European Bank for Reconstruction and Development's MANAGEMENT, ORGANISATION AND INNOVATION SURVEY

UNDERSTANDING THE QUESTIONNAIRE

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INTRODUCTION

The Management, Organisation and Innovation (MOI) survey collects data from the manufacturing sectors in selected EBRD countries of operation, Germany and India. It is envisaged that the MOI survey will be expanded to other parts of the world and services sector as well. The Survey uses a standardized survey instruments and a uniform sampling methodology to minimize measurement error and to yield data that are comparable across the economies. The MOI survey partly overlaps with the EBRD and WB BEEPS, which allows the use of BEEPS variables in the analysis.

The use of properly designed survey instruments and a uniform sampling methodology enhances the credibility of the World Bank and the European Bank of Reconstruction and Development (EBRD) analysis and the recommendations that stem from this analysis. The MOI survey aims to achieve the following objectives:

- To measure and compare management practices across countries
- To assess the constraints to private sector growth and enterprise performance resulting from management practices;
- To build a panel of establishment-level data that will make it possible to track changes in the management practices and innovation over time, thus allowing, for example, impact assessments of reforms and policy changes; and
- To stimulate policy dialogue on the management practices and innovation and to help shape the agenda for reform.

The purpose of this document is to provide information and guidance to the implementing consultant, researchers, field managers, field supervisors and enumerators on how to understand the questions in the surveys. Two complementary notes, the <u>Implementation Note</u> and the <u>Sampling Note</u> complete the documentation for the MOI survey. The <u>Implementation Note</u> is geared to consultants and project managers. The <u>Sampling Note</u> is a technical document of more interest to researchers and final users of the data.

1. What is in a Management, Organisation and Innovation Survey questionnaire

To generate internationally comparable data, the questions in the *Management, Organisation and Innovation* survey questionnaire are asked in all countries and for all industries where the survey is implemented. Attachment A contains the *Management, Organisation and Innovation* survey questionnaire. Attachment B is the *Screener Questionnaire*. The *Screener Questionnaire* is used to screen those establishments that do not fit the sampling criteria and should not be surveyed.

The survey is implemented in two stages. In the first stage the Screener questionnaire is applied typically via phone and the eligibility of each chosen unit is determined. Some additional control information is collected as well as the contact information. In the second stage the MOI questionnaire is applied following the eligibility type determined in the first stage.

The MOI questionnaire is comprised of 8 sections organized by topic:

- Section A Control Information: information collected in the first stage of implementation
- Section T General Information About the Respondent: tenure in the company and current position.
- Section B General information About the Firm: ownership, start-up.
- Section R *Management*: management practices.

- Section S Organisation: organization of firms.
- Section O *Innovation*: innovation and research and development.
- Section E *Degree of Competition*: price and supply changes, competitors.
- Section L *Labor*: employment, training.

The primary sampling unit of the study is the establishment. An establishment is a physical location where business is carried out and where industrial operations take place or services are provided. A firm may be composed of one or more establishments. For example, a brewery may have several bottling plants and several establishments for distribution. For the purposes of this survey an establishment is defined as a separate production unit, regardless of whether or not it has its own financial statements separate from those of the firm, and whether it has it own management and control over payroll. So the bottling plant of a brewery would be counted as an establishment.

2. Target respondents

Target respondent is factory, production or operations manager – which means the person in charge at the factory. Some specific responsibilities are described below.

Factory managers are usually responsible for the efficient operation, maintenance and budgetary control of production. Key responsibilities can include:

- production and engineering operations,
- health & safety,
- planned and preventative maintenance,
- continuous improvement,
- budget management.

Production managers ensure that goods are produced efficiently, at the right quality, quantity and cost, and that they are produced on time. In some jobs, they are known as **operations managers**. They may be involved with:

- forward planning,
- drawing up production schedules,
- estimating how long a job will take,
- monitoring the production process,
- supervising and motivating employees.

For the purposes of this survey, factory manager is considered to be similar to production or operations manager and hence the questions which refer to factory manager are applicable to production or operations manager, and in general this should be the person that will be answering the question. Hence, questions on factory managers will in general refer to the respondent, except when the respondent is not factory, production or operations manager which should only happen in very exceptional and approved cases.

3. Survey implementation

a. Scheduling an interview

The most difficult part of the survey process is scheduling the interviews. Once the interviews are scheduled, running the interviews with the individual managers is interesting and provides an excellent insight into some of the issues facing manufacturers.

On the scheduling part:

- The first goal is to avoid getting automatically screened out by the switchboard thinking you are a salesperson. You are a commercial market researcher, but working on a project which is not commercial in nature. Avoid using the words "survey" or "research". A "piece of work" or "study" is better.
 - o If asked, tell the switchboard the projects university affiliation(s) and that you are working on a project to try and understand management practices and their impact on productivity. Slow down when you say "London School of Economics".
 - Otherwise, directly ask for the plant, production or operations manager and have them connect you.
- Always be polite. You will be in contact with the switchboard and managers quite often over a short period of days, so they will most likely recognize your voice. It is essential you do not upset anyone. Always politely exit if there is any possibility of a problem, and let us know if any issues do arise. No interview is worth causing any trouble over.
- Make sure you take a name (and e-mail, if possible) for when you try and call back. When you call back with the person's name you are almost always put through. You will also find it much easier to schedule an interview with a manager when you start by saying their name: "Hello XXXX, my name is Marge Simpson and I'm calling from..." is much more personal and effective than "Hello my name is Marge Simpson and I'm calling from...".
- If you cannot reach the manager, take the name of the secretary/PA with whom you spoke. Since you might be calling multiple times, it's helpful to be friendly with secretaries/switchboard/PA as they can decide whether or not to put your call through.
- Confidence is the key with switchboard; the more confident you sound the more likely you are to be put through to the person you really need to speak to. Sound positive, firm and avoid sounding like you are reading a script. Know your pitch inside out before scheduling.
- Be short and to the point. Switchboard operators often do not possess the time and patience to hear a detailed explanation of the project. Save the detailed description for when you are questioned, or for managers.

