Micro-enterprise lack of access to credit – The Israeli case

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Abstract
Micro-businesses face various difficulties in obtaining credit. Our research focuses on the demand side for credit through questionnaires addressed to 101 micro- businesses owners in a peripheral region of Israel. We have identified the existence of a market failure: micro-businesses tend to suffer from a lack of information in regard to the existence of credit funds and in regard to loan taking procedures. Many of them are unaware of their need for credit or do not know how and whom to address. We also found that the micro-business population is quite heterogeneous and is in need of tailor-made credit solutions.

1. Introduction and theoretical background

An extensive range of research deals with the existence of limited access to credit as one of the principal barriers to growth in small and medium-sized businesses (Schiffer and Weder, 2001; Pissarides, Singer and Svejnar, 2003; Beck, Demirguc-Kunt and Maksimovic, 2005, Felsenstein and Schwartz, 1993). Despite the global availability of a range of intervention tools to overcome the problem of business access to credit, it seems that most of these tools are designed to help small to medium-sized enterprises (SMEs) rather than micro-enterprises. Principally, the available tools are limited to specific, localized actions focusing on the welfare of weak sectors of the population (e.g., minorities, women, immigrants). Therefore, our research focused on various sectors of the micro-enterprise community and examined 101 micro-businesses in the southern peripheral region of Israel. Our hypothesis is that the difficulties these businesses experience in attempting to obtain suitable credit stem from a market failure. This market failure is the result of failures from both the supply and demand sides: the supply of credit by financial institutions and the demand for credit by micro-enterprises.

From the supply side, lending institutions may refrain from even considering loans to micro-enterprises because of constraints in accessing relevant information from them. This is reflected both in micro-business loan rejection rates by lending institutions and in voluntary self-exclusion of micro-business owners who do not seek loans due to fears of rejection.

A main feature that makes it difficult for micro-businesses to obtain suitable credit is that they are "informationally opaque" due to the existence of asymmetric information between them and the bank, meaning that the owner or manager of a business knows far more than the loan institution, and the loan institution may suspect that the business is hiding information that

could render the loan unviable. Informational opacity and the agency problem incurred thereby (Jenson and Meckling, 1976) is of even greater significance in micro-businesses for a number of reasons: First, agreements and contracts of these businesses usually are not in the public domain. Another factor is that in contrast with large companies, micro-businesses do not offer securities on the open market from which the value and status of the business can be determined. Furthermore, many have no audited financial reports providing a reliable indication of their financial condition before taking out a loan, and they often lack history from which it is possible to learn about the nature of the business and its ability to repay the loan in the future. All of these problems are accentuated in micro-businesses, many of which are not formally registered (Petersen and Rajan, 1995).

The manner in which banks deal with these asymmetric information problems is explained by the "signaling model" (Spence, 1973). According to this model, because banks have insufficient information to assess risk level in loans to micro-businesses and because of high transaction costs; they are forced to make decisions that rely on signals from borrowers. Positive signals can be the existence of collateral, guarantees and a good credit history of the micro-enterprise owner. It has been found that the existence of such positive signals can reduce the cost of credit and increase its approved scope (Smith and Warner, 1979).

Nevertheless, it is important to note that micro-businesses with problematic credit history from the outset or with limited ability to stand guarantee or offer collateral will find it difficult to send positive signals to the bank, and therefore, their requests for loans could be rejected outright or approved only in part.

In this paper, we focus on the demand side. Our argument is that one of the main reasons for a market failure is caused by the information lacuna affecting micro-businesses, for which a solution has yet to be found. These businesses have unique characteristics which contribute to market failure. For instance, many of them have no clear separation between their business activities and those of a domestic household. Moreover, many micro-enterprises actually operate from within households (described in the literature as Home Based Businesses – HBBs). As such, they tend to lack sufficient collateral for business needs, and their debt (loan) to equity ratio is relatively higher than for larger businesses (Binks and Ennew, 1997; Malhotra et al., 2006). Furthermore, such enterprises are highly sensitive to external events (e.g., the business owner becoming ill, economic crises), which could lead to cash flow problems and difficulties in repaying a loan. Thus, this factor reduces their financial flexibility when seeking a loan (Schiffer and Weder, 2001).

