers, while other studies referred to small-scale enterprises as those employing less than 50 workers. So the results of the impact of SME's on job creation varied accordingly.

2. The Relationship between Assistance Programs To SME's and Employment Creation

The evaluations of the effectiveness of small firm support programs differed among researchers. While some praised the support programs for their supposedly favorable effects

[1] P. Badwin & R. Dupuy (1994), p:3.

[2] Ibid.,p:4

[3] Internet," Will Small Business Become the Nation's Leading Employer of Graduates", p:5

[4] Badwin & Dupuy, op.,cit.,p:19

[5] S. Davis &M. Henrekson (1997),p: 4-6

on employment in small firms (Pernia and Pernia,1986), other researchers believed that the programs (UNDP et al ,1988) may present in many cases an ineffective role.[6]

This section will discuss the results of Rietveld & Schipper's study as an indicator of the relation between assistance programs to SME's and job creation. The former study concentrated on the difference in employment growth between assisted and non assisted small manufacturing firms. The data set used was based on a survey carried out in February and March 1993 in the province of Central Java, Indonesia. The most important results were:[7]

- Participation in assistance programs did not have a statistically significant impact on employment growth in small manufacturing firms.
- The determinants of employment growth in small firms often remained incomplete. The following variables were, however, considered significant explanatory variables for employment growth: industry type, firm age and the type of economic activity. In its analysis of firm age, the study found that the most significant employment creation took place in the first 15 years after establishment. Stated generally, it can be argued that an inverse relationship exists between employment growth and firm age.
- It is possible that firms do profit from assistance programs. However, these benefits are not reflected in employment growth, but mostly in higher value added via changes in production processes – leading to higher productivity gains – or via product innovation, leading to higher quality products.

3. Employment – Stabilizing Behavior of SME's

The hypothesis that the behavior of firms in the process of adjusting their number of employees along a business cycle depends on the size of the firm is often referenced in the literature. Several authors argue that while SMEs are more hesitant to hire additional employees during a boom economy, they also do not fire workers as quickly as larger firms in a recession. This yields a less cyclical behavior of aggregate employment of SMEs and implies that SMEs stabilize the economy's wide employment. However, there is hardly any theoretical support and only very limited empirical evidence to support this argument.

Gruhler (1979) analyzes the performance of German SMEs in the industrial sector for the period 1968-1975 and finds evidence of an employment–stabilizing role for SMEs. Also, Fendel & Frenkel examined this role during the period 1978-1992 and pointed out that:[8]

- The SMEs response to changes in economic activity – in terms of changes in employment – was limited, so jobs seem to be safer in SMEs than in large firms.
- The lower unemployment risk of jobs in SMEs is reflected in lower wages and a lower wage response to output changes.
- Past employment patterns had a rather stronger effect on current employment in SMEs than in large firms.

In the UK, Fotherwill and Gudgin (1979) found that for a limited number of regions during a period of severe industrial stagnation in the 1970s, smaller manufacturing firms showed greater buoyancy than their large counterparts. In addition, Hughes (1993) notes that during the 1980s in the UK, changes in the shares of small businesses in employment masked an underlying stability in small firms' employment. This was in contrast to major rationalization

[6] Pernia & Pernia (1986), p: 640

[7] P. Rietveld & Y. Schipper, p16-17

[8] R. Fendel & M. Frenkel ,p:16-17

by larger firms, especially in the manufacturing sector, where employment contracted substantially.[9]

All the previous studies have agreed that SMEs demonstrate employment –stabilizing behavior.

4. Job creation and SME's in Egypt:

In the case of Egypt, a limited number of studies have assessed the impact of small enterprises on employment creation, particularly those enterprises in a position to receive micro-credit through specially designed micro-finance programs.

Some empirical studies have tried to examine whether SMEs have contributed effectively to the employment creation objectives. Table (1) determines these studies and the items of analysis included in each study: [10]

Several points could be drawn from the previous studies concerning the role of SME's in job creation:

- The majority of workers (between 50-60%) are hired to work on a permanent basis. This does not preclude the fact that a large segment is working on either a temporary or casual nature (El Mahdi, Nov.1999). The Nassar & Metwali study (1999) indicated that the use of permanent workers is more apparent in small businesses than in micro-enterprises. This phenomenon reflects a certain stability of employment in small firms.
- Roughly 44 percent of the jobs were created by 14 percent of firms employing more than 26 workers. On the other hand, firms employing less than 10 workers and between 11 and 25 workers made an almost equal contribution to job generation, accounting for about 27 and 30 percent, respectively (El Leithy,1998). When the analysis included both the formal and informal workers, the results indicated that 2.1 percent of the formal workers are concentrated in micro-enterprises (1-4 workers), while 60 percent of informal workers work in the same micro-sized economic units (El Mahdi, 1998).
- Studies revealed that the majority (more than 50 percent) of small firms have a tendency to grow in terms of employment (El Leithy, 1998). However, El Mahdi's study pointed out that only 10.4 percent of the small-sized economic units witnessed an increase in the number of workers as compared to three years ago. The rest of the economic units either kept their number of workers constant (79.5 percent) or decreased them (5.06 percent).
- The studies indicated that the work relationship between the employer and the employee in SMEs is not generally governed by a contract. Only (15 percent) of the workers reported that they were employed by contract (El Mahdi, Nov.1999). The lack of contracts may be a reflection of the traditional and informal environment in which SMEs conduct their affairs. The most important challenge for SMEs is the insecurity of their workers regarding their futures, due to the lack of social security coverage as well as to the fact that employers are not bound by any contract towards their employees.
- SMEs employing less than 10 workers tend to employ more full-time skilled labor rather than less-skilled labor. This tendency decreases with the increase in firm size. Firms employing between 11-25 workers and more than 26 workers tend to hire more unskilled full-time labor (El-Leithy, 1998).
- The previous studies indicated that although the provision of technical and other aspects of running the small firms are greatly needed, the training assistance that is offered to small enterprises through different programs of support and finance is almost negligible. In practice, it became evident (El Mahdi, Nov. 1999) that training assistance is quite

[9] Ibid.,p:3

[10] The mark at any item of analysis means that this item was included in the study

limited in its outreach. The Egyptian labor Market Survey of 1998 showed that only 6.2 percent of the economic units were offered technical or training assistance from the different numerous agencies and NGO's working in Egypt. According to Soliman et. al., only 66.9 percent of the studied projects indicated that they did not receive any kind of assistance, especially training, from the finance providers.

Despite the fact that a few studies tackled the issue of small enterprises, employment and micro-finance, none of these assessments attempted to analyze the relationship that exists between the provision of micro finance and employment creation in small enterprises.

4.1 Scope of Work

During the past three decades a large number of developing countries and international organizations realized the importance of developing micro, small and medium sized enterprises as a way of achieving several goals. These goals included, among other things, providing work opportunities, adding to the GDP, creating a needed feeding industry for the larger enterprises and contributing to the export sector.

To understand the characteristics of the small-scale enterprises, their possibilities and their constraints, studies were conducted all over the world. Some of the studies explored the economic motivations, capabilities, sources of finance, dynamics and links with other firms and within the market, while others were interested in employment creation, entrepreneur-worker relationships, dispute settlement mechanisms and trade union affiliations.

Insufficient credit provided to small enterprises has been considered one of the major constraints that prevent micro and small entrepreneurs from being able to develop and expand. This realization, as well as a knowledge of the inherent potential of small-scale enterprises, led both the developed and developing countries to try and devise varied types of micro-finance programs.

