Productivity and Investment Climate Survey (PICS): Implementation Manual

November 2003

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Investment Climate Assessments

This manual has been prepared by the Private Sector Investment Climate Unit of the World Bank. Please contact John Nasir at jnasir@worldbank.org for questions and comments.

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I. Investment Climate Assessments

A. Introduction and ICA Description

1. Work to improve the investment climate is recognized as a key pillar of World Bank Group efforts to promote economic growth and poverty alleviation in developing countries. ICAs provide a standardized way of measuring and comparing investment climate conditions in a country; replacing a number of varying and sometimes ad hoc methodologies of the past. They are envisioned by the World Bank Group's Private Sector Development Strategy as a systematic means to "allow i) better identification of the features of the investment climate that matter most for productivity and hence income growth, especially for poor men and women, ii) tracking of changes in the investment climate within a country, and iii) comparison of countries or Regions within countries."

2. As fully explained in the ICA Guidelines, completed ICAs will feed into WBG country assistance strategies and programs, and ultimately help shape national policies, as reflected in CDFs or PRSPs. They are a tool that the private sector and government can use in public/private dialogue and a source that other donors can draw on to help develop their programs. For an ICA to be successful, the results must be widely disseminated and integrated into the country's policy discussion as discussed in the Guidelines. The operational ori-

entation of ICAs places the Regions at the center of the ICA preparation and dissemination, assuring relevance and attention to the policy and institutional priorities of each country studied. The scope of the ICAs points to the value of drawing from and building on complementary work of other WBG networks and other development institutions.

3. The main focus of ICAs is on microeconomic and structural dimensions of a nation's business environment, viewed in an international perspective. To this end, ICAs look in detail at factors constraining the effective functioning of product markets, financial and non-financial factor markets, and infrastructure services, including, in particular, weaknesses in an economy's legal, regulatory and institutional framework. ICAs also provide the tools and analytical framework to identify reform priorities in a country's investment climate, by linking constraints to firm-level costs and productivity. The format for the ICA is given in the ICA guidelines.

4. Underpinning all ICAs is a standard core Productivity and Investment Climate Survey (PICS) instrument, which allows the identification of existing conditions, the benchmarking of conditions to monitor changes over time, and the analysis of the impact of these conditions on firm-level performance. ICAs further employ a common structure and methodology to facilitate comparability between countries.

5. Publication of ICAs following clearance is encouraged. Normally, publication of an ICA will be pre-approved with authorities during the preparation phase. Where the authorities have given their consent to publication, CICIC staff will post the ICA on the Bank's external IC web site within two weeks of approval by the PSD Board.

6. Generally, it is desirable that ICAs be updated every three to five years. Any completed ICA (published or not) will be made available to Executive Directors at their request. It will be the responsibility of the Regions to provide, where appropriate, ICAs as background to discussions on CASs and DPRs. Where an earlier ICA exists, new assessments should include a reference to the previous ICA and indicate progress towards meeting the central recommendations.

B. Planning an ICA

7. A successful ICA depends on careful planning and coordination. The necessary resources and time must be allocated and a strong foundation of support

developed among all stake holders prior to beginning work. In general, ICAs will follow the procedures of other regional AAA/ESW work of the PSI family. That is, ICAs require a concept document (and review meeting), peer review (including at least one peer reviewer from the anchor), and a draft review meeting. In many cases, due to common interests and substantive overlap with the work of other institutions, ICAs can benefit from collaboration on surveys, assessments, follow-up and financing with other IFIs (especially regional development banks), and multi- and bilateral development agencies.

8. ***CICIC and DECRG***. The center and DECRG will provide support to regional teams to help plan and conduct the PICS and to produce the ICAs. The first step in the ICA process is to coordinate with counterparts in DECRG and CICIC to lay out the strategy for the ICA and to determine what support is needed. The managers of the Investment Climate Unit must approve all survey instruments before they are launched. In addition, DECRG will check the data for consistency and response rates early in the collection process and provide feedback to the survey team in time to make corrections to the survey process. Upon completion of the survey, DECRG will check the final data set, provide standard tables, and add the data to the comprehensive cross-country data set.

9. ***The Country Team***. Regions initiate and conduct ICAs. A country management unit must be fully committed to the ICA process before it is launched. The country team will have to commit resources to writing and preparing an ICA. The country team also must coordinate the activities of all groups conducting work in the country. Other units within the WBG, such as the WBG SME group or PEP, also conduct surveys or investment climate related activities. Survey fatigue is a real issue and the country director and his team must be cognizant of these issues.

10. The country team's input is especially important in interpreting the results of the ICA and drawing policy conclusions. Without the input of members of the country team who have had direct engagement in country dialogue, strategy formulation, consultations, and operations, the recommendations of an ICA are likely to be broad and abstract. One clear lesson of early ICAs is that engagement of the country team can greatly increase the specificity of recommendations, and makes far clearer how identified constraints relate to planned reforms or identify gaps in existing reform strategy. Before a region can launch an ICA it is imperative to first build support from the WBG country director and his team.