Once you are put through to the factory/production/operations manager:

- Target respondents are generally very busy individuals who do not sit in their office majority of their working time. If the person is away it is normally best not to leave a voicemail, as the probability of someone calling you back is very slim. Call as many times as necessary to reach them and speak to them directly experience from the pilots has shown that it can take more than 15 calls before the target person is actually reached, but once contact with the target person is made, they tend to be cooperative and agree to an interview.
- Introduce the project (e.g. for a UK call), "Hi, my name is Marge Simpson from YYY, collecting information for a piece of work on management practices for LSE, and I was wondering if I

- could schedule a face-to-face interview for about 30 minutes with you regarding your experiences."
- Assure the manager that this is completely anonymous/confidential, non-attributable and does not mention financials.
- Take down their e-mail address and direct extension (if they have one) and schedule an appointment. Schedule any time that is convenient with them even if you can not make that time another interviewer on the team will be able to.
- If possible, schedule the interview for the upcoming 5 days. This will ensure that they will remember the interview and your name when you call back. Often if you schedule for weeks in advance, they might forget about the appointment. However, if they're busy, schedule for whenever it is convenient for them within the time frame of the survey.
- Once this is agreed ensure you send them the letter preferably by e-mail and/or fax. Be sure to send the email/fax by the end of the same working day so that they remember you and note the appointment. This is very important for making sure they understand the interview, and is good for four reasons:
 - o Ethically, we must inform them about the interview process and background.
 - o Practically, the more they know in advance the fewer questions they will have during the interview and the quicker the interview will be.
 - Operationally, sending them details ideally by fax will increase the probability they put this in their diary and keep the appointment.
 - o Informationally, if they know this is for a good cause they are more likely to cooperate and provide information.
- 24 hours before the scheduled interview time, send the manager a short reminder email or give him a call confirming the date and time of the face-to-face interview.
- If they are unkeen initially explore any constraints with them. Try the following which are quick with some success:
 - o If they refuse on the basis of time: "Could we call back at a better time I am working on this for the next X weeks so maybe I could back next week?"
 - o If they refuse completely "Is there another manager in your firm we could speak to who might have more time?"
 - o If this still fails try the old reverse the problem trick. Say something like "We would really like to be able to include your firm in the survey. Could you think how we could do this?"

General Tip

• You can usually try at least two or three different people in the company. This means that senior guys (VPs of manufacturing, production, etc.) should be able to answer the questions. If the company is larger, then usually there will be a couple different production managers or people at that level. The only constraint is to speak to someone that's knowledgeable about the company's practices.

b. How to Minimize Enumerator Bias?

Tables are to be read one category at a time. For example, when asking the following question:

L.3	At the end of fiscal year [insert last complete fiscal year], how many permanent, full-time
	employees were:

	Number	Don't know (spontaneous)
Production employees		-9
Non-production employees [e.g., managers, administration, sales]		-9

The first question to be asked should be "At the end of the last complete fiscal year, how many permanent, full-time employees were production employees?" After reading the first question, solicit a response, and then continue by asking "At the end of the last complete fiscal year, how many permanent, full-time employees were non-production employees?" The point is not to confuse the respondent by asking him or her two questions at once.

Questions have to be read out exactly in the way they are written in the questionnaire, otherwise interviewer-specific bias is added to the responses.

There are particularly difficult questions to implement that we point out here. These relate to the number of levels in the hierarchy and require the interviewer to have a conversation with the respondent according to a script, rather than reading a pre-defined question. In particular, the conversation needs to follow the following pattern:

INTERVIEWER: IN ORDER TO DETERMINE THE NUMBER OF LEVELS, PLEASE DO THE FOLLOWING:

PLEASE SAY "NOW I WANT TO TALK ABOUT THE FIRM HIERARCHY."

THEN ITERATIVELY ASK:

- 1. "WHO DOES A PRODUCTION EMPLOYEE REPORT TO?"
- 2. "WHO WOULD [THEIR BOSS] REPORT TO?"

KEEP ASKING UNTIL YOU REACH THE Top Manager.

FOR EXAMPLE, THE CONVERSATION MIGHT GO AS FOLLOWS:

Interviewer: "Who does the production employee report to?"

Manager: "The factory manager."

Interviewer: "Who does the factory manager report to?"

Manager: "The operations manager."

Interviewer: "Who does the operations manager report to?"

Manager: "The VP of Operations."

Interviewer: "Who does the VP of Operations report to?"

Manager: "The Top Manager."

This is a difficult question to implement because the interviewer has to listen carefully to the respondent and take notes about the number of levels between the production employee and the Top Manager (question S.10) or between the production employee and the factory manager (question S.12), which follow after the conversation. It is essential that you confirm the number of levels with the respondent and that the questions are read exactly as they are written.

c. What are acceptable responses

Many questions ask for percentages or fractions.

In general, all numbers should be recorded in such a way as to **not have decimals**. So, ten percent is recoded as 10 (not .1 nor .10 and certainly not 1/10). In cases where the respondent answers 10.5 percent, for example, the enumerator should **round up** to 11 percent. In cases where the respondent answers 10.25 percent, the enumerator should round down to 10 percent. The point is to **eliminate** all decimals even if it sometimes means rounding down to zero.

If respondents can not answer numerical questions, the enumerator should start by giving them broad ranges and then funelling in. So for example if you ask "What percentage of your employees have a degree?" and they can not answer you could say "Would you say more or less than 50%". If they replied "Less than 50%", you could then reply "How about more or less than 25%", if they replied "More then 25", could reply by asking "Would you say about 30% have a degree or maybe 40%, or a different number?". Continuing in this way will typically provide an approximate answer. If they give ranges even after trying to obtain an answer, for example they said "Between 20% and 30%" take the midpoint as the response (so 25% in this example).

If the answer is supposed to be on a scale from 1 to 10, as for example in questions Q.10a, Q.10b and Q.10c, and the respondents answer for example "Between 7 and 8", you need to ask them "Is that closer to 7 or closer to 8?" and obtain a response on the exact number from them.

With regard to the rounding rule, in terms of measurement of time, where the answer given by the respondent is between 0 and 1, the rule is to record 1 (hour/minute/day, etc.). These cases are clearly indicated in the questionnaires, see example B7 below.

