

Republic of Mozambique
Ministry of Economy and Finance
Ministry of Industry and Commerce

Economic Linkages for Diversification Project (P171664)

MZ-MEF-DNT-208398-CS-QCBS

Manufacturing Firms in Mozambique:
Comprehensive Mapping, Capacity Building, and Firm Surveys
Terms of Reference

I. Introduction

The Government of Mozambique (GoM), through the Ministry of Economy and Finance (MEF) and with the support of the World Bank, is preparing the implementation of the Mozambique Economic Linkages for Diversification Project (EL4D). The objective is to strengthen the performance of MSMEs in Mozambique through economic linkages.

The project has three components: (i) developing economic linkages through skills, finance, and quality upgrading; (ii) enabling elements to support economic linkages; (iii) project management. The project prioritizes the Provinces of Cabo Delgado, Tete, and Nampula, which are some of main areas where large investments are taking place.

The GoM through its Ministry of Industry and Commerce (MIC), in particular its National Directorate of Manufacturing (DNI) is seeking the services of a Consultant (firm or consortium) to collect, digitalize, and systematize information on the entirety of the manufacturing sector in Mozambique. This work will consist of three elements: (1): Database of the existing industrial firms in all provinces of the country; (2) Technical and statistical training for technicians from the MIC on using, analyzing and updating the database; (3) Implementing in-depth surveys with a subset of manufacturing firms in the database.

II. Background and Context

The GoM perceives industrialization and private sector as the drivers of growth and prosperity. As a way to support this agenda, the Council of Ministers approved the Policy and Industrial Strategy – (PEI) 2016-2025, an instrument whose main objective is to make manufacturing one of the main vehicles to reaching prosperity and well-being of the country, through the creation of jobs and local content development. In addition, the National Development Strategy (2015-2035) presents a holistic approach to development

with an emphasis on structural transformation of the economy. The 2020-2024 Government's Five-Year Program perceives manufacturing to lead economic growth, productivity and job creation in the country. In addition, it should be noted that the Industrialization Strategy and SADC 2015-2063 Roadmap gives priority to the need of structural transformation in the region through industrialization, modernization and more regional integration. It focuses on industrialization as a long-term process of structural transformation that can potentially increase competitiveness across the whole region.

Yet, information on the location, performance and constraints in Mozambique's manufacturing firm's is not comprehensive. In order to achieve the goals and priorities established above, MIC, through the National Directorate of Manufacturing, in coordination with the National Directorate of Planning and Studies, Development Agency of Zambeze Valley, and the National Institute of Statistics (INE) intends to perform a comprehensive listing of manufacturing firms across the country not only for the purposes of updating the information on the manufacturing sector, but also to develop support plans and help revitalize the sector. It aims to streamline the manufacturing sector in order to increase its contribution to GDP. It aims to monitor companies who benefit from certain government programs such as tax exemption in the raw material import, location in industrial parks to assess the effectiveness of public support.

III. Objective of the Consultancy

The Government of Mozambique (GoM) is seeking the services of a Consultant (firm or consortium) to collect, digitalize, and systematize information on the entirety of the manufacturing sector in Mozambique. This work will consist of three elements: (1): Update of the inventory of the existing industrial firms in all provinces of the country (face-to-face data collection) (2) Technical and statistical training for technicians from the MIC including from provinces on using, analyzing, interpreting the data analysis, and updating the database; (3) Implementing in-depth surveys with a subset of manufacturing firms in the database (face-to-face data collection).

The selected Consultant will be expected to successfully implement all elements and activities as detailed below.

IV. Scope of Work and Deliverables

Component 1: Inventory of the existing industrial firms in all provinces of the country

This component will focus on developing, implementing, and updating an exhaustive (digital) database of all manufacturing firms in Mozambique. This will include a comprehensive listing of organized/updated sector firms and to the extent possible the unorganized informal firms (e.g. those running out of permanent structure). A total close of **8,000** manufacturing firms can be expected ex-ante from this exercise.