Egypt was no different from other countries in this respect: Several programs have been introduced to provide support to micro and small entrepreneurs, as shown in the provider's report. However, several questions remain to be answered: To what extent have these micro-finance programs been successful in helping small enterprises to develop and offer employment opportunities? Do these programs make a significant difference to the entrepreneurs as compared to the informal practices? And to what extent are they able to reach the micro and small self-employed or employers in the community?

This study is mainly concerned with understanding the role of availability or non-availability of credit in the start-up, survival or expansion possibilities of the small enterprise. The aim of the project is to determine whether having access to credit has a positive impact on the small enterprise. The positive impact could mean a) the opportunity to start-up and sustain the business; b) the ability to sustain or develop an already existing activity; c) the ability to create or increase permanent employment opportunities at acceptable and increasing wage levels.

4.2 Methodology

4.2.1 Design

To assess the effect of loans given to small-scale enterprises a sample of enterprises receiving loans (intervention group) was randomly selected from the databases of donors. A one-to-one matching was implemented to select a "similar" enterprise not receiving loans (control group). The process of matching implies imposing a number of constraints in the selection of the controls. These constraints aimed at making the control group similar to the intervention group with respect to the distributions of one or more potentially confounding factors. However, matching does not preclude controlling for other confounding variables that arose

during data analysis. Even though the matching operation was time-consuming, it provided a better use of the small sample size adopted in the study due to limited resources.

The matching procedure was based on four factors:

- Location
- Activity
- Number of employees
- Year of establishment

4.2.2 Listing

A list of enterprises receiving credit from SFD and USAID has been used as the sampling frame of micro-credit beneficiaries.

A field visit to each of the randomly selected intervention enterprises was conducted. Several objectives were achieved through this visit:

- To make sure that the enterprise is still in business,
- To update information on name of owner, year of establishment, activity, address and phone number (if any),
- To locate the appropriate control enterprise, and,
- To collect data on the control enterprise(s), including names of enterprise, name of owner, year of establishment, activity, address and phone number (if any).

Interviewers doing the listing were instructed to select the control unit to fulfill the following criteria:

- Both units should have the same activity,
- Year of establishment should not exceed five years,
- Year of establishment should not be within the last two years,
- Comparable location in terms of exposure to the market (preferably within walking distance),
- Difference between the number of employees in both enterprises not exceeding two, and
- Comparable level of machinery and technology.

Furthermore, interviewers were asked to collect data on up to five "suggested" control enterprises if the matching criteria were not perfectly fulfilled. For those cases, the selection of the most appropriate control was done by one of the senior staff.

Listing activities were conducted in the six governorates between mid-April and mid-July of 1999.

4.3 Data Collection

A comprehensive questionnaire composed of seven sections was developed. The questionnaire included the following sections:

1. Interviewee's background
2. Employment
3. Capital
4. Trainig,
5. Characteristics of employees
6. Production
7. Marketing

The questionnaire was tested through twenty interviews conducted by two experienced interviewers. The questionnaire was then modified according to the results of the pre-test. Twelve interviewers participated in the training sessions and ten of them were recruited in data collection activities. Interviewers were divided into two teams. An experienced supervisor responsible for assigning work and field editing headed each team.

After the initial fieldwork was completed, a random sample of 5 percent of the cases was re-interviewed as a quality control measure. During the re-interview phase the interviewers were not allowed to work in the region they had participated in during the initial fieldwork.

The fieldwork started in the beginning of October 1999 and ended mid-November 1999 and was conducted in 6 governorates (Cairo, Alexandria, Sharkia, Gharbia, Fayoum and Assiut). Table (2) shows the number of EUs studied in each governnorate.

4.4 Field Work Problems

Several problems were encountered before and during the field work process.

Firstly, one of the major problems facing the data collection in this study was the lack of accuracy of data bases maintained by providers. Information regarding addresses was particularly vague and misleading. Data bases' level of details, accuracy and structure varied to a large extent across providers. This not only generated practical and logistical problems but might lead one to question the representation of research findings in the area of SME financing.

Secondly, from the random sample (150 enterprises) that was selected and prepared by the SFD only 66 enterprises (41 percent) proved to be still active. This situation was especially evident in Cairo, in the city of Herafeiin. A large number of the selected sample proved to have closed down or gone bankrupt. This result was more associated with start-up firms rather than those already established, and therefore poses questions as to the degree of success associated with granting loans to new firms. The second implication of this incidence is a smaller than planned SFD sample.

Thirdly, during the fieldwork several remarks were taken by fieldwork researchers. The main observations could be summarized in the following points:

1. A few NGOs instructed the small laborers not to divulge any information concerning their loans (Alexandria and Assiut).
2. Quite a large number of enterprises shut down their businesses because of the excessive interest payments and the delay penalties (Cairo).
3. Several of the enterprises that dealt with one Sharkia NGO were treated badly to the extent that they the owners came together to sue the NGO collectively (Abu Hamad – Sharkia).
4. The researchers never encountered an inefficient project that was assisted by the lending organizations.
5. Loans ranging between LE1000-1500 that went to manufacture baskets for fruits or vegetables or simple furniture made of palms branches created from 3-5 employment opportunities for at least three months.
6. The excessive guaranties demanded by the SFD drives the loan applicant to take a partner only to provide collateral and not to help in any other way in the production process.
7. The relationship between the NGO and the beneficiaries is highly dependent on the efficiency or inefficiency of the liaison officer.

8. Quite a large number of the entrepreneurs were unwilling at the beginning to answer the questionnaire's questions as they assumed that the researchers were coming from the lending organizations, with whom they had had a negative experience. (BA in Alexandria, Sharkia and Assiut, the Egyptian Association to Support Small Producers in Cairo and the Development of Small Enterprises Association in Fayoum).
9. Some beneficiaries were given home loans for productive purposes, i.e. sewing machines, raising poultry….etc. Some of these projects were imaginary because they simply did not take place. Instead the loans were used for personal purposes that had little to do with the agreed upon activity (Sadat district and Obour street in Assiut)
10. The beneficiaries dealt with the SFD loans complained of the excessive demands and bureaucracy, especially when dealing with the new graduates.
11. No support or guidance is being provided to the small entrepreneurs in case of problems or the failure to perform efficiently.

4.5 Data Analysis

To assess the effect of micro credit on job creation, a set of indicators has been developed to detect changes in employment on establishment level. Table (3) have been computed for each establishment:

Statistical analysis was implemented to test the hypotheses of the study with respect to the effect of micro-credit on job creation. Several types of analyses were performed. The paired t-test was used to assess the effect of credit on indicators reflecting employment. This was done using the pair matched data of establishment. Matching is expected to have naturalized several factors related to job creation as previously mentioned. The paired t-test is used to assess the effect of credit on employment after controlling for other variables.

Independent t-test or analysis of variance was used to test the equality of means in independent groups, such as comparing establishments by activity, or by source of credit. The Chi-square test was used to test the homogeneity of the control and the intervention groups with respect to demographic variables of owner and variables related to the characteristics of the establishment. Multiple regressions were used to determine variables that can predict outcome variables (employment).

4.6 Main Findings

The following parts will include a presentation of the main findings. The presentation will be divided into five major topics, namely:

1. Social Background and Work History of the Entrepreneurs
2. Capital, Partners and Finance
3. Training and Training Provision
4. Employment Creation
5. The Relationship between Labor and Capital
6. Conclusion and Policy Implications

Throughout the following analysis comparisons between the two groups of entrepreneurs (IG and CG) will be conducted. The aim is to understand whether the IG enterprises that have access to formal credit enjoy certain privileges in contrast to the ordinary small CG enterprises, which may or may not have the same kind of financial support.