11. ***Government.*** ICAs should be conducted with the knowledge and support of relevant government authorities. The Region, when initiating an ICA, should assure relevant counterparts are engaged and supportive. Government buy-in at the initial stages is necessary for later implementation of ICA recommendations and will increase the positive impact on the business climate. The initial contacts with the government must include discussions on dissemination and how the findings will be used. Country officials should be aware that the basic investment climate indicators collected for the ICA are expected to be used broadly for benchmarking and comparison within the World Bank Group and may be posted on the Investment Climate page of the World Bank's external website.

12. Given the sensitive nature of the data, having government officials directly involved in data collection is likely to reduce managers' willingness to speak frankly about the business environment. In some countries it may not be possible to operate without the permission of the national statistics agency and other ministries involved in regulating and developing industry. In addition, close coordination with the statistics agencies is necessary to obtain the sample frame and other information. However, the government will not be given the raw data or any information that allows them to identify the responses of individual firms.

13. ***Private Sector.*** A successful ICA should be conducted in partnership with the local private sector. Often independent chambers of commerce or business associations are willing to sponsor the survey as well as help disseminate the results. This raises the profile of the co-sponsoring agency and provides them hard evidence for use in their negotiations with government. In some cases the local business organizations have internal research capability and are able to help actually conduct the survey, participate in the analysis and coordinate dissemination of the results. However, in most cases local associations do not have such sophisticated capabilities. But their involvement is still vital for generating cooperation among their members and the wider business community. Without the full support of the local business community, the PICS survey will obtain poor results, undermining the empirical basis for the ICA. Before partnering with a local business association, however, a survey manager should consult both the WB country team and government counterparts to fully understand the political and organization standing of local associations, as well as their capacity and membership. In some countries, it may be necessary to engage multiple associations in the ICA process to assure broad participation and achieve impartiality.

Box 1: Suggested Standard Language for Insertion in TORs for ICA Preparation Mission

The mission will establish contact with all relevant stakeholders and explain the purpose of an ICA and ICS, their overall design and how they are implemented. The team will identify government and private sector counterparts (and potential co-sponsors). The mission may also identify local experts and researchers who are able to collaborate in data analysis and writing of the report.

The mission will publicize the PICS and begin building support among the private sector by visiting all major business membership organizations. The mission will explain the purpose and use of the ICA and asses their ability to support the field work, help with analysis and conduct dissemination.

The mission will also initiate agreement with relevant government and private sector counterparts on the design of the ICA and the conduct of a PICS. The mission will seek input to survey design, while protecting the integrity of the core instrument.

Working with a local survey consultant or partner, the mission will establish an overall timetable and arrangements for the ICA implementation. Regarding the survey, the mission should establish preliminary timing and the arrangements for survey implementation, including sample design, piloting, enumerator training, oversight, quality control, protection of firm confidentiality, data entry, management and reporting.

The mission should organize discussions with public and private sector experts to assist in identifying and analyzing leading issues and constraints in the investment climate. Business focus groups should provide another key source of input. Based on this input, the mission should produce a revised draft ICA outline and a PICS instrument.

Finally, the mission will discuss a dissemination strategy with stakeholders and how the results of the ICA can be operationalized. The mission will draft a dissemination plan.

14. ***Private Research Agencies.*** In many countries there exist capable research institutions (whether private[1], nongovernmental or state) skilled in survey implementation and data analysis. In these cases they should be considered as partners in conducting the PICS and helping with the analysis of the data. Universities and independent local researchers are also possible partners that should be explored.

1. A list of market research firms adhering to an international code for marketing and social research practice may be found at the website www.esomar.org. ESOMAR is the World Association of Opinion and Marketing Research Professionals. However, it should be noted that many qualified local organizations may not be ESOMAR members.

15. ***International Monetary Fund.*** Colleagues in the IMF are an important source of information on the investment climate of member countries and macro economic statistics. Their data base on banking assets, exchange rate movements, trade flows and other statistics are an invaluable resource in writing an ICA. The IMF team is usually very interested in the ICA findings as it adds a micro foundation to their macro policy recommendations. The IMF team should be consulted by the ICA team early in the planning process to learn about the country and the macro-economic context in which the ICA will be carried out.

16. ***Donors and other IFIs.*** Other donors and IFIs should be included in the initial stages of planning an ICA. They are not only a source of information and possible support, but they are also important for any successful dissemination plan. Using the results of an ICA to spur improvements in the business environment requires building a strong constituency for change among all interested parties in the country. Other donors are valuable resources to help the organized private sector and government to affect changes in the investment climate and they should be brought into the ICA process in the initial planning stages. In addition there is a possibility or overlap between the ICA and ongoing work by other donors that must be addressed.