No.	Specific Activities	Deliverables and tentative schedule of delivery (duration after signing the contract)
1	<p>Plan outreach strategy for listing all manufacturing firms in Mozambique:</p> <ul style="list-style-type: none"> a. Preparing a detailed outreach strategy to reach as many manufacturing firms in Mozambique as possible. b. The Consultant will engage with the MIC, the World Bank, INE, and other relevant partners in the process. The consultant will prepare a detailed listing of possible sources of information on manufacturing firms to be surveyed. This list will include the following elements, but not be limited: <ul style="list-style-type: none"> i. Existing but outdated listings to be provided to the Consultant, e.g. the DNI database, the census of enterprises in 2015/16 provided by INE. The consultant will be responsible for putting together any available updated versions of these lists. ii. Engagement with relevant partners in the GoM, e.g. the INE/Customs and other groups, to obtain additional listings. iii. Engagement with industry partners, e.g. business associations such as AIMO – Associação Industrial de Moçambique, ACIS - Associação do Comércio, Indústria e Serviços, among others, to obtain member databases from these associations. iv. Engagement with microfinance institutions to obtain databases from the clients. v. Visits to areas with a high concentration of manufacturing activity, e.g. Special Economic Zones, Industrial Free Zones, industrial parks, or areas intended for the development of industrial parks. vi. Visits with local government authorities. vii. List of firms using the Made in Mozambique Seal. viii. Identification of other firms involved in on-going projects for value addition. c. Preparing an outreach strategy for certain priority sectors, as agreed with MIC and the World Bank. These include, for example, food and agro-processing industry and other agri-business related activities. d. For each source of information on manufacturing firms relying on existing listings or databases of firms, the deliverable must contain all contact information (e.g. business name, owner(s) name, manager(s) name, address/location, phone numbers, email addresses, as detailed sector as possible and main product and website, if available) as an appendix. 	<p>1- A document with Outreach strategy</p> <p>Deadline: 1 month</p>

	<p>e. For each source of information on manufacturing firms without existing listings or databases of firms, the deliverable must contain:</p> <ul style="list-style-type: none"> i. A detailed list of the areas or institutions to be visited or approached ii. A strategy on how a list of firms will be drawn up iii. How contact information for firms will be accessed iv. Broad timelines for the planned visits v. The expected number of manufacturing firms in each source (a rough estimate will also be acceptable). <p>f. Presenting the outreach strategy to the GoM and World Bank team, and revise as necessary prior to deliverable sign-off.</p>	
2	<p>Plan for face-to-face data collection:</p> <p>a. Team composition</p> <ul style="list-style-type: none"> i. Number of enumerators ii. Number of field-supervisors iii. Number of data managers iv. Qualifications and training of all data collection staff v. Capabilities to conduct the interviews in local languages vi. Proficiency in the electronic data server/software recommended by the MIC and the World Bank vii. Plan for recruitment of enumerators, supervisors, managers, if any <p>b. Short questionnaire/survey instrument</p> <p>i. Preparing a survey instrument, in both Portuguese and in English, to collect key variables according to the specifications of the MIC and the World Bank. At minimum, all the questions in the DNI database instrument should be included in this questionnaire. Key variables expected to include, but not limited to:</p> <ul style="list-style-type: none"> ○ address and contact information ○ location ○ ownership (local/international, gender) ○ main industry detailed (5-digit classification) ○ main product (8-digit classification) ○ sales/revenues in many periods of time ○ number of employees (gender, full-time, temporary, unpaid/paid, local/foreigner) ○ Input usage (details) ○ Registration status ○ Industrial licensing 	<p>2 (a, e, f): A document with data collection plan covering areas a, e and f</p> <p>Deadline for 2 (a, e, f): 2 months after contract signing</p> <p>2 b: Survey questionnaire in English and Portuguese document format and programmed electronic format.</p> <p>Deadline for 2b: 2 months</p> <p>2 (c, d, g, h): A folder with documents on training plan, procedures, manual, presentation and data quality checks procedures, data collection/maintenance and transmission.</p> <p>Deadline for 2(c, d, g, h): 2.5 months</p>