Micro-business owners also suffer from time and resource limitations. Due to the micro-size of these businesses, by necessity, the owner must fill many roles simultaneously: CEO and marketing manager, operations and finance officer. Thus, he/she lacks the time and necessary resources to gain sufficient financial expertise including specific loan knowledge. The lack of time also detains him/her from seeking relevant financial information – a situation evident of an information lacuna. Moreover, the multitasking of micro-enterprise owners also leads them to become overconfident in their management capabilities. This results in a lack of motivation to

seek financial consulting and the underuse of management and financial tools (Forbes, 2005; Franco and Haase, 2010; Schwartz and Bar-El, 2004) – both of which contribute to the financial information lacuna already mentioned. This reality has important consequences when actually requesting a loan: the business owner's lack of financial skills and knowledge coupled with the paucity of audited and reliable business reports increase the inability of the financial institution to achieve a reliable evaluation of the risk level of such a loan.

Consequently, requests for loans may be rejected on the grounds of the inability of banks to evaluate the risk level of a business in spite of the fact that the business may be economically viable. This is a market failure: the free market does not lead to an optimal solution because of information opacity.

In the past few decades, solutions for micro-finance have begun to appear. Micro-credit first appeared some thirty years ago in developing countries with micro-credit loans originally designed to assist people living in poverty. Their aim was to help people overcome poverty by establishing and/or operating a micro-business. The use of micro-credit loans soon expanded to developed countries and today, they are targeted not only to underprivileged populations lacking access to financial services but also to micro-businesses suffering credit difficulties. In these cases, credit is granted with less need to provide collateral/guarantees, while the borrowers are given training in business financing and guidance on how to make the best use of the loan received.

However, while a Microfinance Institution (MFI) mechanism does exist in some developed countries, and they do provide micro-financing and credit for businesses (through government plans, non-profit organizations or special departments at banks), such tools are not yet widely used in all countries. In Israel, for example, there are regulatory and other barriers that limit the formation of an MFI sector, and there is a limited supply of credit for micro-businesses in comparison to the big businesses, Furthermore, there are a limited number of philanthropic credit funds available, and these funds do not extend loans directly. Instead they provide guarantees and mediate the links between borrowing enterprises and the bank. The outreach of such funds is very limited, especially to micro-businesses (Arbel and Lachman-Messer, 2010). Allegedly, the limited outreach of micro-credit funds can also be attributed to a lack of interest demonstrated by micro-businesses. We claim that on the demand side, an information lacuna occurs regarding the existence of credit funds – a lacuna that is caused by the business owner's lack of time and motivation to seek relevant information when needing a loan. This is indicative of another market failure.

Our research aimed to reveal the causes for failure on the credit demand side. Our main research hypothesis is that there is a failure in the credit market for the micro-business sector caused by information gaps on the demand side (micro-businesses). We claim that micro-business owners lack the information on the existence of some relevant credit sources, as well as the applicable knowledge on how to actually take the suitable loan and on how to manage their relationship with the creditor before and after the approval. More specifically, we hypnotize

that *Micro-business owner's lack information regarding the existence of credit funds* and *of financial management information regarding loan language and/or what loan to request*.

2. Methodology

This research focuses on micro-businesses in the Beer Sheva subdistrict in the south of Israel. For the purposes of our research, a micro-business is defined as having up to 10 employees (including the owner) and an annual turnover reaching up to NIS 10 million (about USD 3 million). This conforms to prevailing definitions of micro-businesses in the US (up to 10 employees including the owner) and in Europe (up to 10 employees and up to an annual sales turnover reaching USD 3 million), as quoted by Arbel and Lachman-Messer (2010).