5. Social Background and Work History of the Entrepreneurs

5.1 Gender, Age, Education and Marital Status

A look at the basic statistics of the entrepreneurs reveals the following results:

Firstly, regarding the gender of the enterprise owners, there seems to be a significant difference between the IG and the CG. According to the data it is clear that interventions offered by both the SFD and the USAID financed programs succeeded in presenting better chances to female entrepreneurs, whether those starting up new businesses or those who were already active in the market. Therefore, the data in Table (4) show that whereas the female entrepreneurs represented 3.5 percent of the total CG, this percentage rose up to 7.7 percent of the IG.

However, despite the significant difference in this respect between the IG and CG, the share of the female entrepreneurs is still relatively very limited, especially when we remember that one of the main objectives of the SFD in its Enterprise Development Program is to "increase employment and income-generating opportunities in the small and medium enterprise sector. This program (EDP) targets unemployed graduates**,** women**,** existing enterprises with a potential to expand and employees wishing to leave their jobs in the public sector" (Kheir El Din, 1997:7).

Secondly, regarding the educational attainment levels of the entrepreneurs, there is no clear evidence of the existence of a significant difference between the two groups in this respect.

The only remark resulting from the Table (5) is that the percentage of the illiterates is relatively lower in the case of the IG. This could be an indicator that micro-finance programs prefer to lend entrepreneurs with a certain minimal level of education, and/or that the entrepreneurs who seek micro-credit come from better educational backgrounds.

Thirdly, the marital status of the entrepreneur does not differ significantly between the IG and CG, and the same applies to the age distribution of the entrepreneurs in the two groups.

However, Table (6) pinpoints three main features of the community of entrepreneurs, namely:

a) That young entrepreneurs (less than 30 years old) seem to represent only a minor fraction of the total number, which is an unexpected result at least in the case of the IG, where there is an emphasis on offering new opportunities to youth through micro-finance;
b) That the age bracket with the highest concentration of entrepreneurs is in the range of 40-49 years old for both the IG and the CG, except for the females in the IG, where the highest concentration is in a lower age bracket (30-39 years old). If this remark is added to the previous one concerning the interest of the intervention programs in endorsing the females' position in respect to access to micro finance, one could conclude that there is relative attention given to females in younger age brackets;
c) That the CG's population is relatively younger in age, since nearly 12 percent of the entrepreneurs are less than 30 years old, while the IG entrepreneurs in this category represent only 6.5 percent of the total IG.

5.2 Work Place and Work History

This part will cover three main components, namely: the current, previous and second work conditions:

5.2.1 The current work condition:

5.2.1.1 The Work Location and Place

One of the distinctive features of the CG as opposed to the IG is related to the type of work location. At the outset it must be mentioned that the EU could be located either inside, outside or inside and outside an establishment.

It can be observed from Table (7) that close to 9.5 percent of the IG entrepreneurs practice their work outside a work establishment, which is usually on the street or at home, while a

smaller fraction (4.8 percent), work both inside and outside the establishment. These percentages are reversed in the case of the CG. The explanation of this significant difference in the distribution of the EUs could result from the fact that the names and addresses of the IG entrepreneurs were given to researchers by the credit providers. They did not exclude activities practiced at home. In the case of the CG, the listing process was basically based on finding similar activities that were visible in the same geographical location, without looking into the households.

However, over 85 percent of the economic activities were conducted in workplaces that were inside establishments. Table (8) lists the different types of workplaces, which ranged between workshops, shops, office/flat, several flats, separate rooms, kiosk, truck, home or other types of work settings.

The apparent distribution of the EUs according to the type of workplace shows a significant difference between the IG and CG. In the IG the most prevalent type is the shop, while it is the workshop in the case of the CG. This distribution, however, does not bear a visible indication to the type of economic activity practiced by the EUs. Activities practiced at home are evident in the IG while they are not visible in the case of the CG. This is due to the fact that the information of the location of the enterprise is derived from the data sets of the lenders, while the addresses of the CG are chosen from the visibly active enterprises in the same geographical location of the IG.

5.2.1.2 The Economic Activity

There seems to be no significant difference between the IG and the CG regarding the type of practiced economic activity. In the two groups trade, manufacturing and services, respectively, appear to be the most dominant activities. This result in Table (9) confirms the matching accuracy.

This result implies that the current in-question micro-finance programs do not have any guiding influence as to the type of economic activity that should be encouraged or pursued by the beneficiaries. The previous distribution of enterprises according to economic activities does not differ greatly from the distribution of SME in other studies, which covered a sample of small enterprises of the entire economy[11].

When the entrepreneurs were asked to list the reasons they chose their economic activity, four main factors were mentioned, namely:

a) That this was the activity he/she started to work in at an early age;
b) That they inherited the business;
c) That the activity was appropriate to their skills and education;
d) That it was the only area they could find work in.
e) In addition, when the entrepreneurs were split between self-employed and employers in the two groups, the results were as follows in Table (10):

There is no apparent or significant difference between the entrepreneurs in the two groups. The percentage of those employing others is practically the same in both cases. So far, it is not possible to say if the IG included more employers when compared to the CG.

1 See El Mahdi, A.; The Labor Absorption Capacity of the Informal Sector In Egypt (ELMS98), in the Conference on "Egyptian labor Market and Human Resource Development", EPIC, Cairo, Nov.1999.

5.2.2 The Previous Work Conditions

5.2.2.1 The Employment Status

When the entrepreneurs were asked about their previous employment status it became clear that the majority of them were either wage-workers/employees (regular [RWW] or irregular [IRWW]), or non-paid family workers. However, this change in itself means an improvement, particularly for those who were irregular workers or non-paid family workers, who together exceeded 60 percent of those entrepreneurs who had previous work.

The data in table (11) also reveals that there is no significant difference between the two groups in this respect. This result may be taken as an indicator for the continuous mobility from the ranks of workers to the ranks of Self-employed/Employers.

5.2.2.2 The Previous Economic Sector

The majority of the entrepreneurs, whether from the IG or the CG, had worked in the private sector previously. Therefore most of the movement that is taking place is within the boundaries of the private sector. Those who worked previously in the government or the public sector did not exceed 10 percent of the members of the two groups.

5.2.3 The Second Job

Only a meager percentage (12-13 percent) of the entrepreneurs held a second job. Most of those with a second job work on a regular basis (83.5 percent) and especially in the government or the public sector (75 percent), and basically in trade or services activities.

To conclude this section the entrepreneurs were asked why they left their previous work and how they perceived their current work.

To the first question their answers included three main reasons:

1) The wish to work independently;
2) The desire to expand their activities;
3) The limited income they earned in their previous work.

There was no significant difference in the answers given by the two groups of entrepreneurs except for the second answer, where the response of the CG was stronger and more affirmative.

The difference between the two groups was more pronounced in the answers to the second question, which are summarized in Table (9).

As can be seen from the Table (13) and previous answer, the CG entrepreneurs are more convinced with their work, more likely and willing to expand and less dissatisfied with it. They are simply “more in control” of their situation than the IG.

6 Capital, Partners and Finance

As the availability of sufficient funding represents one of the two main issues in this study, this part will deal with related topics such as sources for financing the starting capital, the tendency to take partners, and the inclination to borrow and the main lending institutions.

6.1 Partners in the Project

One of the main characteristics of the small enterprise is that it is usually run as a “one man show”. Therefore, about 50 percent of the small enterprises in Egypt are managed and run by their owners alone and without other employees. In cases where there are partners, they are usually family members. To what extent does this phenomenon apply to our sample? In case it applies, why is it that the entrepreneurs hesitate to resort to taking partners?

The sample results indicate that only 34 percent of the entrepreneurs have partners. There is no significant difference between the two groups. Therefore, the tradition of not tending to take partners applies to both the IG and the CG. As expected, the family members (household and other family members) represented 89.5 percent of the partners, with no significant difference between the two groups in this respect. This phenomenon also reflects the informal relations that pervade the transactions of the owners, who tend – when needed – to usually take partners only from the family

Among those who accepted the idea of having new partners (7.1 percent of the total sample), there is a significant difference between the IG and the CG. The IG entrepreneurs seem more willing to welcome this idea.