II. Survey Content

17. At the heart of each ICA is the "Productivity and Investment Climate Survey" (PICS). The use of properly designed survey instruments enhances the credibility of WBG analysis and recommendations with government, the business community and other donors, and increases consensus regarding reform recommendations by providing a commonly-accepted factual base. The primary goal of the PICS is to provide quantitative data that allows an assessment of a country's business environment on firm performance in an internationally comparable manner. To generate internationally comparable data, every PICS must begin from a minimum core set of questions that are common across all countries. The accepted PICS Core questionnaire is found in Appendix 1 and all country surveys must contain at least 85 percent of the questions in the Core.

18. The survey manager is free to add additional questions or extend the survey with specialized modules to meet the clients' needs. Several ready-made modules are available, and should be used where applicable to enhance comparability and quality.[2] The questions from the Core may be reordered. However, to

2. Both the core instrument and approved standard modules are posted at http://www.worldbank.org/privatesector/ic/ic_ica_tools.htm.

maintain strict cross-country comparability, the questions themselves must not be reworded (except in translating to well-understood phrases with the same meaning) or substantively changed. All core questions should be asked using the instructions also included in Appendix 1.

19. When designing the survey, the ICA TTL should carefully consider what specific information they need from the survey. Are their specific regional or country issues that could be explored through the PICS? Are their questions being asked in surveys in neighboring countries that would serve as useful comparisons if the questions were asked in the selected country? Once the survey is launched it is too late to make such changes so they must be carefully considered in the planning stages. This should be a major subject in the consultations with local stakeholders, the country team and other donors.

20. The survey manager must keep in mind length when designing a survey. Experience has shown that interviews should take no more than 1–1.5 hours of a manager's time. When interviews go beyond this time, cooperation levels generally fall and, as a result, data quality suffers. Field experience suggests that currently the part of the core PICS administered to the manager generally takes 45 minutes to an hour. The instrument is broken into parts and it is usually possible to conduct the separate parts simultaneously, with multiple enumerators, thus collecting a large amount of information without taking too much time.

21. The PICS core survey is organized into two distinct parts. The larger of these deals with the characteristics of the business and the investment climate in which it operates including:

- ***General information about the firm:*** ownership, activities, location.
- ***Sales and supplies:*** imports and exports, supply and demand conditions, competition.
- ***Investment climate constraints:*** evaluation of general obstacles.
- ***Infrastructure and services:*** power, water, transport, computers, business services.
- ***Finance:*** sources of finance, terms of finance, financial services, auditing, land ownership.
- ***Labor relations:*** worker skills, status and training; skill availability; over-employment; unionization and strikes.
- ***Business-government relations:*** quality of public services, consistency of policy and administration, customs processing, regulatory compliance costs (management time, delays, bribes), informality, capture.

- ***Conflict resolution/legal environment:*** confidence in legal system, resolution of credit disputes.
- ***Crime:*** security costs, cost of crimes, use and performance of police services.
- ***Capacity, innovation, learning:*** utilization, new products, planning horizon, sources of technology, worker and management education, experience.

22. This first section is designed to be administered to the enterprise's manager or owner and many of the questions are qualitative, asking for the manager's opinion on the business environment and for his motivation for business decisions. Consequently, it should be administered to the managing director or his direct representative, whose evaluation of such conditions would influence the firm's investment and management strategy.

23. The second part of the core survey is smaller and consists of questions on production costs, investment flows, balance sheet information and workforce statistics. This section should be administered to the accounting department/book keeper and human resource manager. In enterprises that do not keep formal books, the figures must be estimated or constructed with the help of the enumerator. Often it is necessary to leave this portion of the survey with the firm or send it in advance to give them time to fill it out correctly. The advice of accountants familiar with the standard practices found in the country is essential in conducting this part of the survey. However, it should be noted that this part of the survey is also the most subject to non-response or erroneous response. In many countries, even firms that do keep formal books may be reluctant to reveal their true data, especially if they are underreporting either their income or wages to public agencies. In this context, assuring respondents of the confidentiality of the instrument and the potential value to the firm of reform recommendations, and proper training of enumerators to elicit accurate and consistent responses is imperative.

III. Survey Field Work

24. The PICS Core survey is designed to be administered in face to face interviews with managing directors, accountants, human resource managers and other relevant company staff. Ideally it is carried out in partnership with the organized private sector, such as a local chamber of commerce or business association; the government statistics agency and a government partner. However, local partners and co-sponsors are not likely to also be the implementing

agency. Few business associations have the internal capabilities to conduct large field surveys.

25. Implementing the survey involves a number of separate tasks:
    - Identifying an appropriate sample frame.
    - Piloting.
    - Making appointments with companies and securing their cooperation.
    - Hiring and training qualified enumerators.
    - Tracking survey completion and quality control.
    - Entering data and quality control.

26. It may be possible to find one organization capable of conducting all facets of the field work but in many cases responsibilities may have to be split. For example, in some countries a consulting company has handled finding and training enumerators while the local co-sponsor in the organized private sector (i.e. a business association) made appointments. In all cases the World Bank survey manager is ultimately responsible for the conduct of the survey and the quality of the data.