	<ul style="list-style-type: none"> ○ Other licenses ○ Part of an economic zone (details) ○ Receive government support (details): tax exemption, import of raw materials and other well-known government instruments ○ Part of agri-business value chain (details) ○ Sells or not to other businesses ○ Sells or not to extractives ○ Exports what is produced (share exported, main markets) ○ Member of any associations group ○ COVID Impacts ○ Among other variables <p>ii. Collecting information for some of the variables for the last 2-3 years. Examples include sales volume and total number of employees.</p> <p>iii. INE's assessment of the questionnaire</p> <p>iii. Programming an electronic version of the questionnaire using a software approved by the MIC and the World Bank.</p> <p>iv. The electronic version of the questionnaire should match exactly the final version of the final approved questionnaire.</p> <p>c. Training procedures</p> <p>i. Preparing a detailed training plan including the manual and presentation in consultation with the MIC, INE and the World Bank that will explain the strategy for asking the questions, with methodology and definitions that will clarify the terms and questions in the survey instrument. The training manual should include a review of the structure of the questionnaire, the principles of efficient interviewing, how to fill-in the questionnaire, important definitions and an annotated mock questionnaire with comments and examples.</p> <p>ii. Preparing the delivery methodology and timelines for training, including the number of days, number of enumerators/trainers. At least two days of training should be accommodated prior to the pilots and three days for the main interview.</p> <p>ii. Preparing guidelines for data collection including the following but not limited to:</p> <ul style="list-style-type: none"> ○ The number of visits attempts per firm before considering a respondent as a 'no answer' or 'refusal' (a minimum of 3 firm visit attempts with at least 2 of them in different days should be planned before considering a respondent as a 'no answer' or 'refusal') 	
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	<ul style="list-style-type: none"> ○ A template for contacting firms and recording the outcome of the contact. The template will be developed in consultation with the MIC and the World Bank <p>d. Data quality checks</p> <p>Implementing various forms of checks to detect programming errors, surveyor errors, data fabrication, poorly understood questions, and other issues.</p> <ul style="list-style-type: none"> ○ Spot checks: Preparing plans for spot check explaining the procedure for conducting occasional spot-checks of the interviewers' adherence to data collection protocols and confirming quality of data collection and entry. A minimum of 15% of spot checks to a random sample of interviews should be planned. ○ Preparing a back-check plan acceptable to the MIC and the World Bank. A minimum of 15% (half of them face-to-face) check-backs to a random sample of the respondents to confirm the validity of the data is required. Back-checks require an auditor to re-ask a portion of a completed survey, as a safeguard against enumerators falsifying data. ○ The MIC and World Bank will also use its right to conduct its own checks on 5 to 15% of the interviews (independent of the check-backs conducted by the survey firm) with the interim data received with the weekly reports, as well as validate the completeness and logic of completed questionnaires. If the survey results do not meet the requirements in terms of integrity of data, the MIC will reserve the right to request a repetition of the work or the option of not paying for the work completed (being reimbursed for any initial payment). <p>e. Travel and logistics: The consultant must share a detailed plan for the site visits, including the location details, broad team details, number of enumerators. COVID-19 protocol needs to be included.</p> <p>f. Detailed timelines of work indicating each of the steps starting from training the enumerators to the final delivery.</p> <p>g. Data transmission protocols.</p> <p>h. Data collection and maintenance: The Consultant is responsible for providing tablets for data collection, downloading all necessary materials to the tablets, storing and maintaining tablets, and ensuring data transmission occurs at least daily (from tablets to servers). The</p>	
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	data collection plan should include the available infrastructure to carry out this project.	
3	Pilot testing <ol style="list-style-type: none"> Pilot testing with approximately 20 respondents. The piloting should adhere to the following conditions: <ol style="list-style-type: none"> Train the staff involved in pilots for at least 2 days. Members from MIC and World Bank will be informed of the training location and time, with the option to connect via video conference, if possible. Pilot testing under real conditions. COVID-19 protocol needs to be incorporated. Monitoring of time per question and module for estimation of average time per questionnaire. If the Consultant or its enumerators identify problems with the questionnaire, these should be reported back to the MIC and the World Bank. Modifications will be made to the questionnaire from the lessons learnt from the pilot. 	3- pilot datasets from data server in a format agreed upon with the MIC and the World Bank; report on the quality of the piloted questionnaire and recommendations for improvements. Deadline: 3 months
4	Recruitment of the team (data managers, supervisors and enumerators) <ol style="list-style-type: none"> Recruiting a sufficient number of qualified enumerators and field supervisors. The number of enumerators and supervisors should be approved by the MIC and World Bank. The Consultant is responsible for all compensation of the interviewer teams, including per diem and transportation. 	4-Roster of recruited enumerators with their respective resumes attached Deadline: 3 months
5	Conduct interviewer training and field test <ol style="list-style-type: none"> Scheduling and organizing training of interviewers for the survey. A comprehensive general training should be given to supervisors, interviewers and data entry agents. The supervisors should receive supplementary training as needed. A minimum of three days should be scheduled for training. The training should include: <ol style="list-style-type: none"> Thorough review of the protocol to be followed during the implementation to reach to the manufacturing firms across the country. Thorough review of each question of the questionnaire(s) in order to fully understand the purpose of the survey. Individual and group exercises to be accustomed to the practice of asking and filling questionnaires. This part of the training should include in-class demonstrations and real time exercises – the interviewers will administer the full 	5-Field test documented and data from field test successfully transferred to the MIC and World Bank; Report on any adjustments to the questionnaire; indicators of success of the baseline data Deadline for 5: 4 months

