

**ERF Research Program on Promoting Competitiveness in the Micro  
and Small Enterprise (MSE) Sector in the Middle East and North  
Africa**

**Micro and Small Enterprises in Turkey:  
Uneasy Development**

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## **METHODOLOGY**

### **1. Data collection instruments**

The questionnaire used in the main survey include four different forms:

**Form I. The enterprise list** used for listing of all enterprises within the PSU<sup>1</sup> to identify the enterprise, entrepreneur, and associated household. All members of the enterprise universe were included in the first listing (identifying nature of enterprise) but those in excluded activities were not given the Form II in the main survey.

**Exclusion rules** concern agricultural and non-market activities, illegal activities, production for own personal use, mobile vendors, domestic services, professional services (except ICT) and enterprises with 50 and more persons engaged.

**Sampling rule** designed to *under-sample* smaller sizes and men entrepreneurs  
entrepreneur *women*: (size 1=>1/5; size 2-9 =>1/1; size 10-49=>1/1)  
Entrepreneur *men*: (size 1=>1/10; size 2-9 =>1/2; size 10-49=>1/1)

The size 1 enterprises were deliberately under-sampled to avoid dominating the sample by enterprises size 1, and therefore have statistically significant number of enterprises in the sample for the larger size. The oversampling of enterprises with women entrepreneurs was necessary in order to ensure that the sample included sufficient number of women entrepreneurs to obtain statistically significant results.

**Form II. Household roster-enterprise identification.** This type of questionnaire includes identification variables for the members of the household and possible MSEs at home.

**Form III. Enterprise-entrepreneur questionnaire focuses on** characteristics of the entrepreneur and enterprise. Form III contained 322 questions concerning the characteristics of the entrepreneur and the enterprise, growth performance, access to

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<sup>1</sup> A PSU (primary sampling unit) is a geographical area with an estimated minimum of 45 enterprises in the urban areas.

credit, financial and business services, relations with business associations, status of registration, level of technology, value of assets, main customers, exports, linkages with other enterprises, constraints to business activity, the problems specific to women entrepreneurs and characteristics of the work force.

**Form IV. Household questionnaire deals with** characteristics of the members of the entrepreneur's household and the analysis of the interrelations between the household and the enterprise.

The advantage of this mode of approach, of having four different forms of questionnaire, is that it allows for the investigation of the economic units for which we do not have a complete list. Area sampling, followed by door to door surveying ensures that establishments and household components are combined into one operation, with canvassing of all production units, whether in establishments, household premises, fixed units, in the street or market places. The method avoids the complications of going through the household, getting addresses for economic units/ establishments but not finding them.

Although the questions in these forms mostly specify a number of possible answers, some questions were nonetheless deliberately left "open" to encourage free expression of attitudes and opinions by the respondents when none of the existing answers matched the respondent's answer, or when "other" categories were marked and the answer given by the respondent was written precisely in the space provided.

The questionnaire was originally written in English and then translated in Turkish. The final changes were based on the inputs from the pre-test and comments made by experts and experienced bodies at the Turkish Statistical Institute (TURKSTAT) and the Istanbul Chamber of Industry. Wording of the instrument questions and alternative response categories for instrument items were refined to ensure accuracy and comparability.

## **2. Sampling**

The sample is national in coverage and is chosen by stratified, multi-stage systematic sampling method by the TURKSTAT.

In Stage 1, 19 provinces<sup>2</sup> were selected from 5 strata<sup>3</sup> that were stratified in terms of socioeconomic development level of the provinces compiled by the State Planning Organization (SPO). The selection of provinces from each stratum was carried out by weighted probability regarding the number of enterprises in each province.

In stage 2, 432 PSUs with a minimum of 45 enterprises in urban areas of the 19 provinces were selected based on census of buildings for the year 2000 by the SIS. For the rural areas, 100 villages were selected.

Urban areas: Settlements with population over 20,000. These settlements include the central city of the province and district centers (ilce) with a population over 20,000.

Rural areas: Villages with a population between 500 and 2,000.

Some of the sample villages visited during the survey selected by the TURKSTAT were more or less deserted and usually had only one grocery shop as an enterprise. But this not always clearly reflected in the Population Census. This is because the municipalities receive their budget from the central administration in proportion to their population. Thus in order to compensate for the dearth of population in the villages municipalities mostly arrange bus trips for migrants living in the big cities like Istanbul taking them to their home towns and villages during the national census in order to increase their allowances from the public sources. The persistence of this practice means population of some villages is not reflected accurately in the population census. They are usually inflated.