27. There are a wide variety of ways to organize payments and contracts. Some contracts pay implementing agencies by completed surveys, others by a daily rate and yet others are lump sum. Each has its advantages and disadvantages and the survey manager must determine which structure is appropriate for each individual case.[3]

A. Sample Frame

28. The credibility of claims based on the PICS findings depends in large part on the extent to which the survey sample is seen as accurately representing key elements of a nation's economy. Thus the validity of any statistical inferences drawn from the PICS results hinges on having an appropriate sample frame giving information required to draw a stratified random sample. Consequently, this process should not be shortchanged. Identifying an appropriate sample frame requires in-depth consultation with local contacts and usually personal visits to possible sources. Sample design and sample frames are discussed in more detail in chapter 4 but, an important part of the initial field work is developing a sample frame and developing a relationship with the country statistics agency. In

3. Although there are many possible correct choices on how to set up a contract, for the convenience of task managers, a sample terms of reference is included in Appendix 4.

many countries, the statistics agencies can not only help with the sample frame, but can also provide a vast amount of additional information helpful to the ICA, including data on macro economic trends, firm entry and exit, trade flows etc. In other countries, government may not have the capacity to provide a valid and up-to-date sample frame differentiated in the ways required for the PICS, and alternative frames must be identified or assembled through business associations, market research organizations, or other institutions.

B. Piloting

29. Every questionnaire must be piloted in the country prior to beginning training and launching the survey. The pilot determines if questions are properly worded and understood in the context of the particular country's business environment. The pilot might also reveal important business environment issues that are not covered by the initial survey formulation. However, the instrument used in piloting should already reflect the important issues and the piloting phase should be focused on ensuring the instrument is correctly worded and laid out. Depending on how many new questions are being tested on a survey, piloting may consist of anywhere from 10–25 interviews. An attempt should be made to pilot the survey in all major regions that the survey covers and firms from all size categories and sectors should be included in the pilot sample.

C. Appointments and Publicity

30. Making appointments is one of the most difficult tasks facing the implementing agency. Enterprise managers are often reluctant to take time from their busy schedules to answer intrusive questions. It is vital that the survey be launched with wide publicity and the full support of the local business establishment. Newspaper advertisements have proven useful in many countries. Another successful technique is to have publicized launch parties attended by business leaders and covered by the local press to lay out the purpose and scope of the survey. Not only do such events build cooperation, but they also begin laying the groundwork for a dissemination campaign and can enhance the business communities' ownership of findings and recommendations. It is useful if such events can be held in all regions that the survey is covering.

31. Once appropriate publicity has been carried out, teams of appointment makers can go to work. One successful technique is to make initial contact by an introduction letter, followed up by telephone. Ideally, letters are hand deliv-

ered. Having a respected businessman or a senior staff member of the cosponsoring agency involved in making appointments is useful for gaining cooperation, especially from large firms. In some countries the actual enumerators have been used to make appointments as well as conduct the interviews, in other cases the functions have been split, allowing enumerators to spend all their time conducting interviews. How this is actually organized is at the discretion of the implementing agency. But in all cases, survey teams should not be idle due to lack of appointments, given the excess costs this imposes.

32. Often, companies selected in the sampling process refuse to participate or will not provide certain essential information asked for in the survey. In this case, appointment makers or enumerators should try to persuade the company to cooperate. Often it is helpful to enlist the support of the co-sponsoring agency or to seek the intervention of respected business leaders. If the company still refuses then it should be dropped from the sample and replaced with an establishment drawn from the replacement list.

D. Enumerators and Training

33. Enumerators are the staff who actually carry out the interviews. In most surveys, the complexity of the instrument demands either that a team of 2–3 three people conduct the interview or that interviews are sequentially carried out by a single enumerator. One person can interview the manager, while another enumerator works with the accounting department and human resources manager to fill out the second part of the instrument. Enumerators selected to conduct the accounting and human resource section should be knowledgeable of basic accounting principles. They will have to help the companies' staff pull out the required information from their books and in some cases they will have to help construct information for small companies without formal books. In some countries where costs were not prohibitive, hiring practicing accountants proved extremely useful for quickly extracting accurate accounting data.

34. The quality of the data depends directly on the level of enumerator training. Therefore they must be thoroughly trained under the direct supervision of the World Bank survey manager. All enumerators should be provided a manual that describes what is expected of them and exactly how to ask each question, the purpose of the questions, and how to check the answers for consistency and quality. The aim of the training is to ensure that all enumerators thoroughly understand the instrument and are asking questions in a

manner consistent with other enumerators in their country and around the world. Training should adhere to the instructions that accompany the PICS core. Experience has shown that training usually takes 8–10 hours of class room work and exercises to familiarize enumerators with the questionnaire. Appendix 2 offers some basic enumeration principles that should be covered in the training. After the class room work, enumerators must conduct practice interviews under the supervision of experienced interviewers. One technique is to conduct interviews in the morning and return to the class room to provide feedback, discuss results and answer questions in the afternoon. When surveys are conducted simultaneously in a number of locations, the training of all enumerators should take place in the same location. This allows all teams to coordinate and adopt consistent interpretations of questions and interview techniques.