	<p>questionnaire to a small number of firms (outside the study sample) in a field test.</p> <p>b. Make adjustments to questionnaire and translated version based on enumerator training. A minimum of two days should be given after training for these adjustments in the questionnaire before starting the interviews.</p> <p>c. Provide indicators of success of the baseline data collection field test including evidence that:</p> <ul style="list-style-type: none"> i. Interview teams correctly select, sample and interview firms ii. Interview team members understand their roles. iii. Interview team members understand, and correctly follow, interviewing protocols. <p>d. Inform the MIC and the World Bank of the training location and time, with the option to connect via video conference, if possible.</p>	
6	<p>Successful implementation of the listing and data collection for the entirety of the manufacturing sector in Mozambique</p> <p>a. The Consultant will be responsible for successfully completing the listing of manufacturing firms in Mozambique according to the approved outreach strategy and for collecting the key variables according to the approved plan for data collection and the approved questionnaire for all listed firms. The following guideline should serve as reference:</p> <ul style="list-style-type: none"> i. The consultant must strictly follow the approved outreach strategy, data collection plan and questionnaire. ii. COVID-19 protocol needs to be incorporated. iii. The contact details for the manufacturing firms will be collected according to the approved outreach strategy. iv. Each survey interview will take on average 20 min. A minimum of 10 interviews per enumerator per day are expected on average. v. The respondent of the questionnaire must be a manager, owner, or an official spokesperson (or representative) of the company. vi. The consultant will interview every possible firm in the listing, including those found in the field visit and were not listed. Firms that have hard refusals will be recorded, along with their contact details and the number of times the firm was reached. The MIC and the World Bank can use this information as well. vii. <u>The number of complete interviews depends on the process of initial identification but in expectation a number close to 8,000</u> 	6- Field notes included in deliverable 7

	<p><u>manufacturing firms should be planned including informal firms.</u></p> <ul style="list-style-type: none"> viii. All the outcomes of the firm contact – interviews, no interviews (refusals, reasons for refusals etc.), scheduled interviews must be recorded in a contact template prepared in consultation with the MIC and the World Bank. ix. The management of physical and digital files must be properly organized and properly identified (names and dates). x. As much as possible, the interview will be conducted in a private space at the respondent's business. xi. A minimum of 3 firm visit attempts with at least 2 of them in different days should be planned before considering a respondent as a 'no answer' or 'refusal'. 	
7	<p>Weekly reports on successful interviews and entered data</p> <ul style="list-style-type: none"> a. Provide every week of raw (i.e. unchecked) data to the MIC as it has been entered in the tablets. b. Provide every week contact template report, along with the summary of the progress on data collection c. Conduct spot-checks, back-checks high-frequency checks daily or every other day to check for data irregularities and fix them through call backs d. Provide every week a report on the discrepancies observed between the initial surveys and the back-check surveys, and actions taken to address the discrepancies. e. Providing reports every week informing on the progress of the work (including the number of interviews completed), any notable difficulties or deviations from the standard plan, and any other notable occurrences. f. Report on real-time validity checks upon receipt of each enterprise's data. 	<p>7-Weekly delivery of entered data and weekly reports to the MIC and the World Bank; weekly summary of interviews and updated contact template</p> <p>Deadline: Every Monday during data collection for the past week, starting from 4 months after the signing of the contract</p>
8	<p>Update a digital database of DNI of all data collected</p> <ul style="list-style-type: none"> a. Submitting a database of all manufacturing firms in Mozambique, including contact information and key variables collected in interviews, in a format agreed upon with the MIC, INE and the World Bank. b. The survey firm should ensure that data is maintained and stored in a manner so that no external individual or institution can identify any specific firm or individual in the data. Names and address information should only be made available to the MIC and the World Bank team. 	<p>8- Full raw database and field report along with the contact template in English and in Portuguese</p> <p>Deadline: 9 months</p>

9	<p>Final clean database with summary report</p> <ul style="list-style-type: none"> a. Conduct cleaning and archiving of data <ul style="list-style-type: none"> i. Identifying incomplete interviews ii. Call backs on incomplete interviews to complete the missing information iii. Identifying redundant observations and rectifying them iv. Spotting any inconsistencies (should be minimum at this stage) and making call backs to rectify them v. Ensuring all components are correctly linked – datasets can be merged cleanly vi. Ensuring all variables are named according to the approved questionnaires, labels represent question texts, response options are coded and labelled as in the approved questionnaire. vii. The cleaned datasets should also include an English and Portuguese translation of textual responses such as "other, specify", "main product" etc. b. Summary report <ul style="list-style-type: none"> i. The report should cover the overall organization and execution of the work of this component's tasks, as well as on the organization of the output files. ii. The report should include analysis of the data collected including the following but not limited to <ul style="list-style-type: none"> o Number of firms in the database o Summary statistics on the key variables in table and graph format o Key sectors that may have the potential for development of a program for industrialization process (based on summary statistics) iv. The report should include the final version of the questionnaire and survey manuals. 	<p>9-Final delivery of database in English and in Portuguese; Summary report, with key sectors that may have the potential for development</p> <p>Deadline: 10 months</p>
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Component 2: *Capacity building in government for future data collection and statistical analysis*

This component would involve technical and statistical training for technicians from the MIC on using, analyzing and updating the digital database.