As of 2010, there were some 43,000 micro-enterprises in the Beer Sheva subdistrict, constituting about 10% of the total number of micro-businesses (443,167) operating that year in Israel, (based on the Central Bureau of Statistics estimate from 2008, according to which some 9.7% of the total number of businesses in Israel operate in the Southern Region). Research was conducted during the period of December 2010 to January 2011 among micro-businesses established no later than 2009 and active during 2010.

2.1 Research process and tools

Access to the research population was facilitated using anonymous, online questionnaires distributed by email to owners of microbusinesses from a list provided by Mati Beer Sheva, the regional branch of the National Small and Medium Enterprise Authority, and the index of businesses in the Negev District. In total, 101 completed questionnaires were returned.The questionnaire included a series of 22 mostly closed questions referring to details about the enterprise (size, age, sector, relative contribution to the domestic budget, geographic location), information regarding the business owner (gender, age, education, other salaried employment), the need for credit and the nature of loans (had the owner needed a loan for the business in the past five years, to what sum, for what purposes, if the loan had been extended and if so, from which lending institution), and if the business owner was aware of the existence of credit funds for businesses and which such funds. Business owners were also asked to rate the degree to which the he/she agreed with statements referring to financial management aspects of the business using a scale of 1 to 7 (1 – *completely disagree*; 7 – *completely agree*). The statements were presented in random order and were: *I regularly update the bank if unusual events are expected in my account; I regularly consult with a financial expert; I manage the business cash flow; I determine monthly/yearly goals for my business; I ensure separation between my business and domestic accounts; I participate in courses that improve my management skills/financial skills; I almost always know in advance the business's revenues and costs for the coming month; In reference to loans for my business, I usually know exactly what loan I would prefer (interest, fees, repayment schedule, cost of living indexing, etc.).*

2.2 Key characteristics of businesses and business owners in the sample

Business Size – The average number of employees in the businesses in the sample was 1.7 (standard deviation = 2.9) and the median was 1, the average annual turnover was some NIS 439,000 and the median was NIS 175,000 (about $110,000 and $44,000, respectively), 55% of the

self-owned businesses employed no workers and 51% had annual turnover of up to NIS 200,000 (about $50,000). In fact, about 90% of the businesses in the sample employed up to five workers (including the business owner), and all of these businesses had annual turnover of up to NIS 5 million (while nearly 80% had annual turnover of up to NIS 1 million). These figures are compatible with previous findings according to which about half of the micro-businesses in Israel employ no workers (Central Bureau of Statistics, 2011, table 18.3, page 786).

Age of Business – The average age of the businesses was 7.7 years (standard deviation = 8.0). 55% were aged 1 to 5 years; 26% were between 6 and 10 years and 20% were 11 years and older (treatment of outlier values – numbers in the 98% percentile and above were given the value of the 97% percentile - 33 years).

Sector – 61% of the businesses were operating in the services sector, and the others were divided equally between the trading and manufacturing sectors (each about 20%).

Geographic location, relative to the regional main city – 49% of the businesses were located in the regional capital, Beer Sheva; 10% were located in the immediate vicinity of the city, defined as a distance of up to 20 kilometers. 41% were located at a greater distance.

Gender – 65% of the business owners in the sample were men and about 35% were women.

Age groups: 51% of the business owners were aged 31 – 50, 32% were aged 51 or older and 17% were aged 18 to 30. This distribution is quite similar to the distribution of the micro-businesses owners in Israel (Friedman, 2005).

Education – 52% had academic degrees, 28% had professional education beyond high school and 20% had a high school education. This data coincides only partially with the data for the general population of business owners in Israel, which has a more bi-polar distribution with a greater number of business owners possessing either lower and higher levels of education (Nadiv and Shelach, 2003).

3. Results
3.1. Heterogeneity and lack of access to credit

The two dependent variables in our research were the business owner's awareness of credit funds for businesses (dichotomous) and the degree to which he/she agreed with the statement: *In reference to loans for my business, I usually know exactly what loan I would prefer (interest, fees, repayment schedule, etc.)* on a scale of 1 to 7 (1 – completely disagree; 7 – completely agree) – which represents the owner's financial loan-related knowledge. The independent variables refer to the characteristics of the micro-business and its owner (see table 1): Business size (annual turnover in NIS), gender, business contribution to the monthly household income, business located within the owner's home or otherwise, if the owner has salaried employment besides the business, education, geographic business location relative to the regional capital, age of the business and age of the owner.