E. Supervision and Quality Control

35. The implementing agency is responsible for tracking survey completion and for quality control. Once an interview is completed, a supervisor within the implementing organization should immediately check to ensure it is filled out in accordance with the instructions in Appendix 1. At this stage the supervisor should check to make sure that all blanks are filled and all critical data has been collected. It is also necessary to check that all answers are legible. In many cases interview teams gather valuable information that is not a part of the formal survey. These notes and marginal comments must be captured in a way that will make them available to the data entry team and researchers.

36. Any missing or inconsistent data must be corrected by the enumerator. The more time it takes between interview completion and checking the survey form the more difficult it is to make corrections. It is often necessary to make repeat visits to participating establishments and these visits should be scheduled as soon as possible after the initial visit. Partially completed surveys should remain with the team until they are finished. However, once they are complete and have been checked and verified by the field supervisor they should be immediately sent for data entry. The implementing agency must have a plan for ensuring that all surveys are verified by a supervisor before they are sent for data entry and a method of transporting the completed surveys to the data entry locations.

37. Survey supervisors must spot check enumerators' work by following up with companies that they have interviewed. Supervisors should randomly con-

tact participating enterprises and ask if the interview went well. Did the enumerator ask all sections? Was he professional? Was the company satisfied with the interview? It is suggested that the implementing agency follow up with anywhere from 10–20 percent of the sampled establishments. For a smaller percentage of establishments, certain key responses should be checked for accuracy. Failure to follow this basic stricture can lead to large amounts of spurious information. If an enumerator is found to have made errors or not conducted the interview professionally, the supervisor should provide the enumerator immediate feedback. In some cases enumerators may need to be replaced.

38. In addition to ensuring survey forms are filled out correctly, the implementing agency must ensure that the sample meets the criteria set out in the sample design. The completion rate of interviews must be constantly monitored and checked against the stratification requirements and other elements of survey design.

F. Data Entry and Quality Control

39. Strictly speaking enumeration is not complete until the information is entered into a computer database. This task can be conducted by the implementing agency or be subcontracted out. Data entry should take place at the same time that field interviews are being conducted. Data entry is an integral part of the quality control process and it must be carefully supervised by a person who is not only skilled in the data entry program, but is intimately familiar with the questionnaire and survey design. Data entry clerks are another set of eyes to check the survey forms for illegal or out of range entries and as data is entered it is possible to pick up inconsistencies between different enumerators.[4] If enumerators are interpreting questions or answers incorrectly or differently from others this pattern will emerge during data entry.

40. Immediately after every interview the field team should review the questionnaire and ensure that it is completely filled out. They must correct any mistakes and collect missing data while the interview is fresh in their minds. Before a survey questionnaire is considered complete and sent for data entry it must be checked by a supervisor, who will verify that it is filled out accurately. At this stage the supervisor should check to make sure that all blanks are filled out and that all critical data has been collected. It is also necessary to check that all

4. Many survey organizations have the capacity to program data entry routines that check responses for illegal values and logical inconsistencies (see below). In other cases, the survey advisor can provide such a program.

answers are legible. In many cases interview teams gather valuable information that is not a part of the formal survey. These notes and marginal comments must be captured in a way that will make them available to the data entry team and researchers.

41. Partially completed surveys should remain with the team until they are finished. However, once they are complete and have been verified by the field supervisor, they should not be held, but immediately sent for data entry. The implementing agency must have a plan for ensuring that all surveys are verified by a supervisor before they are sent for data entry and a method of transporting the completed surveys to the data entry locations.

42. During the data entry process, reports should be run every day looking for outliers or anomalies that might be the result of incorrectly reported or incorrectly entered data. The data entry supervisor should look at important ratios such as value added/worker sales/worker, changes in capital stock compared to investment and other ratios that will pick up incorrect data. If this is done while the enumerators are in the field, then enterprises can be re-contacted to sort out discrepancies. The data entry team should return for correction any incorrectly filled-out questionnaires or questionnaires with discrepancies to the enumerator who conducted the interview.

43. Data should be entered into a carefully prepared data entry program and interviews should not commence until the data entry program is complete and has been tested. The data entry program should be MS-Access, EPI6-Info or some other data base program that will not allow out of range answers to be entered, will ensure that the enumerator has followed the proper skip patterns, and will check for logical inconsistencies. Data should not be entered into Excel other programs that do not have such controls.

44. In selecting an implementing agency (or agreeing on its procedures for PICS implementation) it is important to agree how they will manage data entry quality control. Some agencies use a process of double blind entry, where all forms are entered twice and then matched to catch mistakes. However, such a process is expensive for a survey as large as the PICS. Another approach is to only re-enter a small portion of randomly selected surveys. Agencies that are confident in their ability to check completed questionnaires and in the quality of their data entry team forgo double blind entry. In this situation they run other types of checks, for example printing out common ratios and looking for outliers. The World Bank survey managers must discuss how the firm assures quality control and be satisfied with

their system. The quality of the PICS data is the ultimate responsibility of the survey manager and the TTL.