ı	B. 7	How many years of ex	perience working i	in this sector does the Tor	o Manager have?
		, , , , , , , , , , , , , , , , , , ,			

Answer: "Two months"

	Years	
Top Manager's experience in sector		
Less than 1 year experience in sector (spontaneous)	(1)	
Don't know (spontaneous)	-9	
		b 7

For purposes of standardization, the conventions for time conversions are the following:

1 day= calendar day; 1 week=7 days; 1 month=4 weeks; 1 year=52 weeks; and 1 year=365 days. 1 month=30 days If the question asks for a response in days and the respondent responds in weeks, the enumerator must make the conversion and record the response in days, not in weeks. If in doubt about the conversion, record the answer in the margin for conversion after interview.

If the enumerator hears one and a half days, they should round up and record a two (2).

The only case when the respondent is asked to do the conversion themselves is when they respond in dollars, euros, or any other currency which is not the local currency. All questions should have a response in the local currency units (LCUs). The enumerator does not do the conversion himself. This discussion about currencies should also make it clear that the enumerator should always be aware of the currency units the respondent is referring to in his or her responses.

d. How to minimize enumerator bias

The questionnaire is to be read as it is written. As with any survey enumerators should refrain from introducing any interpretation bias by trying to explain or direct the answer. However, in some cases answers are not provided in the format desired or they do not address the issue in question. To handle these situations, in general, questions can be classified in 2 categories: one, opinion-based or sensitive questions and, second, hard-data questions.

Opinion-based or sensitive questions are those where the actual opinion of the respondent is requested or where a sensitive issue is being addressed such as assessing the quality of the management. In these cases enumerators should just read the questions. When asked for the meaning of any term or when faced with a respondent who is confused or does not understand the question enumerators should read again the full question as it is written. They should not attempt to change the wording or explain using synonyms or commonly used terms. If the respondent cannot understand the question, write -9 (don't know). If the respondent refuses to respond, write -8 (refuse to respond). If the respondent asks the enumerator to explain they should provide additional details to help clarify the questions, trying to avoid prejudicing any response.

Hard-data questions are those directed to get objective facts including quantitative data. In some cases the questions are quite specific and they require identifying the appropriate answer from the sometimes "narrative stories" provided by the respondent. In these cases enumerators are allowed to probe the respondent using standard techniques: re-ask the question emphasizing the key concept, for example "In a TYPICAL year how many"; ask a question that completes an incomplete answer already provided, for example, if the respondent provides an answer for one given month but the question refers to the whole year, enumerators can ask what happened in the other 11 months; when the respondent provides the answer in ranges such as, between a and b, enumerators can ask "Could you be more specific?" or "Is it more a or more b?". Notice that in the latter case enumerators that assume the answer is the average of a and b introduce a bias through their own interpretation. In this manual hard-data questions are differentiated by not having a shaded background.

e. Explanation of terms

The instructions below provide explanations of the terms used, definitions applied and the intent of the questions that comprise the MOI survey instruments.

Section	Question Number	Instructions
Control Information	A.0a	Questionnaire module: Self-explanatory.
Control	A.1	Ct
	Λ.1	Country code: Self-explanatory.
Information	A 1	
Control	A.1a	Language of the interview. Self-explanatory.
Information	A 12	1 0 10 1 4
Control	A.12	Interviewer number: Self-explanatory.
Information	A 12	
Control Information	A.13	Supervisor number: Self-explanatory.
Control	A.22a	Age of the interviewer: Self-explanatory.
Information		
Control	A.22b	Gender of the interviewer: Self-explanatory.
Information		
Control	A.22c	Highest level of education attained by the interviewer. This is the highest level of
Information		education completed. For example, if the interviewer attended
		college/university but has not completed his/her degree, then highest level of
		education attained by the interviewer is secondary school qualification.
Control	A.0	Position of the main respondent to the survey: Self-explanatory.
Information		
Control	A.2	Sampling region defines the region stratum of the establishment
Information		It is defined by the regional classification of the establishment in the sampling frame.
Control	A.3x	Physical location of the establishment as determined when the interview
Information		takes place.
Control	A.3	Location control variable: it is defined by the size of the actual location of the
Information		establishment (number of inhabitants).
Control	A.3a	Codification of a3x into regions of homogeneous regulation and or business
Information		environment conditions, for example into regional clusters.
Control	A.4a	Classification of the establishment's activity as defined in the sample frame.
Information		
Control	A.4b	Classification of the establishment's activity as defined by the screener
Information		questionnaire.
Control	A.5	Self-explanatory.
Information		
Control	A.6a	Number of employees as determined with the screener questionnaire
Information		
Control	A.6b	Number of employees taken from the sample frame
Information		
Control	A.14	Self-explanatory. Please use 2 digits for day and month, 4 digits for year.
Information		Hour is on a 0 to 23 scale and minutes on a 0 to 59 scale.
Control	A.7	Establishment part of a larger firm. This question is the first one used to
Information		determine which version of the questionnaire is to be used in the interview:

Section	Question Number	Instructions
		questionnaire for multi-establishment firms (questionnaire A) or questionnaire for single-establishment firms (questionnaire B). An establishment is a single physical location where business is conducted or where services or industrial operations are performed. The scheme below provides a schematic example. It is extremely important that the interviewers understand the concepts of establishment and (national) firm, as a number of questions refer to them. Exceptions: If the establishment is part of a larger firm, but is at the same time the only establishment in the country where the interview is held, then questionnaire B should be used for the interview.
		INTERNATIONAL HEADQUARTERS (Located in London) 200 employees NATIONAL HEADQUARTERS 2 (Located in New York) 70 employees NATIONAL HEADQUARTERS 1 (Located in Berlin) 50 employees ESTABLISHMENT A (Factory in Hamburg) Festablishment A (Factory in Hamburg)
		So employees ESTABLISHMENT B (Factory in Munich) 100 employees
General Information About the Firm	A.10	Identifies the number of establishments in the firm abroad. International headquarters, if applicable, should also be included in the number of establishments if it is a separate entity.
General Information About the Firm	A.11	Identifies the number of establishments (including the national headquarters) the firm has in the country in which the interview is held. National headquarters should be included in the number of establishments if it is a separate entity.
General Information About the Firm	A.9	Identifies establishments for which financial statements are kept separate from financial activities at the national headquarters.
General	B.1	A firm's legal status is information well known for the target respondent: Top