The most important reasons for willingness to involve new partners in the business were:

From the IG entrepreneurs' point of view there are five factors, namely: providing additional finance, helping in marketing operations, managing the business, getting raw materials, and solving varied problems in general.

From the CG entrepreneurs' perspective only two main reasons were mentioned, namely: providing finance and helping in purchasing the necessary raw materials.

In addition, more than **78 percent** of the IG declared that they welcomed the notion that a partner would participate with 50 percent or more of the capital, while the corresponding percentage for the CG that expressed their acceptance of the idea was **83 percent** of the entrepreneurs.

6.2 Capital and Sources of Finance

The size of capital differs significantly in the two groups. Whereas the average capital value in the CG was equal to LE 58,963, it rose to LE 78,051 in the IG. In addition, the CG had a minimum capital size of LE 1,000 and a maximum of LE 800,000, while the capital of the IG ranged between LE 2000 and LE 1.5 million. As illustrated in Table (17), capital percentiles are higher in the IG, reflecting a visible difference in the size of EU measured in terms of capital, where the IG is relatively larger.

When looking into the capital size according to the major activities: agriculture, manufacturing, services and trades, the data does not indicate significant difference between the means of the two groups. However, in both the cases of the two most important activities: In service and trade the variances (according to Levene's test for Equality of Variances) proved to be significantly unequal. This result means that the capital's size is more concentrated around its mean in the CG (LE 53,042 and LE 61,519 in service and trade respectively). On the other hand, there is a wide dispersion around the average capital (LE 87,727 and LE 82,377 in the same two activities respectively) in the IG.

When the entrepreneurs were asked to list the three most important sources through which they acquired their capital, the difference between the IG and the CG was significant in the distribution of the sources in the two cases.

In the case of the IG, self-finance represented the main source of capital, just as for the CG; However, the reliance on this funding was greater for the latter. Borrowing from individuals, interest-free and in lesser cases for interest, came as the second source, followed by the Gameia (Rotating informal savings association). The fourth and fifth sources of finance were the NGOs and SFD. These sources were of nearly non-existent presence or value to the CG.

The main sources for the **CG** were self-finance, through partners, Gameia, and interest-free loans from other individuals. As can be observed, the CG entrepreneurs seldom resorted to formal financial institutions.

The second-degree sources of finance revealed significant difference between the IG and CG.

The IG relied basically on the following five sources, respectively: partners, Businessmen Associations (BA), self-finance, Gameia, and other formal lending institutions such as the SFD, Shorouk project, and the NGOs. On the other hand, the CG relied with a strong emphasis upon finding partners beside Gameia, loans from individuals, self-finance, and BA.

6.3 Borrowing to Finance the Business

The main factor of distinction between the two groups is that the IG has received loans either from the SFD or the USAID-financed small loans programs, while the CG may or may have not received formal loans. The following table reflects this difference between the IG and the CG. It also points out that within the CG community one fifth sought loans as a way to finance their operations.

The sources of finance varied greatly. But before we go into them it is worth mentioning that the intention of the researchers was to bring together an intervention group that was split evenly between the two finance programs understudy. However, although the SFD supplied us with a list of 160 enterprises distributed among the six governorates, the listing operations proved that only 66 EUs of them (41 percent) were still active. As to the rest, the listing researchers realized that they had ceased to be working anymore. Therefore, the IG sample consisted of 66 units financed by the SFD and 207 units financed by the NGOs and banks that used USAID's funds. The remaining 37 units were financed by the cooperatives, and some banks such as the Bank of Development and Agricultural Credit, Nasser Bank, the Fund for Local Development in Gharbia and the Productive Cooperative – Cairo governnorate.

Nevertheless, it must be emphasized that some of the BA that are being provided for by USAID funds have been also receiving funds from the SFD. Therefore, it is difficult sometimes to distinguish the EUs according to the original source of funding.

The borrowing operation was mainly carried out after the EUs became established and had operated for a time. The units that received loans as they were establishing their businesses were limited; however they represented a higher percentage of the IG than in the CG.

The data also revealed that the SFD's loans were on the average far larger than those acquired through the USAID' program for small and micro-enterprise finances (see statistical appendix Table A4). Whereas the SFD's loans averaged in the sample LE 21,000, they only averaged LE 5700 in the case of the USAID program.

Table (22) shows that only 36 EUs of the 310 IG enterprises received loans as they were starting–up. This group was basically financed by the SFD[12]. The USAID small enterprise finance programs only provide it to units that are already established.

The reasons for getting loans differed between the two groups. Whereas the two groups sought borrowing as a means to finance primarily their working capital, this trend was more obvious in the IG. More loans went to finance the fixed capital in the case of the CG.

The size of the last loan differed significantly according to the economic activity. If we look into the three most important economic activities, one could note that manufacturing activities received the largest loans with an average loan size of LE 13,132. The average loan size drops to LE 8,400 in trade and LE 5,850 in services (see statistical appendix Table A5). This result could be indicative of an emphasis on the part of the lending programs towards encouraging manufacturing activities.

12 These EUs represented 54% of the SFD's sample(66 EUs), which is a relatively higher percentage than the ongoing distribution of lending percentage in the SFD(40% for start-ups and 60% for the already established enterprises)

How did the loans help the small enterprises?

From the IG entrepreneurs' point of view, loans were primarily needed to help in sustaining their ongoing projects – corresponding to the previous answers – where it was stated that loans went mostly to covering the working capital. On the other hand, the CG entrepreneurs resorted to loans mainly as they started up their activity, which also agrees with their previous answers in which they declared that loans were used in acquiring fixed capital.

As to using loans for expanding the economic activity, answers of both groups reflected that this target was of minor importance.

As to the impact of loans on the number of workers/employees, there seems to be no significant difference between the answers of the entrepreneurs in the two groups. The majority of the entrepreneurs did not change the number of workers because they were able to get loans.

It is however noticeable that the IG had a greater tendency to increase the labor as they borrowed, which is understandable and coincides with their above-mentioned answers. These indicated that a far greater percentage of the IG used external finance to sustain or to expand their activity. When we look into the comparisons between the SFD and USAID-financed enterprises, it could be noticed that between the years 1995 – 1999, the first group of EUs was able to increase its employment by 17.9 percent, while the second only managed to increase it by 6.8 percent (see statistical appendix Table A1). However, this visible increase in employment in the SFD's enterprises did not prove to be of statistical significance. One possible explanation is the small sample size of these enterprises (66 EUs).

However, it has to be remembered that among the SFDs IG, especially in Greater Cairo region, more than 50 percent of the chosen sample proved to have closed down or gone bankrupt because of several reasons, of which the debt burden was a prominent factor. Therefore, the high failure rate remains one of the major problems the SFD must be able to confront.

7. Training and Training Provision

One of the main areas where the micro-credit providers could play a useful role is the provision of training to the beneficiaries as a prerequisite for receiving credit. The question is: To what extent does this apply to the micro-credit providers in Egypt? Do they stipulate that the beneficiaries receive training in the area of activity, in which they will be engaged? Or that they should have prior training in it? Are the credit providers capable of offering specialized training programs?

Before answering these questions, it must be mentioned that the field work took place in October 1999, therefore any changes that took place afterwards in the area of training provision by credit providers are not referred to in this research.