IV. Sampling Guidelines

A. Introduction

45. Investment Climate Assessments provide information on the effects of a country's investment climate on enterprise performance and international competitiveness. The essential feature of the ICA is its ability to make international comparisons and, where possible, sub-national inter-regional comparisons. The ICS is designed to be conducted periodically to build a panel of sample firms, which over time will dramatically enhance researchers' ability to understand the business environment. Consequently, the success of an ICA depends critically on the sample used for the underlying survey. The consistency and efficiency of the national or regional estimates are only as good as the sample design.

46. Ideally, the PICS would use a sampling frame drawn from a well defined universe and follow a stratified random sampling methodology. Done correctly this will provide the basis to compute consistent population estimates with estimable standard errors and confidence intervals. Unfortunately, actual sampling procedures must depart from this ideal for various reasons. First, there is seldom a complete and accurate frame from which to select a sample. Few developing countries have updated firm registries and for those that do, the registries rarely have all of the required information. Budget constraints often mean that sampling is effectively limited to urban areas where there are large concentrations of targeted industries; consequently, large parts of the universe are excluded. Given the limited resources and the fact that many establishments, especially micro establishments, do not appear on government registers the samples are necessarily truncated. In some cases government registries cut off firms at a certain size, say less than 5 or less than 10 workers.

47. Budget constraints limit the overall sample size of a typical PICS to a very small fraction of the population. To obtain an accurate picture of the investment climate, this small sample must then be spread over a number of sectors, regions and establishment size categories.

48. The ICA orientation imposes further strictures on the sample design. While representation of the broad economy is highly desirable, given the pro-

ductivity orientation of the PICS, a small number of large sectoral sub-samples must be included to provide measures of productivity that can be compared to parallel sectors in other countries. At a minimum, sectors from both manufacturing and services should be covered. In addition, because the distribution of establishments in most countries is overwhelmingly populated by small and medium enterprises, surveys generally over-sample large establishments. Finally, in terms of location, attention must be paid in larger countries with substantial inter-regional variation to representing the diversity of conditions that exist. In countries like Brazil, China and India, capturing regional or state differences is a key objective of sample design.

49. However, encompassing too many strata drives standard errors unacceptably high. The need for international comparability and client demands to cover certain locations and sectors add further complications. This type of requirement often leads the sample to overweight particular sectors and cover them to a degree not warranted by their current share in aggregate activity. Such a bias must be carefully accounted for in the weighting scheme when analyzing the data.

50. Given the many constraints and competing demands, sample selection unavoidably involves a certain amount of discretion. However, within these constraints it is still important to use probability rules as far as possible. For example, we may decide which locations and sectors to cover based upon budget and policy relevance, but within the location-sector cell, sampling should be done in accordance with disproportionate stratified random sampling rules. In developing a sample it is important to address the following issues:

- The definition of the sampling unit.
- Sample size.
- Size, sector and geographic distribution.

51. However the sample is constructed, the details and the weighting scheme must be reported in a technical appendix to the ICA as well as provided along with the data base to the DEC group that manages the cross country data base.

B. Sampling Unit

52. The target unit for the PICS is the business establishment, not the firm.[5] An establishment refers to a production facility or trading outlet with a distinct management and location. A firm may have only one production location and thus be synonymous with an establishment, however large firms may have numerous establishments spread among distant locations. The ICA's goal is to link business environment issues directly to the performance of the business establishment. Since many environment issues are location specific e.g. laws, regulation, infrastructure, work force, it is necessary to use establishments and not firms.

53. Attempting to survey establishments can be problematic since many large firms keep consolidated accounts and have difficulty disaggregating financial and other data by establishment. In addition, managers who have more than one establishment may not answer subjective questions in a manner that reflects the experience of only one establishment. Since the firms that keep consolidated accounts are usually among the biggest and most influential, restricting interviews to firms with disaggregated accounts is often not possible. What is important is to make sure all data that is gathered is consistent. If information can not be disaggregated by establishment then the financial data must refer to the same unit as the labor force information and this must match the unit for which the manager is providing qualitative information. Ideally, the unit of observation is the establishment in one distinct location but market leaders should not be dropped to meet this goal.

C. Sample Size

54. In principle, sample size is limited only by budget and time constraints. Larger samples are better as they lead to lower standard errors for population estimates. A large sample also allows a PICS to cover more sectors and locations since every sector and location strata must have enough observations to make analysis useful. Ideally each sector and region represented in the sample will have at least 50–100 observations. The sample must also be large enough to provide a set of continuing establishments that will form a significant panel over time, despite the high attrition rate observed in many countries. Depending on the country, the sample size for most recent ICAs have ranged from 200–1500. Countries with a small formal private sector such as

5. Although much of the preceding and subsequent text refers to firms, in technical terms the relevant unit of analysis for the survey is the establishments.