Section	Question Number	Instructions
Information About the Firm		Manager, General Manager or owner of the firm. ENUMERATORS DO NO NEED TO KNOW THE DEFINITION OF EACH TYPE OF LEGAL STATUS.
		A firm's legal status is first determined by whether participation on ownership is by shares (first 2 options) or not (options 3 and 4). The fifth option is a combination of the previous ones.
		If a firm's shares are publicly traded, it is a <i>shareholding company with shares traded in the stock market</i> . If the shares are not traded or they are traded only privately it is a <i>shareholding company with shares traded privately</i> . A <i>shareholding company with shares traded privately</i> is a firm that is owned by partners or shareholders for whom their claims over the firm are not publicly traded. They may or may not be traded privately. In both of these categories firms have limited liability.
		A <u>sole proprietorship</u> is a business owned and operated by one individual natural person. A natural person is a real human being, as opposed to an artificial legal entity such as a corporation or organization that the law treats for some purposes as if it were a person distinct from its members or owner(s).
		A firm's legal status defines the extent of the liability which defines the level of responsibility of the owner over the firm's obligations. Sole proprietorships and simple partnerships companies are the only entities with unlimited liability. Every partner/owner is fully responsible for all obligations of the firm. Under limited liability each owner is only responsible for the proportion of his/her shares.
		A <u>partnership/collective company</u> allows two or more people to share profits and liabilities, with or without privately held shares. In a partnership, the parties could be individuals, corporations, trusts, other partnerships, or a combination of all of the above. The essential characteristic of this partnership is the unlimited liability of every partner.
		<u>Limited partnership/Comandite company</u> is a legal form that includes one or several general partners and one or more limited partners who invest capital into the partnership, but do not take part in the daily operation or management of the business. The limited partners limit their amount of liability to the amount of capital invested in the partnership. The general partners personally shoulder all debts and obligations of the partnership. Business operations are governed, unless otherwise specified in a written agreement, by majority vote of voting partners. Limited liability partnerships are separate legal entities that provide liability protection for all general partners as well as management rights in the business.
		Cooperatives and state owned firms should be designated as Other. When

Section	Question Number	Instructions
		other is chosen, the actual form of legal status must be specified in writing by the enumerator on the survey instrument.
General Information About the Firm	B.9a	Was the (national) firm ever fully or partially state-owned. By partially state owned we mean more than 25% of shares and less than 100% of shares are or were owned by the Government.
General Information About the Firm	B.9b	Year in which the (national) firm was privatised. Self-explanatory.
General Information About the Firm	B.2a	In the case of multinational firms, national headquarters Top Manager is the Top Manager based in the country in which the survey is done, and national headquarters is the headquarters of the firm in the country in which the survey is done. Founder is the person who started the firm – the firm's first Top Manager.
Labor	L.15	Ask the respondent to provide a rough estimate if they do not know the exact age of the national headquarters Top Manager. See explanation in B.2a above how the national headquarters Top Manager is to be understood.
General Information About the Firm	B.3a	Largest owner of the firm. Largest owner is defined as someone with the highest number of voting rights, but no less than 25 per cent of voting rights. If no single owner owns 25 per cent or more of the firm, then the first option should be chosen – No single large owner (multiple shareholders).
General Information About the Firm	B.3b1	Country where the largest owner - foreign firm is registered, where the largest owner - foreign individual is from or the country of the largest owner - foreign state.
General Information About the Firm	B.3c1	(National headquarters) Top Manager member of the family which owns the firm. National headquarters Top Manager is defined in B.2a. Family is to be understood in a broad sense, and it includes brothers, sisters, cousins, aunts, uncles, in-laws, etc.
General Information About the Firm	B.3c2	National headquarters Top Manager is defined in B.2a. Family is defined as individuals related by birth or marriage and is to be understood in a broad sense: it includes brothers, sisters, cousins, aunts, uncles, in-laws, etc. To determine which generation of the family the current Top Manager is, refer to show card 5 which shows a schematic family tree of the Ford family.
General Information About the Firm	B.3c3	Top Manager control passed down to the eldest son of the previous Top Manager. Self-explanatory.
General Information About the Firm	B.3c4	Number of members of the family that own the firm who are part of its management. Family is defined as individuals related by birth or marriage and is to be understood in a broad sense: it includes brothers, sisters, cousins, aunts, uncles, in-laws, etc.
General Information	B.3d	<u>Change of ownership in the last three years.</u> Change in largest owner as defined in question B.3a.

Section	Question Number	Instructions
About the Firm		
General Information About the Firm	B.3e	<u>Largest owner of the firm three years ago.</u> Largest owner as defined in B.3a.
Labor	L.16	Number of permanent, full-time employees in the firm last complete fiscal year. Permanent, full-time employees are defined as all paid employees that are contracted for a term of one or more fiscal years and/or have a guaranteed renewal of their employment contract and that work up to 8 or more hours per day. A national definition of a permanent, full-time employee is to be used if it differs from the above definition. Fixed-term employees are included in this category if their contract fits the above definition. All employees and managers (including respondent) should be counted. Note that the firm includes the establishment participating in the survey, all other establishments in the country where the survey is conducted and the national headquarters (if it is a separate entity).
Labor	L.17	Number of permanent, full-time employees in the firm three complete fiscal years ago. Permanent, full-time employees are defined as in L.16.
Organisation	S.3	Largest purchase of fixed assets the establishment can make without prior authorization from the corporate headquarters. Purchase of fixed assets refers to buying land, buildings, machinery, vehicles and equipment. Ask the respondent to provide the answer in local currency units. Please cross-check any zero response by asking: "Would the factory manager not be able to buy a small piece of equipment, such as a £250 (or a local currency equivalent at the time of the survey) computer printer?"
Organisation	S.4a	Hiring decisions for the establishment. The question aims to establish the degree of autonomy the establishment has in hiring a permanent full-time production employee.
Organisation	S.4b	Authority for granting a significant pay increase to a permanent, full-time employee. The question aims to establish the degree of autonomy the establishment has in granting a significant pay increase (which 10 per cent above the average growth rate in the country is assumed to be) to give a permanent, full-time production employee.
Organisation	S.5	<u>Place of decisions of new product introductions</u> . The question aims to establish the degree of autonomy the establishment has in introducing new products.
Organisation	S.6a	<u>Pricing decisions for the establishment.</u> The question aims to establish the degree of autonomy the establishment has in making pricing decisions – such as giving discounts and setting prices.
Organisation	S.6b	Advertising decisions regarding products made at the establishment. The question aims to establish the degree of autonomy the establishment has in making advertising decisions for products or brand – for example placing