7.1 Access to Training

When the entrepreneurs of both the IG and the CG were asked about having received previous training, the answers were as follows in Table (24):

The majority of the entrepreneurs (85 percent) had received previous training and only a limited 15 percent of them did not get any guidance before venturing with their new businesses. Among those who received training, the bulk of entrepreneurs were prepared before starting their employment, while only a limited percentage of unit owners had training before and after they began their own private activity.

7.2 Types of Training

The most prevalent type of training was technical, specialized production, as well as marketing techniques. As to keeping accounts and maintenance training, they were of minor importance in the sample results. It is worth mentioning that the Table (26) shows that there is no significant difference between the IG and the CG's answers in this respect.

7.3 Sources of training

One of the surprising results was related to the source of training. It was assumed that the micro-credit providers' role did not stop at supplying finance but should be extended to supporting the enterprises by offering training that could be helpful in sustaining the units and giving personnel the ability to develop and expand. But it is clear from the table (27) that whatever training the entrepreneurs received, it was for the most part in the private sector workshops or in previous jobs, and not by the credit providers.

As to the contribution of the SFD and the USAID-financed small and micro-credit programs to the capacity building of the small EU, it is apparent that it was nearly non-existent. Only one entrepreneur stated that he participated in a training program organized by the SFD, and he also said that he benefited from it. It was also mentioned that completing the training was a condition to get the loan.

8. Employment Creation

The main objective of this research is to try and assess whether the injection of small enterprises with formal funds is helpful in creating greater employment opportunities in the IG as compared to the CG. Module V in the questionnaire contains several questions that help to shed light on the impact of micro-finance on the process of employment creation and the perceptions of entrepreneurs regarding employment levels in the future.

8.1 Employment Change During 1995-1999

In the following section the analysis will cover two issues: The change in employment over time and the development in the capital labor ratio in both the IG and the CG on one hand and within the IG on the other hand. To understand more about the change in employment, it must be mentioned that the available data contains information on the levels of employment from 1995-1999.

Therefore, to trace the changes that took place, the existing level of employment in 1999 will be compared to the average, maximum and minimum levels of employment during 1995-1999 for the two groups. In addition, the percentage change of employment between the years 1995 and 1999 on the one hand, and the percentage change of average employment in the years 1995/96 and 1998/99 will be compared among the CG, SFD and USAID financed enterprises (see statistical analysis Table A1).

- In a further step, the IG will be compared to the CG after excluding the EUs that received formal micro-finance within the CG (see statistical analysis Table A15).
- In the third step, a comparison in employment levels based on a one-to-one matching between the EUs will be conducted (see statistical analysis Table A14).
- In the fourth step, a comparison between the already established and the start-up enterprises - based on a one-to-one matching - regarding employment creation will be conducted (see statistical analysis Table A20-21).
- Finally, a comparison based on a one-to-one matching between the SFD enterprises and their matches and the USAID-financed enterprises and their matches will be conducted (See SA, Tables A22-23).

At each of these steps, the comparisons were considered on the economic sectors' levels. The results of these comparisons can be seen in the statistical appendix.

What do these results tell and indicate?

1) The progress in average employment over time in the IG and the CG is very slow and there is no significant difference between the two groups during the years in question. However, when the employment level in 1999 is compared to the min employment of the period (1995-1999) data show that the IG has experienced a significantly higher employment growth as compared to the CG (See statistical appendix Table A11). By looking into the employment levels according to economic sectors, the previous result seemed to be apparent only in the service sector. The employment (in 1999 to the min of the period) in the service sector in the IG is significantly higher than in the CG. The other sectors did not reflect such difference.
2) The exclusion of the EUs that received loans from the CG and their addition to the IG does not seem to bear any significance on the employment levels in the two groups.
3) When using the matched data for each pair two steps were taken: a) All EUs were included and the results concurred with the previously mentioned results, where the employment in 1999 was significantly higher than the min employment of 1995-1999 in the IG (See statistical appendix Table A14). b) The EUs that received loans from the CG were excluded, and the matching was conducted between the remaining CG and the corresponding IG with similar findings to the previously mentioned results.
4) When we divided the EUs according to the timing of getting the loans, it became evident that the part of IG that received loans after they were established was more capable to increase their employment levels as compared to the CG. The IG that received loans as they started up their activity did not show any relevant increase in employment when compared to the corresponding/matching CG enterprises (See statistical appendix Tables A20-21).
5) When we inspected the percentage change in employment between the year 1995 and the year 1999, results revealed that: the whole sample showed significant increase in employment in 1999 compared to 1995. This result is also significant for the CG and USAID financed enterprises, but not the SFD enterprises.
6) When we inspected the percentage change in average employment between the years 1995/1996 and the years 1998/1999 results revealed that: the entire sample showed an increase in employment in 1998/99 compared to 1995/96, and in 1999 compared to 1995. However, these increases in employment were not statistically significant
7) The resulting data indicated that whenever the absolute employment levels in each year were compared between the CG, SFD and USAID-financed enterprises, the SFD group proved to have higher levels of employment, though not significant from the statistical point of view.

To conclude one could summarize the previous information as follows:

It is clear that the interventions through micro-finance proved to have an impact on the employment creation process in the IG only when the employment levels in 1999 are compared to the minimum employment levels in the last five years. Employment appears to have been growing in the IG in at a higher rate than the CG.

Within the IG the enterprises that received loans after they became established in the market were in a better position to create employment than the enterprises that received loans just as they were starting up their businesses.

The comparison between the SFD and USAID-financed enterprises indicates that the former group proved that the absolute numbers of workers in its enterprises were significantly higher, and so was the size of its loans granted to the entrepreneurs. However, when the change of employment over time was included there was no apparent significant difference between the two groups.

8.2 Future Prospects

As to the enterprises owners' perceptions regarding the possibilities of change in employment in the future, the responses varied. Whereas the CG entrepreneurs were more reserved in expressing optimistic visions, the IG were more emotional in revealing their opinions. Table (28) summarizes these views:

The majority of the CG believed that the employment levels will either remain the same (85 percent), decline (1 percent) or were uncertain as to what will happen (4.2 percent). Only 10 percent of the CG believed that they would increase the workers' numbers in the coming year. In contrast nearly 21 percent of the IG believed that employment will grow in the following year and another 20 percent were uncertain regarding this issue.

8.3 Work relations and distribution

Both types of enterprises were facing difficulties with the workers. Absenteeism, late arrival to work, and the high wage levels were considered the major sources of problems.

As to the distribution of work among workers in the enterprises according to specialty, it is apparent from Table (29) that the IG has been more successful in this area. The IG entrepreneurs tend to be more organized in the way they run their units.

9. The Relationship between Labor and Capital

Since the micro-finance impact could also be reflected in the degree of capital intensity in the enterprise, capital/labor ratios among the two groups will be compared in the following section. The objective is to verify whether the provision of micro-finance has had a significant effect on the degree of capitalization of the EU or not.

Therefore, to trace the changes that took place in the existing capital and capital/labor ratios in 1999, these figures will be compared to their average, maximum and minimum levels during 1995-1999 for the two groups. In a further step, the IG will be compared to the CG after excluding the EUs that received formal micro-finance within the CG. In the third step, a comparison of capital intensity levels based on a one-to-one matching between the EUs will be conducted. Finally, a comparison between the already established and the start-up enterprises regarding capital and capital/labor ratios will be conducted.

1- By looking at the results shown in the S.A. one realizes that the average size of enterprise measured in terms of the current capital value is significantly higher in the IG (See statistical appendix Table A11). The average capital/labor (C/L) ratios (1999) are higher in the IG, though the difference is not statistically significant (.053).

2- The investigation of the C/L ratios on the sectoral level does not show significant differences between the IG and the CG.

3- By adding the units among the CG that received loans to the IG and by comparing them (376EUs) with the CG that did not receive formal loans (244EUs) it becomes apparent that the first group has significantly higher C/L ratios. This result indicates that the availability of loans helps in intensifying the use of capital in the small enterprises.