Mozambique or Eritrea will have a small sample. However, large countries, where the survey must cover many regions such as Brazil, India or China, should have at least several hundred observations to ensure that each sector-region cell has enough observations to draw significant conclusions.

D. Stratification

55. All samples for PICSs must be stratified by size, sector and location. There are several reasons for this. First, industrial research has shown that there is significant variation in the constraints faced by establishments in different size categories. Second, productivity (and other measures of firm performance) should be estimated separately for establishments engaged in different sectors (and presumably having distinct production functions). Third, one of the main objectives of the ICA is to investigate geographic differences. Finally, governments, donors or business community counterparts may have policy or political reasons for wanting to understand certain subcategories of enterprises, such as SMEs, enterprises with FDI, manufacturers or exporters. There are other ways to stratify samples that may also be useful. For example, in some countries differences between government and privately owned establishments are important. In other countries, the performance of recently privatized companies relative to the rest of the economy is of interest to policy makers. These can be addressed in sample design, but all PICSs should stratify the sample by size, sector and location.

1. Size

56. The PICS takes a bore hole approach to size; drilling down and extracting a sample containing all size strata. Smaller establishments are generally thought to face more severe business problems than large establishments. Research has shown that small and medium enterprises have more difficulty obtaining credit, accessing markets and dealing with government regulations than their larger competitors. However, large establishments tend to have more variation in the types of problems that they face. In addition, large establishments are more likely to be exporters, make investments in technology and engage in other activities on which the PICS seeks information. Thus, careful stratification by size is necessary. Size can be determined by value-added, turn over, capital stock or employment. Often employment is the only reliable figure in developing countries, especially for manufacturing establishments, so the number of full time workers has been used by most World Bank Group and other international survey teams, including DECRG, RPED and the Oxford Centre for the Study of African Economies.

57. In most countries the number of registered small establishments dwarfs the number of large establishments. If a sample is constructed where establishments in different size strata are represented in the same proportion that they appear in the population, the results would be a sample overwhelmingly composed of small establishments. In some countries it would not be unusual to have 80–90 percent of the sample composed of establishments with less than 100 workers. This would lose much of the richness of the survey since often there is little variance among small establishments and such an approach would also eliminate many of the market leaders.

58. Some surveys overweight the large firms by basing the probability of selecting an establishment on its size. In this method, each worker has the same probability of being selected. Thus, an establishment with 1000 workers is 10 times more likely to be selected than a establishment with only 100 workers. This gives a sample where most of the biggest establishments are selected and the proportion of medium and large establishments is higher than the number of small and micro establishments. In order to obtain population estimates it is necessary to properly weight all results.

59. Other studies have attempted to have the size distribution of the sample mimic the population's distribution, especially where large and medium establishments are a sufficient portion of the population to make this approach useful. In some cases, contribution to GDP was used as a sampling criteria.

60. Most recent surveys have imposed a lower bound on the size of included establishments, often based on the cut off used by the official register serving as the sample frame. This technique removes most of the individual entrepreneurs and informal establishments that often account for much of the employment in poor countries. However, there are a number of practical issues that recommend this approach. First, the smallest establishments are almost never included in any available sample frame. By definition, unregistered establishments do not appear on government or business association lists. Micro enterprises and small groupings of artisans are not firms and do not rely on wage labor or have a visible management structure. Since they are not organized like firms, they may not have the same constraints and informal enterprises most likely face fewer problems from government regulations, which are an important focus of ICAs. Most micro and informal enterprises have very low levels of productivity and research suggests that only a tiny percentage have the internal capability to grow and become medium size firms. Thus, while they may account for much of a countries employment, they are the least dynamic part of the economy and contribute little to productivity improvements. The aim of the ICAs is to deter-

Box 2: Example—Technique for Sample Selection

Once it is determined which sectors and locations will be included it is necessary to allocate the sample among them. The following example outlines an approach where size is based upon employment.

1. The share of the sample allocated to each chosen sector is the same as the sector's share in total employment of all the selected sectors and locations. For example if garments accounts for 30 percent of the aggregate employment of the selected sectors and locations, then 30 percent of the sample will be garments firms.

2. Similarly the number of firms in each location is proportional to the location's share in aggregate employment.

3. The share of each sector in each location is proportional to its share in that location's aggregate employment. If garments accounts for 20% of aggregate employment in region 1 then 20% of the sample in region 1 is allocated to garments firms.

4. Once the sample has been allocated among sector and location the next step is to randomly choose establishments in each sector-location cell. Basing the probability of selection on an establishment's employment, where each individual worker has an equal chance of being in the sample, results in a sample skewed toward larger establishments. However, this bias can be corrected through appropriate weighting and this approach is more likely to ensure that the sample covers a wider variety of enterprises including exporters, foreign-owned firms and those who have recently adopted new technologies.

5. Since many establishments will either refuse to cooperate or be unable to respond, it is necessary to develop a reserve list. Establishments that are identical to the selected establishments in terms of size, sector and location and other stratifying criteria must be identified. As a selected establishment falls out it is replaced by a designated alternate drawn from the same cluster.