Section	Question Number	Instructions
		adverts in local newspapers, sending out a mail-shot, etc. Advertising for job openings does not count.
Organisation	S.2a	Number of people who report directly to the (national headquarters) Top Manager. National headquarters Top Manager is defined in B.2a. Direct management includes regular interaction, pay setting and the determination of promotions.
Organisation	S.2b	Number of people the (national headquarters) Top Manager directly meets and supervises on a daily or weekly basis. National headquarters Top Manager is defined in B.2a. Self-explanatory.
Organisation	S.10	Number of levels between a typical production employee and the (national headquarters) Top Manager. Typical production employee is defined as the most common type of production employee in the establishment. Example: If the typical production employee reports to the factory manager, who in turn reports to the operations manager, the operations manager reports to the Vice President of Operations and Vice President of Operations in turn reports to the (national headquarters) Top Manager, then there are 3 levels between the typical production employee and the (national headquarters) Top Manager: factory manager, operations manager and Vice President of Operations.
Organisation	S.11	Change in the number of levels between the typical production employee and the (national headquarters) Top Manager in the last three years. Self-explanatory.
Organisation	S.12	Number of levels between the typical production employee and the factory manager. Example: If the typical production employee reports to the factory manager, who in turn reports to the operations manager, the operations manager reports to the Vice President of Operations and Vice President of Operations in turn reports to the Top Manager, then there are 0 levels between the typical production employee and the factory manager.
Sales and Supplies	D.1a1	Establishment's main product The purpose of this question is to determine what the company produces. The description should be written down exactly as provided by the respondent. The main product is defined in terms of sales in monetary value not volume.
Sales and Supplies	D.1a2	Categorize the products according to standard industry classification codes. The enumerator should show the respondent the list of codes that correspond to the products identified to ensure agreement with the categorization. The respondent should be directed to look at the card only after he has provided the answer to D.1a1. It may be that all major products fall into one category or that the establishment has only one main product. If the respondent does not know the code, the enumerator should write the sector and look for the corresponding code in the list of codes before submitting the completed questionnaire.
		For the codes use United Nations ISIC Rev.3.1. http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=17 To download the English language file:

Section	Question Number	Instructions
		http://unstats.un.org/unsd/cr/registry/regdntransfer.asp?f=17.
General Information About the	B.5	The objective of this question is to obtain the year in which operations started regardless of who was the owner at the time.
Establishment		The year when the establishment began operation refers to the year in which the establishment actually started producing (or providing services), not to the year in which it was registered for the first time.
		If the establishment was privatized, then the date provided should refer to when the original government-owned establishment began operations.
		If the establishment changed its production significantly to change <u>sector</u> classification, then the year when that took place should be provided. For example, if the company first began operations in 1950 producing T-shirts (industry code 181), but started producing luxury handbags in 1990 (industry code 191), then the year recorded as the answer should be 1990.
General Information About the Establishment	B.6	The number of permanent, full-time employees for the time that the enterprise began operations should be provided. All employees and managers (including respondent) should be included.
General Information About the Establishment	B.2f	Number of permanent, full-time top and middle managers in the establishment. By managers we mean people who have responsibility for pay and promotion for at least one other employee. This excludes shift supervisors.
General Information About the Establishment	B.2f1	Number of female permanent, full-time top and middle managers in the establishment. Managers as defined in B.2f. Self-explanatory.
General Information About the Establishment	B.2b	Percentage or number of the establishment's permanent, full-time top and middle managers that were born abroad. Include only permanent, full-time top and middle managers that were born abroad. Managers as defined in B.2f.
General Information About the Establishment	B.2c	Percentage or number of the establishment's permanent, full-time top and middle managers that have a domestic MBA. Include permanent, full-time top and middle managers managers that have a domestic MBA – Masters of Business Administration obtained from a university or other institute in the country where the establishment surveyed is located, regardless of the nationality of the managers. Managers as defined in B.2f.
General Information About the Establishment	B.2d	Percentage or number of the establishment's permanent, full-time top and middle managers that have a foreign MBA. Include permanent, full-time top and middle managers that have a foreign MBA – Masters of Business Administration obtained from a university or other institute outside of the country where the establishment surveyed is located, regardless of the nationality of the

Section	Question Number	Instructions
		managers. Managers as defined in B.2f.
General Information About the Establishment	B.2e	Percentage or number of the establishment's permanent, full-time top and middle managers that have worked at a multi-national firm prior to joining this establishment. Include permanent, full-time top and middle managers that have worked at a multi-national firm PRIOR to joining this establishment, either abroad or in the country where the establishment surveyed is located. See the scheme of a multi-national firm in A.7. Managers as defined in B.2f.
General Information About the Establishment	B.7	B.7 refers to years of <i>Top Manager's</i> managerial experience in the type of sector in which the establishment presently operates.
Management	R.1	<u>Dealing with a process problem</u> . The question refers to the timing and frequency of process improvements in response to process problems, such as machinery break-down, human errors or failures in communication. Answer that best describes the management practices in the establishment should be chosen.
Management	R.2a	Number of production performance indicators monitored in the establishment. Production performance indicators include, for example, volume of production (number of units produced), number of errors per 10000 units produced, greenhouse gas emissions in thousand tones of CO2/year, sulphor dioxide in thousand tones per year, nitrogen oxides in thousand tones per year, total energy use and energy intensity, total water used, hazardous/dangerous waste generated, non-hazardous/non-dangerous waste generated, number of production related incidents, etc.
Management	R.2b	Frequency of collecting production performance indicators. Production performance indicators are defined in R.2a. Self-explanatory.
Management	R.2c	Frequency of showing production performance indicators to factory managers. Production performance indicators are defined in R.2a. Self-explanatory.
Management	R.2d	Frequency of showing production performance indicators to workers. Production performance indicators are defined in R.2a. Self-explanatory.
Management	R.2e	Location of production display boards with production performance indicators in the factory building. Self-explanatory.
Management	R.3	<u>Use of production performance indicators.</u> The question refers to the frequency with which production performance indicators are reviewed by top or middle managers to ensure improvement, if necessary. Answer that best describes the management practices in the establishment should be chosen.
Management	R.6	<u>Use of production performance indicators to compare different teams of employees</u> . The question aims to find out whether teams (in the production line, different shifts, etc.) or divisions within production are compared on the basis of any of their production performance indicators.
Management	R.4	Timescale of the establishment's production targets for its main product. The purpose of the question is to find out whether short-term or long-term goals are the focus of the company and the relationship between the short-term and long-