4- By attempting to look deeper into the correlation between: capital, labor and capital/labor ratios at the level of the whole sample, the CG and the IG (SFD and USAID program), three major features appear to be dominant (See statistical appendix TableA7-11):

   A) There is a strong positive and significant correlation between the size of capital and the C/L ratios in all enterprises, though they are more clearly accentuated in the SFD and USAID enterprises.

B) There is a positive but less strong correlation, though also significant, between the size of capital and the size of labor.

C) The correlation between the C/L ratios and labor is significant though negative, which means that the increase in the C/L ratios is usually at the expense of declining employment.

These three conclusions are especially accentuated in the IG. It could thus be concluded that the IG has a significantly higher capital size. As the intervention unit grows through making more finance available to it, it tends to increase its employment and its capital intensity, though the latter with a far higher degree. The fact that the C/L is more strongly correlated to capital size could be taken as an indication of growing labor productivity and wages, the ability to produce better quality products and better expansion possibilities.

5- When the comparisons between the EUs in the sample are based on the matching of all cases it becomes clear that the IG has significantly higher capital sizes and C/L ratios as compared to the CG. However, there seems to be no significant difference between the two types of enterprises in terms of the size of employment. This confirms the hypothesis that the intervention group benefits from the micro-credit and that this benefit is mostly translated into an increase in the capital size and in the capital intensity of the production techniques.

6- This type of strong distinction between the intervention cases and the control cases – in terms of size of capital and C/L ratios – is not apparent among the enterprises that received loans as they established the businesses; In contrast it is quite evident in the case of the establishments that received the loans at a later stage.

7- Among the IG the C/L ratios did not show that a significant difference existed between the SFD and USAID-financed enterprises.

10. Conclusion and Policy Implications

The main objective of this research was to assess the impact of the micro-finance programs, especially those provided by the SFD and USAID, on employment creation processes in the small enterprises that benefited from these interventions. To measure the impact against an acceptable yardstick, a control group of enterprises was chosen, as mentioned above.

The data analysis and the providers report brought to light several results:

1- There are a large number of micro-finance packages offered to the micro and small entrepreneurs in both the urban and rural areas in Egypt. The boundaries between the small and micro-finance programs are blurred. Therefore, micro-credit could start at LE 200 and extend to LE 3000 or higher. At the same time, the small credit programs could start at LE 2000 and extend to LE 100,000 in some cases.

2- Despite the variations in the finance packages and the decentralized locations of the credit providers, the outreach proved to be quite limited in reality, as demonstrated above. Methods of self-finance continue to constitute the major source of finance, whether for the CG or the IG.

3- One of the main drawbacks to all of these ongoing schemes, particularly those studied, is the nearly non-existent training and support components. This deficiency resulted in the high failure rates, especially among the SFD's small credit beneficiaries.

4- Another drawback of the on-going schemes is the provision of small credit to inexperienced start-up entrepreneurs. Their failure rate is high, and their ability to create employment is no different from the matching CG enterprise.

5- Interventions offered by both the SFD and the USAID-financed programs succeeded in presenting better chances to female entrepreneurs, both those starting new businesses and those who already active in the market. However, this consideration for gender issues is still quite limited and there is a necessity to expand the role of the interventions in this respect.

6- The enterprise owner could either be self-employed or employer. Since the employers are the ones who provide additional employment to others, the increase in their percentage to the total number of entrepreneurs would denote more chances of potential work for others. In this respect, data showed that there is no apparent or significant difference between the entrepreneurs in the two groups. The percentage of those employing others is practically the same in both cases.

7- The average levels of employment do not show significant differences between the IG and the GC. It is clear that the interventions through micro-finance proved to have an impact on the employment creation process in the IG only when the employment levels in 1999 are compared to the worst or minimum employment levels in the last five years considered. Employment appeared then to have been growing in the IG at a higher rate than the CG.

8- Within the IG it could be noticed that SFD's enterprises had significantly higher levels of employment in every year from 1995-1999. However, when the percentage change of employment over time was considered, there was no significant difference between the SFD and USAID-financed enterprises.

9- Within the IG the enterprises that received loans after they became established in the market were in a better position to create employment than the enterprises that received loans just as they were starting up their businesses (SFD-financed enterprises).

10- The size of capital is significantly higher in the IG relative to the CG.

11- There is a positive and significant relationship between the capital and loan size. As to the direction of causation it was not possible to determine whether the large existing capital led to the possibility of receiving larger loans, or that larger loans helped in increasing the size of capital.

12- With regard to the relationship between capital, labor and capital to labor ratios the following points were revealed:

    a) There is a strong positive and significant correlation between the size of capital and the C/L ratios.
    b) There is a positive but less strong correlation, though also significant, between the size of capital and the size of labor.
    c) The correlation between the C/L ratios and labor is significant though negative, which means that the increase in the C/L ratios is usually at the expense of declining employment.

    These three conclusions are especially accentuated in the IG. It could thus be concluded that the IG has a significantly higher capital size. As the intervention unit grows in terms of the size of capital and/or finance available, it tends to increase its employment and its capital intensity, though the C/L with a far higher degree (close to three times as much). The fact that the C/L ratios are more strongly correlated to capital size could be taken as an indicator for growing labor productivity and wages, the ability to produce better quality products and better expansion possibilities.

13- When the comparisons between the EUs in the sample are based on the matching of all cases it becomes clear that the IG has significantly higher capital sizes and C/L

ratios as compared to the CG. However, there seems to be no significant difference between the two types of enterprises in terms of the size of employment. This confirms the notion that the intervention group benefits from the micro-credit and that this benefit is mostly translated into an increase in the capital size and in the capital intensity of the production techniques.

14- This type of strong distinction between the intervention cases and the control cases – in terms of size of capital and C/L ratios – is only apparent among the enterprises that received the loans at a later stage.

Accordingly, one could conclude that providing micro-finance to enterprises would be successful in creating employment, raising productivity and eventually developing the workers' skills in the case of firms that are already established rather than the start-ups. Any attempt to provide support to small or micro enterprises would be more effective in increasing employment and productivity if targeted toward already existing enterprises

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Table 1: Empirical Studies Examining if SMEs Have Contributed Effectively to the Employment Creation Objectives

	Degree of Job Stability	Social Security Coverage	Number of Workers	Technical Assistance	Stabilizing Behavior
Soliman, Saleim & Metwaly (1998)	•	•	•	•	•
El-Leithy (1998)	•	•	•	•	•
El-Mahdi (Nov 1999)	•	•	•	•	•
Nassar & Metwaly (1999)	•	•	•	•	•
El Mahdi (Oct 1999)	•	•	•	•	•

Sources: Soliman ,Saleim & Metwaly (1998), El Leithy (1998), El Mahdi (1998), Nassar & Metwaly (1999) and El Mahdi (1999).