We used factor analysis to study the patterns of relationship among the independent variables to identify a reduced number of latent variables within these variables that enable a clearer picture. Our analysis generated three factors that together contain about 53% of the variance in all the variables, as shown in Table 1. The factors represent the business characteristics from perspectives: *The "At Home" Factor* – the size of the business and the

linkages with the household, *The Opportunity Factor* – the motive for the establishment of the business and *The Business Experience Factor* – the business background.

Variables/ Factors	Definitions
At Home Factor	
Business size	Dummy coded 1 if business has a yearly turnover of less than 200,000 NIS
Gender	Dummy coded 1 when business owner is a woman
Business contribution	Dummy coded 1 if business contributes less than 50 per cent to the household income
Location relative to the owner's home	Dummy coded 1 if business is located within the owner's home
Opportunity Factor	
Salaried employment besides the business	Dummy coded 1 if business owner has salaried employment besides the business
Education	Dummy coded 1 if business owner has an academic education
Location relative to the regional capital	Dummy coded 1 if business is located less than 20 km from the regional capital
Business Experience Factor	
Age of owner	Dummy coded 1 if the owner is older than 40
Age of business	Age of the business in years (a continuous variable)

Table 1: Factors and Independent Variables Definitions

As described in table 2 below, the "At Home" Factor explains approximately 20% of the variance and was heavily loaded with the variables: *Annual turnover lower than NIS 200,000*, *the business contributes less than 50% of the household income*, *Business located within the home* and the value *Woman* in the gender variable. In practical terms, the "At Home" factor distinguished between businesses based on their location and their activities relative to the household, and when this factor was high loaded, the business was more likely to be female-owned and to operate from inside the owner's home. Such businesses generally generate lower revenues and constitute a secondary slice of the entire household income, certainly in comparison with businesses with a lower "At Home" factor.

The Opportunity Factor explains 16% of the variance, and it has a high loading in the variables: *Academic education*, *the business owner also has salaried employment* and *Location – Beer Sheva and environs*. In fact, The Opportunity Factor refers to the motive when establishing the business (opportunity versus necessity) combined with the geographic location factor because the owners of opportunity businesses have higher levels of education, their work in the business is usually in parallel with salaried, outside employment and the business is located closer to the regional capital where there are more employment opportunities than in more remote locations. It would seem that for these business owners, establishment of the business was driven less by necessity and/or the absence of alternatives and was more due to the identification of opportunity to vary and/or augment existing income in comparison with geographically more distant businesses. That differentiation is to some extent similar to the accepted differentiation between the necessity and opportunity motivations when establishing the business (Reynolds et al., 2002).

The Business Experience Factor explains about 16% of the variability and is heavily loaded with the variables: *Age of the business (years)* and *Age of the business owner – 41 years and above*. The latter refers to the combined experience of the business and the business owner.

| | Factor loading | | |
	At Home	Opportunistic	Business Experience
Annual turnover less than NIS 200,000	0.75		
Gender - Woman	0.73		
The business contributes less than 50% of the household income	0.58		
Business located within the home	0.58		
Academic education		0.70	
The business owner also has salaried employment		0.70	
Location – Beersheba and its environs		0.38	
Age of the business (years)			0.82
Age of the business owner – 41 years and above			
			0.81
Eigen value	2.08	1.16	1.50
Percentage variability	19.95	16.21	16.42

Table 2: Factor analysis with a varimax rotation of the business and the business owner variables