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<sup>2</sup>Adana, Adiyaman, Afyon, Agri, Bursa, Corum, Erzurum, Eskisehir, Gaziantep, Istanbul, Izmir, Kahramanmaras, Kirsehir, Konya, Manisa, Mugla, Sanliurfa, Trabzon, Van are the 19 provinces selected. See Appendix 4 for the location of the provinces in the sample on the map of Turkey.

<sup>3</sup> See Appendix 5 for a detailed illustration of the sampling process.

Since due to lack of a nation-wide survey of establishments for both rural and urban areas the selection of villages was carried out without a reliable stratification process, it was decided to exclude the rural enterprises from the sample before the weighting and extrapolating process. The rural MSEs interviewed could be evaluated separately from the urban MSEs that constitute a representative sample of MSEs for the urban areas.

### **3. Fieldwork**

Fieldwork consisted of successive stages of pre-test, canvassing of the sampling units, the main survey in the year 2001 and the follow-up survey in the year 2002.

#### **Pre-test**

Pre-test was carried out in February 2001 in a limited number of selected streets in two neighbourhoods of Istanbul (Merter, and Gultepe) known for having a variety of MSEs in terms of size and sector, and at a small industrial estate (Ikitelli sanayi sitesi) with a sample of 102 MSEs. Merter neighbourhood includes both manufacturing workshops and wholesale and retail shops. In the Gultepe neighbourhood, on the other hand, migrants from rural areas live and perform small-sized economic activities including home-based work.

During the pre-test, an additional questionnaire was used for the workers of the enterprise. A selected number of workers were asked to respond to a separate questionnaire about the conditions of the workplace, work contract, social security and their salaries. In most cases, during the interviews the presence of the entrepreneur made the workers hesitant to answer questions, particularly those related to legal obligations of the employer. Thus in order to avoid the risk of using unreliable data, the MSE team decided, during the evaluation of the pre-test results, to exclude the workers questionnaire from consideration.

On the basis of the assessment of the field experience and results of the pre-test, questions judged inaccurate or otherwise unacceptable were modified or

excluded from the instruments. Some response categories for open questions through classification of responses in pre-test were devised.

On the basis of review of pre-test experience in the four countries involved in the research program, namely Egypt, Lebanon, Morocco and Turkey, it was agreed to adopt the “combined” approach, i.e., door-to-door canvassing of entrepreneurs and households followed by sampling in the office and interviewing later on.

### **Training of the fieldwork personnel**

Fieldwork personnel are one of the major determinants of the quality of fieldwork and the resulting data. Training for the pre-test is carried out with individuals experienced in fieldwork. The supervisors of the main survey were selected from among the people who had already gained experience in the pre-test. Fieldwork personnel were organised in teams comprising a number of interviewers, a field checker, and a supervisor. The training programme started with a number of candidates larger than the number of individuals needed for the actual fieldwork. This was intended to provide for the natural depletion and ensure selection of a more qualified and competent fieldwork personnel. Trainees were evaluated continuously throughout the programme on the basis of their performance. A comprehensive manual along with a glossary including comprehensible definitions of concepts used in the survey were distributed during the training programme. The training programme included interactive sessions on the objectives of the survey, definitions of the concepts used in the questionnaire, sessions on improving interviewing skills with the help of role playing and field practices.

40 interviewers and 11 field checkers and supervisors were selected and organized into 8 teams. Local interviewers were recruited from provinces in the sample to avoid the difficulties that may arise with local dialects and traditions. Training sessions were held in 8 different regions.

### **Main survey**

The main survey fieldwork started on the last week of June 2001 with training, and completed in the last week of September 2001.

The selected streets comprising the PSUs given by the TURKSTAT were marked on the maps of the neighbourhoods and visited by the field team before the interviews started.

A special team were formed to undertake independent random checking of the field teams on the field, and at the office by contacting the entrepreneurs by phone or by reinterviewing the MSEs in order to check the reliability of the interviews. Quality control of the data collected was carried out both in the field and in the office.

The interviews were carried out at the enterprise with the entrepreneur or one of the partners in the enterprise. The respondents were assured of complete anonymity throughout the survey.

All housing and establishment units were visited by the interviewers by knocking all the doors in the selected primary sampling units (PSUs) to survey the individual enterprises located in establishments, as well as economic activities performed by own-account basis (or for sub-contract) in homes. As such, the survey offers a good opportunity to cover home-based workers be they own-account or dependent workers. The listing of enterprises through door-to-door canvassing was followed by sub-sampling in the office. The rules of exclusion cover the following activities: agricultural and non-market activities, illegal activities, production for own-use, mobile vendors, domestic services, professional services (except ICT) and enterprises employing more than 50 persons engaged. Those excluded activities are not given the full questionnaire in the main survey and the follow-up.