1	<p>Database manual, digitalization and dissemination</p> <ul style="list-style-type: none"> a. Preparing a database updating manual for training the technicians from the MIC on using, analyzing and updating the digital database. The manual should include 	<p>1-Database manual, available data and methodology documentation and manuals</p>
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	<ul style="list-style-type: none"> i. A methodology of how the firm listings were identified ii. Integration of a database with all existing data at DNI so as to enable interoperability of relevant information into a single database iii. Definitions for all variables included iv. Instructions on how to access and analyze the data in the database v. A detailed procedure to update the database every two years vi. Individual and group exercises for training technicians in all five aspects mentioned above, including field tests. vii. The database, manual and other documents will be hosted on a digital platform on a standard server in consultation with the MIC and the World Bank <p>b. Preparing for dissemination of the database. Disseminate the consolidated statistical data of the industrial sector into a MIC platform with access to potential stakeholders.</p>	<p>on a digital platform and dissemination</p> <p>Deadline: 12 months</p>
2	<p>Identifying mechanisms of documenting information beyond the first data collection</p> <ul style="list-style-type: none"> a. Draft a proposal to identify the data collection matrix in the future. b. Identify mechanisms of regularly updating information on industrial licensing and others relevant without excess costs of redoing a full survey. This needs to be realistic to a few competing aspects: (i) internal resources for collecting data are limited, which would imply some process that is being updated over time instead of one-off updates; (ii) the private sector does not fill-in requests to update data unless there is some value to it (or cost of not doing it), but the risk is that only those with high incentives update data. Other aspects can come into play and need to be well considered in the design of this plan. c. Prepare mechanisms to enable new non-licensed and non-registered companies to be added in the database on a regular basis. d. Prepare mechanisms of running queries to consolidate statistical information on production and industrial registration. e. Identify mechanisms of keep updating the system to problems that may occur beyond the duration of this contract. 	<p>2- Detailed plan for regularly updating data through a cost efficient mechanism.</p> <p>Deadline: 12 months</p>
3	<p>Training technicians from the MIC</p>	<p>3-Attendance sheets for trainings; Completed exercises</p>

	<ul style="list-style-type: none"> a. Scheduling and organizing training for technicians from the MIC and INE on using, analyzing and updating the digital database, using the database manual, discussed in point 1. The training should include on all aspects of the database manual. b. The training will also include individual and group exercises and field tests to accustom the technicians to working with the database. This part of the training should include in-class demonstrations and real time exercises. c. Training will take place for a minimum of five groups of central and local-level technicians separately. For each group, training should take place for a minimum of one week. The separate groups are: <ul style="list-style-type: none"> 1. Technicians of the licensing sector and industrial registration; 2. Technicians of statistical analyses and assessment of industrial production. 3. Technicians working with the implementation of Ministerial Decree (DM) 99/2003 that grants customs duties rights to the manufacturing industry. 4. Technicians working in the delimitation and legalization process of identified areas for implantation of industrial parks. 5. Technicians working with concession right of the Made in Mozambique Seal at the central and province level. d. MIC and World Bank can nominate additional members in each of these groups to attend and monitor the training. e. Conducting feedback on the training quality and usefulness from trained MIC staff f. If needed, making adjustments to the database manual based on feedback from trainings. 	<p>and field tests; training feedback and assessment forms</p> <p>Deadline: 14 months</p>
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Component 3: *Implementing in-depth surveys for a subset of manufacturing sectors*

This component will focus on in-depth analysis of certain manufacturing sectors identified in component

1. It will include in-depth interviews to a total of 1,000 firms.

1	<p>Survey preparation</p> <ul style="list-style-type: none"> a. Identifying the sectors: The MIC and the World Bank will identify the sectors where in-depth analysis is would be useful, likely within food manufacturing. This will be developed based on the statistics collected in component 1, taking in view the plans in component 2. 	<p>1 a-List of identified sectors with underlying data analysis; Final Portuguese version of questionnaire for approval by the MIC and the World Bank; Electronic version of the</p>
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	<p>The consultant will work in consultation with the MIC and the World Bank to identify these sectors.</p> <p>b. Preparing the Survey instruments:</p> <ul style="list-style-type: none"> i. The questionnaire for the in-depth surveys will be provided by the MIC and the World Bank. Modules will likely include licensing and regulations, production, management and business practices, technology adoption including green technology, HR management, market frictions between buys and suppliers, sector specific modules, among others. ii. The survey firm is responsible for creating an electronic version of the questionnaire using a software approved by the MIC and the World Bank. iii. The structure of the electronic version of the questionnaire should match exactly the structure of the final version of the final approved questionnaire. 	<p>questionnaire acceptable to the MIC and the World Bank</p> <p>Deadline: 12 months</p>
2	<p>Plan for data collection:</p> <p>a. Sample: The sample for the data collection will be provided to the Consultant by the MIC and the World Bank, taken from the database of all manufacturing firms in Mozambique completed in Component 1. It is expected there will be 2 identified manufacturing sectors with a target survey of at least 500 firms in each sector, total 1,000 firms. The identified sector may include agribusiness but will not necessarily be limited to this sector.</p> <p>b. Survey team:</p> <ul style="list-style-type: none"> i. Number of enumerators ii. Number of field-supervisors iii. Number of data managers iv. Number of Metadata Repository Manager v. Qualifications and training of all data collection staff vi. Capabilities to conduct the interviews in local languages vii. Proficiency in the electronic data server/software recommended by the MIC and the World Bank viii. Plan for recruitment of enumerators, supervisors, managers, if any <p>c. Training procedures</p> <ul style="list-style-type: none"> i. Preparing a detailed training plan including the manual and presentation in consultation with the MIC and the World Bank that will explain the strategy for asking the questions, with methodology and definitions that will clarify the terms and questions in the survey instrument. The training manual should include a review of the structure 	<p>2-Plan for data collection acceptable to MIC and World Bank</p> <p>Deadline: 12 months</p>