60% of the micro-businesses in the sample declared specifically that they had needed at least one loan for the purposes of their business activities in the five years prior to our research. These businesses were asked if they had approached an external source for a loan (defined as a bank, credit card company, leasing company, credit fund or any other type of body other than friends and/or family) and what the sum of credit extended, if at all, was compared with the sum requested. To assess the actual access of micro-businesses to such loans, the sample data was divided into two groups: businesses not needing loans for business activities during the past five years (n= 40) and businesses that did need a loan (n = 61). This distribution is described in Table 3.

| Did you need a business loan in the past five years? Was a request made? Was a loan received? | N=97 | |
	n	percent
No loan from an external source was required.	45	46
No loan needed	40	41
Loan needed, not requested because a preferable source of financing was available	5	5
Needed a loan from an external source	52	54
Requested a loan and received the entire sum	29	30
Requested a loan and received part of the sum	8	8
Requested a loan and was refused (n=5, 5% of the sample) or refrained from making a request, presuming refusal (n=10, 10% of the sample)	15	16

Table 3: Distribution of the percentage of business owners needing loans for the purposes of business activities during the five years previous to the research/asked for/extent of the credit received

The findings show that close to half of the businesses in the sample (46%) claimed that they did not need a business loan from any external source whatsoever (which includes those who needed loans but found sources of financing independently from friends and family). It must be noted that this group might include some who needed credit but did not know what

type of loan to seek, where and how to apply for it, or others who were unaware of their need for such a loan or were pessimistic in regard to their probability to receive a loan with reasonable conditions. The presence of the latter group is further testimony to the fact that there is a market failure in the field of credit for micro-businesses. It also might include businesses that due to cost-benefit calculations have decided that the cost to gain credit is higher than the expected benefit. It is important to note, that this market failure is expressed both by a lack of awareness about the existence of relevant credit sources and by a lack of knowledge – how to address and use these credit channels effectively.

Furthermore, the data stating that 54% of businesses made requests for loans from external sources (N = 52, including 10 who would have made requests if not for the fact that they thought that their request would be summarily rejected) – *is a low percentage* relative to the prevailing levels for large businesses (Beck, Demirgue-Kunt and Maksimovic, 2008). In practical terms, it would seem that micro-businesses are not making enough effort to make use of external financing/credit, despite the need and the opportunities inherent in such loans – which as mentioned previously is further evidence of a market failure in the credit market for such businesses.

Out of the 52 micro-businesses that did submit requests for loans from an external source, only 29 received the entire sum needed, or in other words, only 55% of those making requests for loans benefited from full access to credit**.** These businesses constituted about 30% of the entire sample. Eight businesses benefited from partial access to credit (receiving loans, although not the full amount requested) and another 15 businesses were left without access to credit (they needed and asked for a loan but were rejected or abstained from making a request assuming rejection). In other words, a total of just one quarter of the total number of micro-businesses in the sample lacked full or partial access to such credit (23/101), and these comprised 45% of the businesses which submitted a loan request to an external institution.

Lack of access to credit is also expressed by the relative proportion of businesses stating that they needed credit (about 60% of the sample). More than 40% of the micro-businesses that needed loans found them difficult to get. These findings demonstrate that a significant number of micro-businesses need credit but are not receiving it because they avoid asking for it (due to "fear of rejection"). This data emphasizes the existence of a market failure on the supply side that should be addressed in future research.

3.2 Predicting the likelihood of a need for a loan

In order to examine how micro-businesses differ in their need for business loans, we applied multiple logistic regressions in which the predicted variable answered the question: *Did you need a business loan in the past five years?* The predictors were the three factors: "At Home," "Opportunity" and "Business Experience." The findings are presented in Table 4 below:

Variable	B	SE B	Wald (df=1)	Exp(B)
At Home	-1.25	0.28	20.06	0.29***
Business Experience	0.07	0.24	0.09	1.07
Opportunity	-0.48	0.24	3.94	0.62**
Regression constant	0.57	0.25	5.42	1.77
R²	0.353			
χ²	30.53***			

*** Significant at 1%-level, ** significant at 5%-level, *significant at 10%-level

Table 4: Findings from logistic regression applied to predict the chances that a business will need a loan

The findings show that home based businesses have a 0.30 times lower chance of needing a business loan, in comparison with non home based businesses, and that Opportunity businesses had a 0.60 times lower chance of needing a loan, compared with non opportunity businesses. As for the Business Experience factor, no significant effect was found. The regression model was found to be statistically significant (R^2=.35, χ^2 (3) =30.53, p<.01).