#### **Fieldwork strategy**

First stage	Listing	Form I	Enterprise list
		Form II	Household roster-enterprise identification
Exclusion-sampling in the office			
Second stage	Interviewing	Form III	Enterprise-entrepreneur questionnaire
		Form IV	Household questionnaire

Out of the 52,485 enterprises and households screened during the canvassing,



Form I and IV were completed for 34,795 units (Table 3.1). The high rate of non-completion of the forms during the canvassing was mainly due to the high non-response rate of entrepreneurs and households. The eligible units in the PSUs were more than expected by the TURKSTAT. Out of 9,280 eligible enterprises 7,335 enterprises were selected randomly with respect to the proportions by subcategories of gender, size and location. A total of 5,000 interviews were carried out, of which 4,776 were in the urban areas.

**Table 1. Number of enterprises screened and interviewed at the canvassing stage and main survey**

**Canvassing, 2001**

	<b>Total</b>
<b>Screened</b>	<b>52,485</b>
<b>Roaster completed</b>	<b>34,795</b>
<b>Not completed</b>	<b>18,253</b>

**Main Survey, 2001**

<b>Eligible</b>	<b>9,280</b>
<b>Sample units</b>	<b>7,335</b>
<b>Interview completed</b>	<b>5,000</b>
<b>Not completed</b>	<b>2,335</b>

***Reasons for not completion***

<i>Door not opened</i>	<b>55</b>
<i>Refused to respond</i>	<b>1.012</b>
<i>Entrepreneur not present</i>	<b>814</b>
<i>Temporarily absent</i>	<b>454</b>

**Follow-up**

Follow-up was conducted in July 2002. The questionnaire used in the follow-up was a shorter version of the main survey questionnaire with identical questions as the main survey in order to capture the performance dynamics of the MSEs. Some new questions regarding the change in the activities of the enterprise or the entrepreneur were also included.

Owing to reasons listed in Table 3.2, the number of interviews in the main survey fell to 3,852 in the follow-up survey. Unfortunately, it was not possible to generate information on the enterprises that had been closed or disappeared in the course of a year. We could not determine the cause of the closing down; whether they moved to a different location and continued to survive or closed permanently. Liedhold and Mead (1999:24) consider this the indeterminacy of the cause as an inevitable outcome of follow-up surveys.

**Table 3.2. Reasons of decline in the follow-up survey**

	<b>Number of enterprises</b>
<b>Enterprises contacted</b>	<b>5,000</b>
<b>Interview completed</b>	<b>3,852</b>
<b>Not completed</b>	<b>1,148</b>

*Reasons for not completion*

<i>Enterprise closed, different one is acting at the same address</i>	245
<i>Enterprise closed, no enterprise at the same address</i>	301
<i>Entrepreneur rejected the interview</i>	387
<i>Entrepreneur was not available</i>	188
<i>Temporarily closed</i>	27

During the pre-test, the main survey and the follow-up, the principal investigator and the members of the core team visited the sites of the survey, held interviews with relevant business associations, professional organizations, public agencies and NGOs, such as KOSGEB (Small and Medium Industry Development Organization), KUGEM (Small Enterprise Development Centres), MEKSA (Vocational Training and Small Industries Support Foundation), TOBB (The Union of Chambers of Commerce, Industry), TESK (Confederation of Turkish Tradesperson and Artisans), and TOSYÖV (Turkish Foundation for Small and Medium Business). Clusters, small enterprise districts and organized industrial estates in the provinces were also visited and interviews were carried out with the entrepreneurs and officials.

#### **4. Data cleaning and processing**

Data collected by the help of questionnaires were coded and entered into excel sheets in the office. Senior personnel carried out the correction of inconsistencies frequently by phoning or revisiting the entrepreneurs in order to get the correct responses.

Several check questions were identified to ensure the consistency among the responses of the interviewees. The number of persons engaged, for example, was among the information that was addressed several times in the questionnaire. Responses by the interviewees were checked in the office and for the cases that could not be resolved in the office interviewees were contacted in order to clarify the inconsistencies.

Entries in the response category for “other” are listed and response categories are reformulated to ensure that the category “other” does not contain more than 10% of the cases.

The International Standard Industrial Classification (ISIC, 3rd Revision) were used for the classification of economic activities.

Classification of occupations was carried out according to the adapted version of the International Standard Classification of Occupations ISCO-88 for Turkey by the Turkish Statistical Institute.

#### **5. Weighting and extrapolation**

A survey analysis is usually conducted as if all sample observations were independently selected with equal probability of selection. This analysis is correct if simple random sampling (SRS) with replacement is used. However, in practice sample selection is more complex than SRS. Some sample observations may be weighted more heavily than others, and some are included in the sample by virtue of their membership in a certain group (e.g. household) rather than being selected independently. Thus, rather than simple statistical techniques, this complexity requires

special analytic considerations such as inserting sampling weights into the sample analysis.