Section	Question Number	Instructions					
		term production targets. Production targets can be defined in terms of units of products produced, percentage of products with errors etc. Answer that best describes the management practices in the establishment should be chosen. Main product as defined in D.1a1.					
Management	R.7	Rewarding production target achievement. The purpose of this question is to find out who, if anyone, is rewarded when production targets are achieved.					
Management	R.5a	Ever hired an external consultant to help improve an area of management. The purpose of this question is to find out whether the establishment has ever hired an external consultant, either domestic or foreign, to help improve an area of management. The areas covered can include brand management, product launch and project management, lean manufacturing and production, value-chain cost reduction, technology strategies, new business opportunities, supply-chain management, growth strategies, etc.					
Management	R.5b	Number of external consultants hired on average each time in the last complete fiscal year. This question refers to the actual number of external consultants (individuals) that were part of the team that helped improve an area of the establishment's management, not the number of external consulting firms hired to help improve an area of the establishment's management.					
Management	R.5c	Number of man-days each external consultant worked on average. Man-day is a unit equal to the work one person can produce in one day (which is to be considered as 8 hours for this purpose – working day). For example, if each external consultant worked on average 4 hours each working day for 8 weeks (40 working days), this should be converted into 20 man-days.					
Management	R.5d	<u>External consultants hired from international consulting firms.</u> Examples of international consulting firms include McKinsey & Company, Accenture, Pricewaterhouse Cooper, Deloitte, KPMG, Ernst & Young, etc.					
Management	R.5e	Main reason why the establishment did not hire an external consultant. Self-explanatory.					
Management	O.14	<u>Promotions policy</u> . The purpose of this question is to find out what promotions are based on – individual's effort and ability, other factors, or a mix of the two. Answer that best describes the promotions policy in the establishment should be chosen. If no policy for promotion choose does not apply.					
Management	O.15	Policy for dealing with employees who do not meet expectations in their position. The purpose of this question is to find out what happens to employees who do not meet expectations in their position. Answer that best describes the management practices in the establishment should be chosen. If no policy for dealing with employees who do not meet expectations choose does not apply.					
Organisation	S.1a	Number of people reporting directly to the factory manager. Direct management includes regular interaction, pay setting and the determination of promotions.					
Organisation	S.1b	S.1b Number of people the factory manager directly meets and supervises on a daily or weekly basis. Pace of work means the speed of production, how production is organised.					

Section	Question Number	Instructions					
Organisation	S.7	Setter of the pace of work for workers in the establishment. Self-explanatory.					
Organisation	S.8	Allocation of tasks to workers in the establishment. Self-explanatory.					
Organisation	S.9	Asking for workers' opinion. The purpose of this question is to establish whether the establishment's management asks any workers for their opinion with regard to the decisions about the working hours, days of factory holidays (number, length, timing), employing new workers, making investment decisions (investment is to be understood as purchasing fixed assets), introducing new products and setting prices.					
Innovation	O.1	New products or services refer to the introduction of new outputs or services that required changes in the process of production or how the service is provided. Minor improvements on a product such as changes in buttons used when manufacturing shirts are not included.					
Innovation	O.2	Share of products or services introduced in the last three years in establishment's annual sales. Self-explanatory.					
Innovation	O.3	Research and development is defined as creative work undertaken on a systematic basis in order to increase the stock of knowledge. Research and development is distinguished from market research and product testing by the presence of an appreciable element of novelty. So, for example, laboratory research for a new chemical compound of paint would be R&D while market research surveys or internet surfing would not be research and development.					
Innovation	O.4	<u>Spending on research development in the last completed fiscal year.</u> Research and development as defined in O.3. Includes all spending related to research and development (labor costs, materials, etc.).					
Innovation	O.6	Percentage of establishment's employees regularly using personal computers (PCs) in their jobs. Employees include all personnel, including administration and management. Only personal computers are included; automated machinery, Xerox machines, etc. should be excluded.					
Innovation	C.23	<u>High-speed, Internet connection</u> is defined as Internet connection that is faster than using a telephone line with a modem.					
Innovation	O.10a	Outsourcing refers to activities being conducted on the establishment's behalf by other companies. In this question, the location of these other companies does not matter, but establishments that are part of the same national/international firm as the establishment being interviewed need to be excluded.					
Innovation	O.10b	Outsourcing as defined in O.10a. Self-explanatory.					
Innovation	O.11a	Outsourcing as defined in O.10a. In this question, the location of the companies to which production is outsourced matters – the answer should be affirmative only if these companies are located outside of the country in which the establishment surveyed is located. The establishments that are part of the same international firm as the establishment being interviewed need to be excluded.					
Innovation	O.11b	Outsourcing as defined in O.10a. Measured in terms of the value of					