A possible explanation for these results is that home based businesses have less need for credit because they are relatively smaller as are their credit needs. Another possibility is that there is no clear differentiation between the financial needs of the household and the business. It is important to note that this class of businesses is often the target of microcredit funds. As for the Opportunity businesses, it appears that they share a relatively stable financial environment in which there are other employment alternatives, and owners are usually able to get credit more easily from family and friends in comparison to necessity businesses. These results indicate that larger micro-businesses and those which operate and were established due to lack of employment alternatives (necessity) are more likely to depend on external credit, but it seems that there are few suitable credit solutions for them. This supports our research hypothesis stating that there is a failure in the credit market for micro-businesses because the data shows that these businesses have an obvious need for loans and must receive differential treatment that distinguishes between micro-businesses of different types.

3.3 The failure in the credit market for micro-businesses and its causes

Our core research hypothesis refers to the difficulties faced by micro-businesses looking for the credit they need as an expression of a market failure from the demand side. Micro-businesses lack information about the existence of relevant credit funds (and consequently, no help is received from those funds) and a lack of financial management information pertaining to loans (what type of loan would be appropriate for the business and where and how to apply for it).

3.3.1 The lack of information regarding credit funds

Respondents to the questionnaire were asked to state which credit funds for businesses they were aware of, selecting them from a list of funds provided (list based on the credit funds active in Israel during 2008, offering loans up to about NIS 100,000). The information regarding the funds was received from the Small to Medium Businesses Authority, 2009. As presented in

Figure 1, the findings show that, in accordance with the research hypothesis, micro-businesses lack knowledge regarding the existence and activities of credit funds, even though a significant proportion of the businesses stated that they had needed a loan for their businesses at some point in the past five years (about 60%). Apparently, an even larger proportion were supposed have had some awareness of the existence of credit funds for businesses as a possible solution. In practice, there is a significant lack of awareness of the existence of and the activities conducted by credit funds.
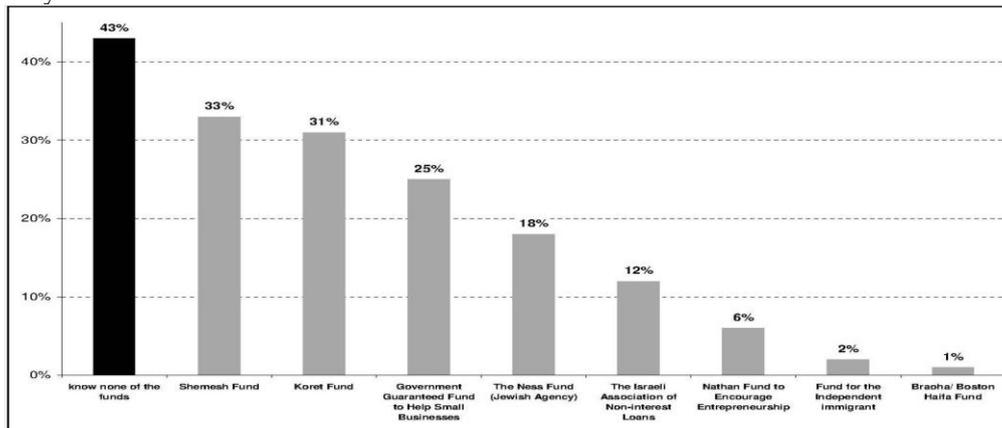
43%	know none of the funds
33%	Shemesh Fund
31%	Koret Fund
25%	Government Guaranteed Fund to Help Small Businesses
18%	The Ness Fund (Jewish Agency)
12%	The Israeli Association of Non-interest Loans
6%	Nathan Fund to Encourage Entrepreneurship
2%	Fund for the Independent immigrant
1%	Braoha/ Boston Haifa Fund