Table 2: The Distribution of the EUs according to Type and Geographical Location

Group	CG		IG		Total	
	Count	%	Count	%	Count	%
Greater Cairo	81	26	80	26	161	26
Alexandria	72	23	70	23	142	23
Sharkia	37	12	40	13	77	12
Gharbia	40	13	40	13	80	13
Fayoum	40	13	40	13	80	13
Assiut	40	13	40	13	80	13
Total	310	100	310	100	620	100

Table 3:

Name of Variable	Description
CAP-LAB	Ratio Capital to labor in 1999
R99-MIN	Ratio of labor in 1999 to min labor 1995 to 1999
R99-MAX	Ratio of labor in 1999 to max labor 1995 to 1999
R99-AVR	Ratio of labor in 1999 to average labor 1995 to 1999
DF-99-95	Difference between labor in 1999 & 1995
AV-95-96	Average employment in 1995 & 1996
AV-98-99	Average employment in 1998 & 1999
R-99-95	Percent change in employment between 1995 (base year) and 1999
RA99-95	Percent change average employment 98&99 to 95&96
DA99-95	Difference between average employment 1999 & 1998 vs. average employment in 1996 &1995
LAB-INC	Percent increase in number of employees since establishment
R-LN-CAP	Percent last loan to capital
R-TLN-CP	Ratio of total loans to capital

Table 4: The Distribution of the Entrepreneurs of the IG and CG by Gender

Group	Male		Female		Total	
	Count	%	Count	%	Count	%
IG	286	92.3	24	7.7	310	100
CG	299	96.5	11	3.5	310	100
Total	585	94.4	35	5.6	620	100

Chi-Square Test		
Pearson Chi-Square 5.117	1 df	Asymp.Sig.(2-sided) 0.024

Table 5: The Distribution of the Entrepreneurs in the IG and the CG According to the Educational Level:

Group		IG	CG	Total
Illiterate	Count	64	84	148
	%	20.6	27.1	23.9
Read only	Count	14	11	25
	%	4.5	3.5	4
Write only	Count	65	50	115
	%	21	16.1	18.5
Primary	Count	12	6	18
	%	3.9	1.9	2.9
Preparatory	Count	20	21	41
	%	6.5	6.8	6.6
Secondary	Count	11	19	30
	%	3.5	6.1	4.8
Intermediate	Count	74	60	134
	%	23.9	19.4	21.6
Above intermediate	Count	13	18	31
	%	4.2	5.8	5
University	Count	37	41	78
	%	11.9	13.2	12.6
Total	Count	310	310	620
	%	100	100	100

Chi-Square Test		
Pearson Chi-Square 11.651	8 df	Asymp.Sig.(2-sided) 0.167

Table 6: The Distribution of the Entrepreneurs According to Gender and Age Group

Age		IG			CG		
		M	F	Total	M	F	Total
<30	Count	19	1	20	37	0	37
	%	6.5	4.2	6.5	12.4	0	11.9
30-39	Count	81	12	93	76	1	77
	%	28.3	50	30	25.4	9.1	24.8
40-49	Count	98	4	102	98	6	104
	%	34.3	16.7	32.9	32.8	54.5	33.5
50-59	Count	50	5	55	46	1	47
	%	17.5	20.8	17.7	15.4	9.1	15.2
60+	Count	38	2	40	42	3	45
	%	13.3	8.5	12.9	14	27.3	14.5
Total	Count	286	24	310	299	11	310
	%	100	100	100	100	100	100

Chi-Square Test			
IG	Pearson Chi-Square 6.324	4 df	Asymp.Sig.(2-sided) 0.176
CG	Pearson Chi-Square 5.554	4 df	Asymp.Sig.(2-sided) 0.235

Table 7: The Distribution of the EUs According to Work Location

Group	Inside Est.		Out. Est.		In. & Out. Est.		Total	
	Count	%	Count	%	Count	%	Count	%
IG	266	85.8	29	9.4	15	4.8	310	100
CG	274	88.4	3	1.0	33	10.6	310	100
Total	540	87.1	32	5.2	48	7.7	620	100

Chi-square Test		
Pearson chi-square 27.994	2 df	Asymp.Sig.(2-sided) < 0.0005

Table 8: The Distribution of the EUs According to Type of Workplace

Group	Workshop		Shop		Home		Others		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
IG	73	33	188	55	18	100	31	18	310	50
CG	147	67	156	45.3			7	82	310	50
Total	220	100	344	100	18	100	38	100	620	100

Chi-Square Test		
Pearson Chi-Square 61.026	3 df	Asymp.Sig.(2-sided) 0.000

Table 9: The Distribution of the EUs according to Economic Activity

Groups	Agriculture		Manufact		Service		Trade		Other		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
IG	15	4.8	76	24.5	55	17.7	159	51.3	4	1.3	310	50
CG	15	4.8	62	20.0	52	16.8	177	57.1	5	1.6	310	50
Total	30	4.8	138	22.3	107	17.3	336	54.2	9	1.5	620	100

Chi-Square Test		
Pearson Chi-Square 2.258	4 df	Asymp. Sig.(2-sided) 0.63

Table 10: Entrepreneurs in the IG and CG distributed According to Employment Status:

Groups	Employer		Self- Employed		Total	
	Count	%	Count	%	Count	%
IG	183	59	127	41.0	310	100
CG	184	59.4	126	40.6	310	100
Total	367	59.2	253	40.8	620	100

Chi-Square Test		
Pearson Chi-Square 0.007	1 df	Asymp.Sig.(2-sided) 0.935

Table 11: The Current and the Previous Employment Status of the Entrepreneurs

		Current employment status					
		IG			CG		
Previous employment status		**E**	**SE**	**Total**	**E**	**SE**	**Total**
RWW	Count	68	43	111	77	43	120
	%	43.6	37.7	41.1	45.6	40.2	43.5
IRWW	Count	34	28	62	29	26	55
	%	21.8	24.6	23	17.2	24.3	19.9
Employer	Count	16	4	20	20	6	26
	%	10.3	3.5	7.4	11.8	5.6	19.4
Self-employed	Count	10	9	19	11	5	16
	%	6.4	7.9	7	6.5	4.7	5.8
Non-paid family workers	Count	25	29	54	29	26	55
	%	16	25.4	20	17.2	24.3	19.9
Unemployed *	Count	3	1	2	3	1	4
	%	2	1	0.7	1.8	1	1.4
Total	Count	156	114	270	169	107	276
	%	100	100	100	100	100	100

Notes: * including students

Chi-Square Test		
Pearson Chi-Square 9.456	6 df	Asymp.Sig.(2-sided) 0.150

Table 12: Previous Economic Sector of Work

Sector		**IG**	**CG**	**Total**
Government	Count	14.0	20.0	34.0
	%	5.2	7.2	6.2
Public	Count	8.0	9.0	17.0
	%	3.0	3.3	3.1
Private	Count	241.0	238.0	479.0
	%	89.3	86.2	87.7
Others	Count	7.0	9.0	16.0
	%	2.6	3.3	2.9
Total	Count	270.0	276.0	546.0
	%	100.0	100.0	100.0

Chi-Square Test		
Pearson Chi-Square 1.32	3 df	Asymp.Sig.(2-sided) 0.724

Table 13: The entrepreneurs' perceptions of their current work

Group	**Need to expand**		**Sufficient Income**		**Want to change it**		**Don't know other**		**Other**		**Total**	
	Count	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
IG	205	66.1	64	20.6	12	3.9	22	7.1	7	2.3	310	100
CG	281	90.6	19	6.1	1	0.3	4	1.3	5	1.6	310	100
Total	486	78.4	83	13.4	13	2.1	26	4.2	12	1.9	620	100

Chi-Square Test		
Pearson Chi-Square 58.385	4 df	Asymp.Sig.(2-sided) 0.000

Table 14: Accepting New Partners in the EU's

Group	Yes		No		Total	
	Count	%	Count	%	Count	%
IG	32	10.3	278	89.7	310	100
CG	12	3.9	298	96.1	310	100
Total	44	7.1	576	92.9	620	100

Chi-Square Test		
Pearson Chi-Square 9.785	1df	Asymp.Sig .(2-sided) 0.002

Table 15: The Size of Capital in the IG and CG

	CG		IG		Total	
Capital	Count	%	Count	%	Count	%
<5000	14	5	11	4	25	4
5000-	19	6	13	4	32	5
1000-	37	12	43	14	80	13
20000-	52	17	66	22	118	19
40000-	69	23	48	16	117	19
60000-	32	11	29	9	61	10
80000-	25	8	29	9	54	9
100000-	34	11	26	8	60	10
150000-	14	5	27	9	41	7
250000+	8	3	14	5	22	4
Total	304	100	306	100	610	100