	<p>of the questionnaire, the principles of efficient interviewing, how to fill-in the questionnaire, important definitions and an annotated mock questionnaire with comments and examples.</p> <p>ii. Preparing the delivery methodology and timelines for training, including the number of days, number of enumerators/trainers. At least two days of training should be accommodated prior to the pilots and three days for the main interview.</p> <p>ii. Preparing guidelines for data collection including the following but not limited to:</p> <ul style="list-style-type: none"> ○ The number of visits attempts per firm before considering a respondent as a 'no answer' or 'refusal' (a minimum of 3 firm visit attempts with at least 2 of them in different days should be planned before considering a respondent as a 'no answer' or 'refusal') ○ A template for contacting firms and recording the outcome of the contact. The template will be developed in consultation with the MIC and the World Bank <p>d. Data quality checks</p> <p>Implementing various forms of checks to detect programming errors, surveyor errors, data fabrication, poorly understood questions, and other issues.</p> <p>i. Spot checks: Preparing plans for spot check explaining the procedure for conducting occasional spot-checks of the interviewers' adherence to data collection protocols and confirming quality of data collection and entry. A minimum of 15% of spot checks to a random sample of interviews should be planned.</p> <p>ii. Preparing a back-check plan acceptable to the MIC and the World Bank. A minimum of 20% (half of them face-to-face) check-backs to a random sample of the respondents to confirm the validity of the data is required. Back-checks require an auditor to re-ask a portion of a completed survey, as a safeguard against enumerators falsifying data.</p> <p>iii. The MIC and World Bank will also use its right to conduct its own checks on 5 to 15% of the interviews (independent of the check-backs conducted by the survey firm) with the interim data received with the weekly reports, as well as validate the completeness and logic of completed questionnaires. If the survey results do not meet the requirements in terms of integrity of data, the MIC will reserve the right to request a repetition of the work or the option of not paying for the work completed (being reimbursed for any initial payment).</p>	
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	<ul style="list-style-type: none"> e. Travel and logistics: The consultant must share a detailed plan for the site visits, including the location details, broad team details, number of enumerators and so on. f. Detailed timelines of work indicating each of the steps starting from training the enumerators to the final delivery. g. Data transmission protocols. h. Data collection and maintenance: The Consultant is responsible for providing tablets for data collection, downloading all necessary materials to the tablets, storing and maintaining tablets, and ensuring data transmission occurs at least daily (from tablets to servers). The data collection plan should include the available infrastructure to carry out this project. 	
3	<p>Pilot testing</p> <ul style="list-style-type: none"> b. Pilot testing with approximately 20 respondents. The piloting should adhere to the following conditions: <ul style="list-style-type: none"> vi. Train the staff involved in pilots for at least 2 days. Members from MIC and World Bank will be informed of the training location and time, with the option to connect via video conference, if possible. vii. Pilot testing under real conditions. viii. Monitoring of time per question and module for estimation of average time per questionnaire. ix. Firms in the sample cannot be interviewed in the pilot. In consultation with the MIC, the Consultant will be responsible for selecting firms in the Maputo area to be included in the pilot. x. If the Consultant or its enumerators identify problems with the questionnaire, these should be reported back to the MIC and the World Bank. Modifications will be made to the questionnaire from the lessons learnt from the pilot. 	<p>3 ii.- pilot datasets from data server in a format agreed upon with the MIC and the World Bank</p> <p>3 iii.-Report on the quality of the piloted questionnaire and recommendations for improvements.</p> <p>Deadline: 13 months</p>
4	<p>Recruitment of the team (data managers, supervisors and enumerators)</p> <ul style="list-style-type: none"> a. Recruiting a sufficient number of qualified enumerators and field supervisors. b. The number of enumerators and supervisors should be approved by the MIC and World Bank. c. The Consultant is responsible for all compensation of the interviewer teams, including per diem and transportation. 	<p>4-Roster of recruited enumerators with their respective resumes attached</p> <p>Deadline: 13 months</p>
5	Conduct interviewer training and field test	