Since our sample provides a complex sampling design, our weights are generated by the multiplication of three different sample weights each of which is calculated for a certain stage.

$$W = \prod_{i=1}^3 w_i \quad (1)$$

where,  $w_i$  for  $i = 1, 2$  are obtained by the TURKSTAT, whereas  $w_3$  is calculated according to our canvassing and sampling results. The details about  $w_i$ 's are as follows:

$w_1$  : In our sample, there are 19 provinces selected by the TURKSTAT.  $w_1$  represents the inverse of the selection probability of a province that the enterprise is located in.

$w_2$  : depends on the enumeration results of year 2000 of TURKSTAT. With the help of the data of a complete enumeration of all enterprises in the sample areas and urban-rural stratification, the blocks were selected. However, due to TURKSTAT's provision of limited data on MSEs such as having no data base for the number of enterprises in rural areas, our survey data collected in rural areas has been omitted and only the data of enterprises selected from 432 different blocks in urban areas are used in the remaining analyses.  $w_2$ <sup>4</sup> represents the reciprocal of the selection probability of a block that the enterprise operates in.

$w_3$  : The canvassing procedure was conducted by visiting 36,692 enterprises located in one of these 432 blocks in order to collect data about their general characteristics like the gender of the entrepreneur, the number of persons engaged and the type of the production activity. However, due to non-responses, interviews have been completed with only 24,968 of them. Due to these insolvable obstacles like refusing to respond, being temporarily absent, we have to assume that these 11,724 enterprises have the

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<sup>4</sup> Since no database for the distribution and the number of enterprises in rural areas exists in Turkey, we are unable to obtain weights of enterprises in rural areas. We preferred to omit the data of enterprises in the rural areas from our analyses, due to the possibility of this assumption producing misleading results. Thus, our remaining analyses are based on the main survey data set with 4,776 observations and the follow-up survey data set with 3,700 observations.

same distributions (in terms of gender of the entrepreneur, the number of persons engaged) with their counterparts that accepted the interview. With the help of this assumption we are able to expand our canvassing data set from 24,968 to 36,692 enterprises. We obtain  $w_3$  as illustrated in Table 3.3.

<b>Table 3.3. Calculation of the third weighting multiplier (<math>w_3</math>)</b>											
<b>Canvassing</b>				<b>Sample</b>				<b><math>w_3</math></b>			
<b>Size</b>				<b>Size</b>				<b>Size</b>			
<b>Gender</b>	1	2-9	10-49	<b>Gender</b>	1	2-9	10-49	<b>Gender</b>	1	2-9	10-49
Women	A	B	C	Women	a	b	c	Women	A / a	B / b	C / c
Men	D	E	F	Men	d	e	f	Men	D / d	E / e	F / f

<b>Gender</b>	<b>Size</b>		
	1	2-9	10-49
Women	4.602273	2.894495	1.473684
Men	7.782927	4.577913	4.400531

Due to the sampling rules regarding the gender and size criteria, the third weighting multiplier ( $w_3$ ) is obtained over the subgroups of sample divided according to the gender of the entrepreneur and the size of the enterprise. For instance, while one out of 10 enterprises with working proprietor (single-person engaged) among men entrepreneurs is visited for the interview, this ratio is one over five for their women counterparts. Furthermore, while each woman entrepreneur of an enterprise with 2-9 persons engaged is interviewed, only half of their men counterparts are visited. However no sampling rule is carried out for enterprises with 10-49 persons and the main survey is conducted with each of them due to their rare presence in the economy.

Table 3.4 shows the distribution of interviews carried out in urban areas both in the main survey and follow-up along with the distribution of weighted number of enterprises.

**Table 3.4. The distribution of the sample and the weighted number of enterprises by size of enterprise**

Number of persons engaged	Main survey (2001)				Follow-up survey (2002)			
	n	%	weighted n	%	n	%	weighted n	%
<b>1</b>	839	<b>17.57</b>	348,556	<b>24.34</b>	571	<b>15.43</b>	211,356	<b>20.84</b>
<b>2-9</b>	3,524	<b>73.79</b>	962,319	<b>67.21</b>	2,811	<b>75.97</b>	717,734	<b>70.75</b>
<b>10-49</b>	413	<b>8.65</b>	120,957	<b>8.45</b>	314	<b>8.49</b>	83,880	<b>8.27</b>
<b>50+</b>	-	-	-	-	4	<b>0.11</b>	1,427	<b>0.14</b>
<b>Total</b>	4,776	<b>100.00</b>	1,431,832	<b>100.00</b>	3,700	<b>100.00</b>	1,014,398	<b>100.00</b>