Figure 1: The level of lack of awareness of credit funds for businesses among owners of micro-businesses

We applied logistic regression in which the predicted variable was the likelihood that a business owner would know of any credit fund whatsoever (dichotomous) with the predictors the At Home, Opportunity and Business Experience factors. We found that At Home businesses had a 0.62 times lower chance of being aware of the existence of credit funds, compared with non At Home businesses. A possible explanation is that At Home businesses are smaller, have a reduced need for credit and, therefore, a reduced awareness of credit funds. The regression also showed that "experienced" businesses had a 0.56 times lower chance of knowing about credit funds, compared with businesses without "experience," suggesting that credit funds tend to focus their marketing efforts toward newly established businesses rather than on older, more experienced ones. The regression model was found to be statistically significant (R^2=.17, χ^2 (3) =13.34, p<.01). It is likely that this data indicates that the existing marketing focus of most credit

funds is on new and larger businesses, at the expense of the focus on established businesses and those with lower turnover. Regression results are given in Table 5.

Variable	B	SE B	Wald (df=1)	Exp(B)
At Home	-0.48	0.219	4.86	0.62**
Business Experience	-0.58	0.222	6.98	0.56***
Opportunity	-0.23	0.215	1.1	0.8
Regression constant	0.32	0.217	2.16	1.38
R^2	0.168			
χ^2	13.34***			

*** Significant at 1%-level, ** significant at 5%-level, *significant at 10%-level

Table 5: Results from logistic regression to predict the likelihood of awareness of credit funds, according to the factors – at home, opportunistic and business experience

3.3.2 Lack of financial information regarding suitable business loans

We examined the degree to which respondents agreed with the statements describing financial information and knowledge regarding suitable loans for their business (*In reference to loans for my business, I usually know exactly what loan I would prefer* – in terms of interest, fees, repayment schedule, etc.). Their agreement was rated on a scale of 1 – *Completely disagree* to 7 – *Completely agree*. The findings are shown in Table 6.

How much do you agree with each of the following statements? 1 – Completely disagree; 7 – Completely agree	n	M	SD	SD/M
I manage the business cash flow	97	5.08	1.96	0.39
I regularly update the bank if unusual events are expected in my account	96	4.83	2.01	0.42
I almost always know in advance the business's revenues and costs for the coming	98	4.67	1.66	0.35
I regularly consult with a financial expert	98	4.56	1.92	0.42
I determine monthly/yearly goals for my business	96	4.43	1.77	0.4
I ensure separation between my business and domestic accounts	96	4.32	2.32	0.54
In reference to loans for my business, I usually know exactly what loan I would prefer (interest, fees, repayment schedule, cost of living indexing, etc.)	95	3.86	2.00	0.52
I participate in courses that improve my management skills/financial skills	96	3.69	2.00	0.54

Table-6: The degree of agreement with statements regarding financial management behavior in the business

In addition to the average score for each statement, we also calculated the percentage of respondents who agreed with that statement – giving a score of 6 or 7. The findings show that some 60% of owners usually manage a cash flow for their businesses and inform the bank if they expect any unusual movements in their accounts (an average grade of 5.1, standard deviation = 2.0 and an average grade of 4.8, standard deviation = 2.0, respectively). Interestingly, although the owners could assess their loan needs (repayment schedule, costs and conditions) on the basis of this existing information – only 36% of the respondents felt that when asking for a loan for the business, they usually knew what type of loan they would prefer (in terms of interest, fees,

repayment schedule etc., with an average score of 3.9 and standard deviation = 2.0). In other words, about two-thirds of the business owners did not know what type of loan would be most appropriate for their needs.