Section	Question Number	Instructions production.					
Innovation	O.11c	Self-explanatory. Ask for the three most important countries in terms of the value of production. to which production is outsourced, if production is outsourced to more than three countries. If production is outsourced to fewer than three countries, write "-7" (does not apply) after obtaining the name of the first (and second) country.					
Innovation	O.16a	 Patents registered abroad. A patent protects new inventions and covers how things work, what they do, how they do it, what they are made of and how they are made. It gives the owner the right to prevent others from making, using, importing or selling the invention without permission. The invention must: be new, have an inventive step that is not obvious to someone with knowledge and experience in the subject be capable of being made or used in some kind of industry not be: a scientific or mathematical discovery, theory or method, a literary, dramatic, musical or artistic work, a way of performing a ment act, playing a game or doing business, the presentation of information, some computer programs, an animal or plant variety, a method of medical treatment or diagnosis or against public policy or morality. Patents registered abroad refer to patents not registered in the country whethe establishment surveyed is located. The same patent can also be register in the country where the establishment is located in addition to being 					
Innovation	O.16b	registered abroad. Year in which the first patent was registered abroad. Self-explanatory.					
Innovation	O.17a	Patents registered nationally refer to patents registered in the country where the establishment surveyed is located. The same patent can also be registered abroad in addition to being registered nationally. Patents are defined in O.16a.					
Innovation	O.17b	Year in which the first patent was registered nationally. Self-explanatory.					
Degree of Competition	E.1	The purpose of this question is to get the establishment to define what it considers to be its main market.					
		The main product is defined by the output that generates the highest proportion of sales. The establishment's main market is defined by the market that generates the most sales for the main product as defined above. It could be the case that an establishment's main product is sold in smaller proportions in a greater number of markets and that the main product is never the greatest total annual share of revenue in any one market. For					
		example, 51 percent of revenue comes from selling nails, but that is distributed equally in the local, national, and international markets, 33 percent in each. Bolts make up 49 percent of total annual revenues. However, half of the revenue for bolts comes from selling in the international market and half in the local market.					

Section	Question Instructions Number					
		It is clear that bolts sell more in its respective market with respect to nails, but does not generate as much revenue as nails do for the establishment. In such a case, nails should be used as the main product. Whenever local, national and international markets have equal shares choose the national market and do not follow the skip pattern.				
Degree of Competition	E.15	Multi-national firm is a large business company that has production facilities or other fixed assets in at least one foreign country and makes its major management decisions in a global context.				
Degree of Competition	E.16	Self-explanatory.				
Degree of Competition	E.2	Number of competitors in establishment's main market. Main market as defined in E.1. Self-explanatory.				
Degree of Competition	E.17	Self-explanatory.				
Labor	L.1	Number of permanent, full-time employees in the establishment last complete fiscal year are defined as all paid employees that are contracted for a term of one or more fiscal years and/or have a guaranteed renewal of their employment contract and that work up to 8 or more hours per day. A national definition of a permanent, full-time employee is to be used if it differs from the above definition. Fixed-term employees are included in this category if their contract fits the above definition. All employees and managers (including respondent) should be counted. Note that the establishment refers to the establishment participating in the survey				
Labor	L.3	only, not other establishments (if they exist) in the firm. Number of permanent, full-time production and non-production employees. Permanent, full-time production employees are employees (up through the line supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations. Employees above the working-supervisor level are excluded from this item. Permanent, full-time non-production employees are those employees not engaged in				
		fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations. Managers and other supervisory personnel with responsibilities for the performance of shop floor supervisors and below are included. Do not include shop floor supervisors. Employees in sales (including driver-salespersons), sales delivery (highway truck drivers and their helpers), janitorial and guard services, advertising,				

Section	Question Number	Instructions				
		credit, collection, installation and servicing of own products, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.) are included among non-production employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations utilized as a separate work force. Professional, and technical employees are included in this category.				
Labor	L.5	Number of permanent, full-time skilled production employees that are female. Self-explanatory				
		Number of permanent, full-time unskilled production employees that are female. Self-explanatory				
Labor	L.2	Number of permanent, full-time employees in the establishment three complete fiscal years ago. See definition of permanent, full-time employees in L.1.				
Labor	L.6	Full-time temporary or seasonal employees are defined as all paid short-term (i.e. for less than a fiscal year) employees with no guarantee of renewal of employment contract) and work 40 hours or more per week for the term of their contract. A national definition of a temporary or seasonal full-time employee is to be used if it differs from the above definition.				
		Temporary employees should be counted on a person rather than job basis. For example, suppose that a food-processing establishment has one person on the books for one fiscal year. This person first works full-time for two months peeling apples to be used in the production of apple juice. After the end of the two-month period, this person leaves, but then comes back three months later and this time works full-time as a cook making strawberry jam for two months. The person again leaves for one-month period and then comes back to work full-time for four months in packaging. These three different jobs could have been done by three different people, but they were all done by the same person and the number of temporary employees in this case is one temporary employee.				
Labor	L.8	Average length of employment of all full-time temporary or seasonal employees refers to the number of months that the employee was contracted for work that occupied employees for 40 hours or more per week. If average full-time temporary or seasonal employment was for less than one month, enumerator should write 1.				
Labor	L.18	Percentage of permanent, full-time employees that leaves the establishment in a year, excluding any exceptional events. Permanent, full-time employees are defined as in L.16. The question is aimed at finding the percentage of workers who leave the establishment in a year, excluding any exceptional events such as natural events affecting the firm, exceptional layoffs (above the usual layoffs), etc. They can leave the establishment for any reason: either voluntarily or involuntarily.				
Labor	Q.69	Had a university degree means completed a university degree; only attending a university without obtaining a degree should be excluded.				

Section	Question Number	Instructions						
Labor	L.12a	Average weekly hours of work of the establishment's employees. Se explanatory.						
Labor	L.12b	Average number of days of paid annual leave the establishment's employees took on average. The question refers to the actual number of days of paid annual leave taken, not to the number of days of paid annual leave they are entitled to.						
Labor	L.14	Ask the respondent to provide a rough estimate if they do not know the exact average age. Self-explanatory.						
Management	R.10b	People management quality. Self-explanatory.						
Management	R.10c	Operations management quality. Self-explanatory.						
Management	R.10a	Overall management quality. Self-explanatory.						
Control Information	A.15b.1	For example, the respondent is a plant manager who started working with the company as a production employee 5 years ago and was promoted to his current position of the plant managed 1 year ago. His tenure in his current position as the plant manager in this case is 1 year and his tenure with the company is 5 years. Interviewer should guess the respondent's age if the information is not given freely.						
Control Information	A.15b.2	As in A.15b.1.						
Control Information	A.15a1	Self-explanatory.						
Control Information	A.15a2	Self-explanatory.						
Control Information	A.15b	Self-explanatory.						
Control Information	A.16	Self-explanatory.						
Control Information	A.17	Self-explanatory.						
Control Information	A.20	Self-explanatory.						
Control Information	A.21	Self-explanatory.						
Control Information	A.18	Self-explanatory.						
Control Information	A.19	Self-explanatory.						