	<p>e. Scheduling and organizing training of interviewers for the survey. A comprehensive general training should be given to supervisors, interviewers and data entry agents. The supervisors should receive supplementary training as needed. A minimum of one week should be scheduled for training. The training should include:</p> <ul style="list-style-type: none"> i. Thorough review of each question of the questionnaire(s) in order to fully understand the purpose of the survey. ii. Individual and group exercises to be accustomed to the practice of asking and filling questionnaires. This part of the training should include in-class demonstrations and real time exercises – the interviewers will administer the full questionnaire to a small number of firms (outside the study sample) in a field test. <p>f. Make adjustments to questionnaire and translated version based on enumerator training. A minimum of two days should be given after training for these adjustments in the questionnaire before starting the interviews.</p> <p>g. Provide indicators of success of the baseline data collection field test including evidence that:</p> <ul style="list-style-type: none"> i. Interview teams correctly select, sample and interview firms ii. Interview team members understand their roles. iii. Interview team members know the objectives of the survey. iv. Interview team members understand, and correctly follow, interviewing protocols (including COVID-19 protocols). <p>h. Inform the MIC and the World Bank of the training location and time, with the option to connect via video conference, if possible.</p>	<p>5-Field test documented and data from field test successfully transferred to the MIC and World Bank; Report on any adjustments to the questionnaire; indicators of success of the baseline data</p> <p>Deadline: 14 months</p>
6	<p>Successful implementation of the survey data collection for the full sample</p> <p>a. The Consultant will be responsible for successfully completing data collection for all sampled firms, using as reference the following guidelines:</p> <ul style="list-style-type: none"> i. The questionnaire for the survey will be provided by the MIC and World Bank team and ought to be strictly followed by the selected Consultant. ii. The contact details for the sampled manufacturing firms will have been accurately collected in Component 1. iii. The respondent of the survey must be a manager, owner, or a key official of the company. iv. <u>Each interview will take on average of 60 minutes. Each enumerator should be able to complete on average two interviews per day.</u> 	<p>6-Short report on the implementation of the survey from the field</p> <p>Deadline: 18 months</p>

	<ul style="list-style-type: none"> v. As much as possible, the interview will be conducted in a private space at the business location. vi. A minimum of 5 firm visit attempts with at least 3 of them in different days should be planned before considering a respondent as a 'no answer' or 'refusal'. vii. Substitution of sampled enterprises will only be accepted after explicit agreement from the MIC and World Bank team. 	
7	<p>Weekly reports on successful surveys and entered data</p> <ul style="list-style-type: none"> a. Providing every week of raw (i.e. unchecked) data to the MIC as it has been entered in the tablets. b. Provide every week contact template report, along with the summary of the progress on data collection c. Conduct spot-checks, back-checks high-frequency checks daily or every other day to check for data irregularities and fix them through call backs. d. Provide every week a report on the discrepancies observed between the initial surveys and the back-check surveys, and actions taken to address the discrepancies. e. Providing reports every week informing on the progress of the work (including number of surveys completed), any notable difficulties or deviations from the standard plan, and any other notable occurrences. f. Report on real-time validity checks upon receipt of each enterprise's data. 	<p>7-Weekly delivery of entered data and weekly reports to the MIC and the World Bank; weekly summary of interviews and updated contact template</p> <p>Deadline: Every Monday during data collection for the past week, starting from 14th month until 18th month</p>
8	<p>Compile a digital database of all data collected</p> <ul style="list-style-type: none"> a. Submitting a database of all firms surveys conducted in a format compatible with a statistical package (STATA preferably) with the appropriate unique firm identifier. b. Providing a consolidated contact template with the data collected for all the firms contacted for the survey, along with the outcomes of the contact, as agreed upon with the MIC and the World Bank. c. The survey firm should ensure that data is maintained and stored in a manner so that no external individual or institution can identify any specific firm or individual in the data. Names and address information should only be made available to the MIC and the World Bank team. 	<p>8-Completed raw database and contact template</p> <p>Deadline: 19 months</p>
9	<p>Final clean database with completion report</p> <ul style="list-style-type: none"> a. Conduct cleaning and archiving of data 	9-Final delivery of database

	<ul style="list-style-type: none"> i. Identifying incomplete interviews ii. Call backs on incomplete interviews to complete the missing information iii. Identifying redundant observations and rectifying them iv. Spotting any inconsistencies (should be minimum at this stage) and making call backs to rectify them v. Ensuring all components are correctly linked – datasets can be merged cleanly vi. Ensuring all variables are named according to the approved questionnaires, labels represent question texts, response options are coded and labelled as in the approved questionnaire. vii. The cleaned datasets should also include an English and Portuguese translation of textual responses such as "other, specify", "main product" etc. <p>b. Completion report</p> <ul style="list-style-type: none"> i. The report should cover the overall organization and execution of the work of this component's tasks, as well as on the organization of the output files. ii. It should include a short field report, using the contact template information iii. It should include a summary of the data collected including the following but not limited to <ul style="list-style-type: none"> o Number of firms in the database o Summary statistics on coverage by sector and other strata (e.g. size, location), if any iv. The report should include the final version of the questionnaire and survey manuals. 	Deadline: 20 months
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V. Reports and Tools