This level of lack of business knowledge regarding credit aspects remains stable when compared with the independent variables and factors in the sample, and those owners who actually submitted a request for a loan in the past five years also felt a lack of knowledge similar to the others. It would appear that the principal difficulty faced by the owners of micro-businesses is not searching for and extracting the financial data for their businesses, but it is their correct translation into credit needs. In other words, in accordance with our hypothesis, the owners of micro-businesses are indeed in need of more financial knowledge and information in reference to loans, which results in a market failure. From the bank's point of view, loans for this type of business incur higher monitoring and risk assessment costs, and in the best of circumstances, that higher cost makes the loan more expensive, while in the worst case scenario, it leads to the rejection of the loan request. Appropriately, the owners of micro-businesses should be able to better manage their affairs with the bank on a regular basis, especially when they ask for a loan. Before making a loan request, if they can persuade the bank that they have conducted the required checks and, therefore, know what type of loan is appropriate for their needs and that they can repay it, it would be reasonable to assume that the bank will view the level of risk as lower. Hence, the bank should be willing to extend more credit under better conditions for the borrower.

4. Discussion and conclusions

This research has dealt with the problem of the lack of access by micro-businesses to suitable credit, which places a significant limitation on their possible growth and survival. Its aim was to examine whether this problem arises from lack of knowledge and information on the side of the potential borrower (the micro-business) and as such, finds expression as a market failure for which no solution has yet been found.

In accordance with our research hypothesis, we have found that the owners of micro-businesses lack information about the existence and activities of suitable credit funds, and consequently, they are not helped by these funds even though the owners state that they need credit and some find it difficult to receive. Furthermore, we have found that the owners of micro-businesses do not have the knowledge linked to loan "know how" procedures (type of loan and loan conditions appropriate for business needs), which can be expected to increase the bank's need for loan monitoring that, in turn, reduces bank profitability when extending a loan. Taken together, these information and knowledge lacunas result in a market failure and prevent achievement of the optimum in terms of the cost and extent of available credit in the marketplace.

Moreover, we have found that the micro-business population is heterogeneous and requires a differentiating approach to its financing needs based on their "At Home" and "Opportunity" levels because these particular businesses experience more substantial financing difficulties. In addition to these conclusions, we have found that there is a lack of knowledge

and information about the subject of credit even among educated business owners who have other salaried employment. Based on our findings, we recommend that lending institutions expand the supply of credit for micro-businesses; that awareness of micro-businesses regarding the existence of credit funds be raised and the availability of information regarding these funds be ensured; and that business owners be provided with simple, readily available mentoring in reference to the financial management of credit, along with the development of tools to make it easier for banks to assess risk levels in loans to micro-businesses and overcome the problems of asymmetric information and information opacity.

5. Recommendations for further research

We suggest extending the research towards analyzing the differences between micro businesses located in peripheral region and micro businesses located in the core region of Israel. We also believe that further research should consider the use of applicable micro-financing tools, which could make access to credit easier for all micro-businesses and not just for underprivileged populations (women, minorities, immigrants). We suggest in-depth research of three models: *the internal banking, the mediation and the direct credit models.* Regarding the *internal bank model*, we propose an examination of the possibility that a group of micro-businesses could apply for a single larger loan rather than a number of smaller loans without joint guarantees (Schreiner and Woller, 2003). In that way, the businesses could acquire a market power and better credit conditions from the bank. From the bank's point of view, the inherent risk in the combined loan would be expected to drop (because a high risk borrower would be set off against a borrower carrying less risk) and the potential profit should rise. Furthermore, the group factor in the loan could be used to purchase financial advice and mentoring regarding the strength of the use of the credit extended.

Through the "*mediation model,*" the establishment of funds extending credit directly to micro-businesses could be offered, in particular, to businesses in more remote locations and with larger turnovers. Another target population should be well-educated entrepreneurs, who have established a business following their identification of an opportunity, in parallel with their work as salaried employees. An additional possible method to advance micro-credit to businesses is the *peer-to-peer model* that utilizes an Internet platform. Under this model, private lenders would extend credit to private borrowers. The risk to the lenders would drop as the Internet site processes the credit ratings, and the loan is spread among a number of borrowers. One better known example of this method is the prosper.com site (Berger and Gleisner, 2009).

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