List of questions used in the MOI questionnaire (excluding control information)

Question	Asked in MOI questionnaire A? (Yes/No)	No. of variables	Asked in MOI questionnaire B? (Yes/No)	No. of variables	Asked in BEEPS Manufacturing Module? (Yes/No)	No. of variables
A.7	Yes	1	Yes	1	Yes (screener)	1
A.10	Yes	1	Yes	1	No	0
A.11	Yes	1	Yes	1	No	0
A.9	Yes	1	No	0	Yes (screener)	1
B.1	Yes	2	Yes	2	Yes	2
B.9a	Yes	1	Yes	1	No	0
B.9b	Yes	1	Yes	1	No	0
B.2a	Yes	1	Yes	1	No	0
L.15	Yes	1	Yes	1	No	0
B.3a	Yes	2	Yes	2	No	0
B.3b1	Yes	1	Yes	1	No	0 _
B.3c1	Yes	1	Yes	1	No	0
B.3c2	Yes	1	Yes	1	No	0
B.3c3	Yes	1	Yes	1	No	0
B.3c4	Yes	1	Yes	1	No	0
B.3d	Yes	1	Yes	1	No	0
B.3e	Yes	2	Yes	2	No	0
L.16	Yes	1	No	0	No	0
L.17	Yes	1	No	0	No	0
S.3	Yes	1	No	0	No	0
S.4a	Yes	1	No	0	No	0
S.4b	Yes	1	No	0	No	0
S.5	Yes	1	No	0	No	0
S.6a	Yes	1	No	0	No	0
S.6b	Yes	1	No	0	No	0
S.2a	Yes	1	Yes	1	No	0
S.2b	Yes	1	Yes	1	No	0
S.10	Yes	1	Yes	1	No	0
S.11	Yes	1	Yes	1	No	0
S.12	Yes	1	Yes	1	No	0
D.1a1	Yes	1	Yes	1	Yes	1
D.1a2	Yes	1	Yes	1	Yes	1
B.5	Yes	1	Yes	1	Yes	1
B.6	Yes	1	Yes	1	Yes	1
B.2f	Yes	1	Yes	1	No	0
B.2f1	Yes	1	Yes	1	No	0

	Asked in MOI		Asked in MOI		Asked in BEEPS	
	questionnaire	No. of	questionnaire	No. of	Manufacturing	No. of
Question	A? (Yes/No)	variables	B? (Yes/No)	variables	Module? (Yes/No)	variables
B.2b	Yes	1	Yes	1	No	0
B.2c	Yes	1	Yes	1	No	0
B.2d	Yes	1	Yes	1	No	0
B.2e	Yes	1	Yes	1	No	0
B.7	Yes	1	Yes	1	Yes	1
R.1	Yes	1	Yes	1	No	0
R.2a	Yes	1	Yes	1	No	0
R.2b	Yes	1	Yes	1	No	0
R.2c	Yes	2	Yes	2	No	0
R.2d	Yes	2	Yes	2	No	0
R.2e	Yes	1	Yes	1	No	0
R.3	Yes	1	Yes	1	No	0
R.6	Yes	1	Yes	1	No	0 _
R.4	Yes	1	Yes	1	No	0
R.7	Yes	1	Yes	1	No	0
R.5a	Yes	1	Yes	1	No	0
R.5b	Yes	1	Yes	1	No	0
R.5c	Yes	1	Yes	1	No	0
R.5d	Yes	1	Yes	1	No	0
R.5e	Yes	2	Yes	1	No	0
O.14	Yes	2	Yes	2	Yes	1
O.15	Yes	2	Yes	2	Yes	2
S.1a	Yes	1	Yes	1	No	0
S.1b	Yes	1	Yes	1	No	0
S.7	Yes	2	Yes	2	No	0
S.8	Yes	2	Yes	2	No	0
S.9	Yes	6	Yes	6	No	0
O.1	Yes	1	Yes	1	Yes	1
O.2	Yes	1	Yes	1	Yes	1
O.3	Yes	1	Yes	1	Yes	1
O.4	Yes	1	Yes	1	Yes	1
O.6	Yes	1	Yes	1	Yes	1
C.23	Yes	1	Yes	1	No (it's in services module)	0
O.10a	Yes	1	Yes	1	No	0
O.10b	Yes	1	Yes	1	No	0

Question	Asked in MOI questionnaire A? (Yes/No)	No. of variables	Asked in MOI questionnaire B? (Yes/No)	No. of variables	Asked in BEEPS Manufacturing Module? (Yes/No)	No. of variables
O.11a	Yes	1	Yes	1	No	0
O.11b	Yes	1	Yes	1	No	0
O.11c	Yes	3	Yes	3	No	0
O.16a	Yes	1	Yes	1	No	0
O.16b	Yes	1	Yes	1	No	0
O.17a	Yes	1	Yes	1	No	0
O.17b	Yes	1	Yes	1	No	0
E.1	Yes	1	Yes	1	Yes	1
E.15	Yes	1	Yes	1	No	0
E.16	Yes	1	Yes	1	No	0
E.2	Yes	1	Yes	1	Yes	1
E.17	Yes	1	Yes	1	No	0
L.1	Yes	1	Yes	1	Yes	1
L.3	Yes	2	Yes	2	Yes	2
L.5	Yes	2	Yes	2	Yes	2
L.2	Yes	1	Yes	1	Yes	1
L.6	Yes	1	Yes	1	Yes	1
L.8	Yes	1	Yes	1	Yes	1
L.18	Yes	1	Yes	1	No	0
Q.69	Yes	4	Yes	4	No (not in exactly the same way)	0
L.12a	Yes	2	Yes	2	No	0
L.12b	Yes	2	Yes	2	No	0
L.14	Yes	2	Yes	2	No	0
R.10b	Yes	1	Yes	1	No	0
R.10c	Yes	1	Yes	1	No	0
R.10a	Yes	1	Yes	1	No	0
Totals	97	122	88	112	21	27