Table (16) The Most Important Means of Financing the Capital

		IG	CG	Total
Self-finance	Count	255.0	281.0	536.0
	%	82.3	90.6	86.5
Partners	Count	9.0	10.0	19.0
	%	2.9	3.2	3.1
Gameia	Count	14.0	10.0	24.0
	%	4.5	3.2	3.9
Other	Count	32.0	9.0	40.0
	%	10.3	3.0	6.5
Total	Count	310.0	310.0	620.0
	%	100.0	100.0	100.0

Chi-square Test		
Pearson chi-square 14.88	3 df	Asymp.Sig.(2-sided) 0.002

Table 17: The Second Important Means of Financing the Capital

Group		IG	CG	Total
Self-finance	Count	30	17	47
	%	9.7	5.5	7.6
Partners	Count	46	63	109
	%	14.8	20.3	17.6
Gameia	Count	29	34	63
	%	9.4	11.0	10.2
B A	Count	38	10	48
	%	12.3	3.2	7.7
Borrow from persons without interest	Count	18	19	37
	%	5.8	6.1	6.0
Other	Count	38	11	49
	%	19.1	7.1	13.9
Total	Count	199	154	353
	%	100	100	100

Chi-square Test		
Pearson Chi-Square 32.68	5 df	Asymp.Sig.(2-sided) <0.0005

Table 18: Borrowing to Finance the Business Needs

Group	Yes		No		Total	
	Count	%	Count	%	Count	%
IG	310	100			310	100
CG	66	21.3	244	78.7	310	100
Total	376	60.6	244	39.4	620	100

Chi-square Test		
Pearson Chi-Square 402.340	1 df	Asymp.Sig.(2-sided) 0.000

Table 19: The Sources of Finance of the Last Loan

Group		IG	CG	Total
Social Fund for Development	Count	51	5	56
	%	16.5	7.6	14.9
Egyptian Association to support	Count	45	2	47
Small Producers	%	14.5	3	12.5
BA Alexandria	Count	66	24	90
	%	21.3	36.4	23.9
BA Sharkia	Count	33	1	34
	%	10.6	1.5	9
Fund for Local Development –	Count	26	1	27
Gharbia	%	8.4	1.5	7.2
Association for Development of	Count	35	8	43
Small Enterprises - Fayoum	%	11.3	12.1	11.4
BA Assuit	Count	38	9	47
	%	12.3	13.6	12.5
Banks* & cooperatives	Count	16	16	32
	%	5.2	24.2	8.5
Total	Count	310	66	376
	%	100	100	100

Notes: *include National Bank of Egypt, Agricultural Development and Credit Bank, Feisal Bank, National Bank of Development, Egyptian Bank for Industrial Development (EBID), and Nasser Bank.

Chi-Square Test		
Pearson Chi-Square 57.234	14 df	Asymp.Sig.(2-sided) < 0.0005

Table 20: The Timing of Loan

Group	Start-ups		Established EU		Total	
	Count	%	Count	%	Count	%
IG	36	11.7	273	88.3	309	100
CG	4	6.1	62	93.9	66	100
Total	40	10.7	335	89.3	375	100

Chi-Square Test		
Pearson Chi-Square 1.783	1 df	Asymp.Sig.(2-sided) 0.182

Table 21: Distribution of the Loans According to their Use

Group	Fixed Capital		Working Capital		Both (F+ W Capital)		Total	
	Count	%	Count	%	Count	%	Count	%
IG	42	13.6	239	77.3	28	9.1	309	100
CG	25	37.9	36	54.5	5	7.6	66	100
Total	67	17.9	275	73.3	33	8.8	375	100

Chi-Square Test		
Pearson Chi-Square 21.946	2 df	Asymp.Sig.(2-sided) < 0.0005

Table 22: How did the Loans Help the Entrepreneur?

Group	Start the Activity		Continuity		Expand Current Activity		Others		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
IG	39	12.6	177	57.3	51	16.5	42	13.6	309	100
CG	41	62.1	13	19.7	9	13.6	3	4.5	66	100
Total	80	21.3	190	50.7	60	16.0	45	12.0	375	100

Chi-Square Test		
Pearson Chi-Square 81.614	3 df	Asymp.Sig.(2-sided) 0.000

Table 23: Change in Employment due to Loans

Group	No change		Yes (more workers)		Yes (less workers)		Total	
	Count	%	Count	%	Count	%	Count	%
IG	259	83.8	49	15.9	1	0.3	309	100
CG	61	92.4	5	7.6	0		66	100
Total	320	85.3	54	14.4	1	0.3	375	100

Chi-Square Test		
Pearson Chi-Square 3.276	2 df	Asymp.Sig.(2-sided) 0.194

Table 24: Having Access to Training

Group	Yes		No		Total	
	Count	%	Count	%	Count	%
IG	267	86.1	43	13.9	310	100
CG	260	83.9	50	16.1	310	100
Total	527	85.0	54	15.0	375	100

Chi-Square Test		
Pearson Chi-Square 0.620	1 df	Asymp.Sig.(2-sided) 0.431

Table 25: Timing of Training

Group	Before Start of Business		After Start of Business		Before & After Start of Business		Total	
	Count	%	Count	%	Count	%	Count	%
IG	219	82.0	34	12.7	14	5.2	267	100
CG	225	86.5	28	10.8	7	2.7	260	100
Total	444	84.3	62	11.8	21	4.0	527	100

Chi-Square Test		
Pearson Chi-Square 2.903	2 df	Asymp.Sig.(2-sided) 0.234

Table 26: Type of Training

Group	Production		Administration		Marketing		Maintenance		Others	
	Count	% of Group	Count	% of Group	Count	% of Group	Count	% of Group	Count	% of Group
IG	166	62.2	39	14.6	131	49.1	5	1.9	3	1.1
CG	154	59.2	41	15.8	134	51.5	4	1.5	1	0.4

Table 27: Sources of Training

	IG		CG		Total	
	Count	%	Count	%	Count	%
Loan Provider	1	0.4	1	0.4	2	0.4
Previous Work	94	35.2	82	31.5	176	33.4
Specialized Centers	4	1.5	0	0.0	4	0.8
Tech. Education.	4	1.5	5	1.9	9	1.7
Government & Public Sector	4	1.5	5	1.9	9	1.7
Invest. Sector	1	0.4	1	0.4	2	0.4
Current W.	52	19.5	60	23.1	112	21.3
Workshops	106	39.7	107	41.2	213	40.4
Total	267	100	260	100	527	100

Chi-Square Test		
Pearson Chi-Square 5.525	7 df	Asymp.Sig.(2-sided) 0.596

Table 28: Expectations of Employment Change Next Year

Group	CG		IG		Total	
	Count	%	Count	%	Count	%
No change	264	85.1	173	55.8	437	71
More Workers	30	9.7	65	21.0	95	15
Less Workers	3	1.0	12	3.9	15	2.0
Not sure	13	4.2	60	19.3	73	12.0
Total	310	100	310	100	620	100

Chi-Square Test		
Pearson Chi-Square 67.50467	3 df	Asymp.Sig.(2-sided) 0.000

Table 29: Distribution of Work in the EU

	CG		IG		Total	
	Count	%	Count	%	Count	%
No work Distribution	167	72.6	127	54.4	294	63.5
Work Distribution	53	23.0	97	41.6	150	32.4
Multiple Tasks	10	4.3	9	4.0	19	4.1
Total	230	100	233	100	463	100

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