All data will be collected using tablets through the online data collection application (SurveyCTO or Survey Solutions). The script to run the survey on the data application system will be developed and tested by the Consultant and approved by the MIC and World Bank. The MIC and World Bank team will have access to data collected through the system. The company will deliver to the team a verified and cleaned database.

Any changes to the timeline must be agreed upon by both the MIC and the Consultant.

Upon completion of data cleaning, the Consultant will send a full copy of the verified and cleaned data to the MIC and the World Bank. All soft copies of data must be encrypted.

In entering the data, the Consultant will abide by the following conditions:

- Questionnaire correction: Under no circumstances will the data entry operators or supervisors make any modifications to the original questionnaires during the course of data entry.
- Transparency: The MIC and World Bank will have free access to the site on which the data entry is underway, and to observe the data entry in progress. This includes meeting with the data entry operators, supervisors, executives, database designers, and all other relevant Consultant's staffs.
- Data ownership: All primary data, including PII (Personal Identifiable Information), such as name and address, collected during the contract will be under the ownership of the MIC. Under no circumstances will the Consultant use the data collected during this study.

Field enumerators will be monitored and supervised in the field by a team of supervisors. The supervisors will scrutinize all the digital questionnaires (i.e. read through all questions and answers in the filled-in questionnaire to ensure that there have been no blanks, skips mistakes, or mis-measurements) after they come back from the field and before they are dispatched for database.

The enumerators in the field will be scrutinized through a rate of accompaniments, backchecks, and spot-checks in such a way that the performance of all investigators will be checked. Any error found at the scrutiny level shall be reported. All errors found at the scrutiny level should be corrected right away or by revisiting the same respondent by the same investigator, depending on the types of mistakes. In no circumstances can the original answers be erased once the investigator leaves the household.

VI. Technical requirements

The Consultant may be a single company or a consortium. The Consultant must demonstrate sufficient experience and capacity in the implementation of surveys. The following experiences and skills will be assessed:

- Experience in designing and implementing large-scale enterprise surveys, preferably in sub-Saharan Africa;
- Experiencing in preparing data collection instruments;
- Experience with data collection electronic systems, including SurveySolutions or SurveyCTO;
- Strong capacity in database design, data management and statistics;
- Experience in conducting training of interviewers for large-scale surveys;
- Experience in Mozambique or in consortium with companies with such experience is an advantage.

The team should include the following main members:

- i. **Team Leader**, with a minimum of 10 years' international experience in data survey firms, and/or

research organizations, preferably in sub-Saharan Africa. The Team Leader must have at least a Master's degree in Business Administration and Management, Economics, Statistics, Finance, or a related field.

- ii. **Team Supervisor**, with a minimum of 4 years' experience in data collection, preferably in sub-Saharan Africa and/or similar regions. The Team Supervisor must have at least a Bachelor's degree in Business Administration and Management, Economics, Statistics, Finance, or a related field.
- iii. **Data Management Specialist**, with a minimum of 5 years' experience in data management, databases, survey design in computer assisted personal interviews, preferably in sub-Saharan Africa. The Data Management Specialist must have at least a Bachelor's degree in Information Technology, Statistics, or other relevant field.
- iv. **Knowledge Management Specialist**, with a minimum of 5 years' experience in capacity building, preferably in data statistics. The Knowledge Management Specialist must have at least a Bachelor's degree in Communications, Business Administration and Management, Statistics, or a related field.

v. VII. Schedule of deliverables

Component 1: Inventory of existing manufacturing firms in all provinces of the country	
Deliverables	Period
Deliverable 1	1 month
Deliverable 2	2.5 months
Deliverables 3, 4	3 months
Deliverable 5	4 months
Deliverables 6, 7	As of 4 months to 9 months
Deliverable 8	9 months
Deliverable 9	10 months
Component 2: Institutional Capacity-building for future database collection and statistical analyses	
Deliverables	Period
Deliverable 1	12 months
Deliverable 2	12 months
Deliverable 3	14 months
Component 3: <i>Implementation of in-depth research for a subgroup of manufacturing sectors</i>	
Deliverables	Period
Deliverables 1, 2	12 months
Deliverables 3, 4	13 months
Deliverable 5	14 months
Deliverable 6	18 months
Deliverable 7	As of 14 months to 18 months
Deliverable 8	19 months
Deliverable 9	20 months