6. Finally, many researchers want to ensure that market leaders and establishments with specific characteristics are included. For example if the selection methodology does not provide many exporting firms or leaves out the largest multi-nationals that are useful for international comparisons, the researcher may add the desired establishments.

There are a wide range of references on sampling including: Levy, P.S. and Lemeshow, S. (1991). *Sampling of Populations, Methods and Applications*, John Wiley and Sons, New York; and Brenda G. Cox et al. (Editors), (1995). *Business Survey Methods.* A product of the International Conference on Establishment Surveys, held in Buffalo, New York, June 1993, New York. This text contains papers that describe current methods and new technologies for solving the problems unique to business surveys. The contributors cover such topics as frames and business registers; sample design and selection; data collection and response quality; data processing; weighting and estimation; and past, present, and future directions.

mine how to spur growth and raise productivity. Under this logic, PICSs should gather information where there is a potential to accomplish this and the sample should be skewed toward larger enterprises.

2. Sector

61. One of the most difficult issues in sample design is determining which sectors to cover. Not all sectors can be covered since the sample size is limited. Having only a few establishments in any sector-location cell makes statistical comparisons of limited value. It is also necessary to cover sectors that are included in surveys of other countries to allow meaningful comparisons of productivity.

62. The need to make international comparison of productivity estimates led previous studies to restrict their coverage to a few common manufacturing sectors. Adding non-manufacturing sectors makes estimating productivity more difficult due in part to greater heterogeneity of production technology and a weaker understanding of productivity estimation in services industries. The techniques for estimating productivity in the service sectors are less developed and the survey questions needed to gather the required information are somewhat different for manufacturing and service sector enterprises. However, retail, wholesale trade and, tourism, and other services are important sectors in developing countries, often accounting for a larger share of GDP than manufacturing. Leaving them out would not provide a complete picture of the investment climate. If a survey includes non-manufacturing enterprises, the survey instrument design must reflect this decision.

63. Given the limited sample size, it is necessary to make choices and restrict the sample to only a few clearly defined sectors. If a good representation of sectors is chosen, then it is possible to make inferences about the investment climate as a whole. The selection of sectors is also made more complicated by the demands of clients and policy makers who often want coverage of specific sectors for their own needs. To harmonize sector structure and ease cross country comparison, where possible samples should be designed using standard ISIC classifications, revision 3.

3. Location

64. The high cost of face to face interviews limits the choice of locations to areas with a high concentration of establishments in the selected sectors. This

generally means that the survey will be restricted to regions with large urban centers. To understand inter-regional variations it may be necessary to add some outlying regions with limited industrial activity, but in this case the sample will still be restricted to urban centers where there is a high density of establishments in the chosen sectors. How many separate locations are selected depends upon the budget, the size of the country, unique geographic characteristics and the interests of stake holders.

E. Sample Frame

65. The importance of the sample frame must not be overlooked. All possible sources must be utilized to obtain an accurate sample frame and this will often require a concentrated effort in the country. There are three likely places to find information to build a sample frame:

- ***Census Groups***. Some countries have well developed census or statistics departments that do an annual or biannual census of operating firms. This provides a list scrubbed of no-longer active companies and it also provides valuable information on entry and exit. Such lists usually have ISIC codes and some measure of size, often the number of workers. This situation is ideal, but in most of the poorer countries nothing like this exists. Another possible government agency is the registrar of companies, but this is only useful if they remove closed firms and update company information on size.

- ***Tax Authorities.*** Social security tax authorities usually have good lists of firms that are paying employee social security tax. They regularly update the lists when tax payments arrive and their lists will have employment and location information. However, they do not always have ISIC codes. VAT lists are also a good place to obtain information on operating companies. Unfortunately, many companies are VAT exempt so they will not show up on the lists and a VAT list probably does not have the most common measure of size: number of employees. However, it will have turnover. Often it is difficult to get tax authorities to release their lists.

- ***Commercial Lists.*** Commercial companies (such as market research firms) keep lists of firms for marketing purposes. While such lists are usually accurate, being updated frequently, they are often incomplete and unrepresentative. They usually only list major companies or com-

panies in certain cities and do not break out separate establishments. The information on such lists, while usually accurate, does not always include information on size, sector and other characteristics required for drawing a sample.

V. Data Handling

66. The success of an investment climate survey is judged by how accurate and usable is the resulting data set. The survey manager and the TTL are ultimately responsible for the quality of the data and the data entry and data handling process are critical determinants for the quality of the data. Once the survey is completed the survey manager must provide the cleaned data along with a coded questionnaire to the DECRG data manager for inclusion into the ICA database.

67. Validated questionnaires should be entered using a computer program "form" (such as Access, EPI-INFO, etc.) that will allow the exclusion of inadmissible entries and automatically follow the required skip patterns. The program must be able to output the data set into a format commonly used in the World Bank. STATA is the preferred format. In exceptional cases data may have to be entered in Excel or another program that does not set acceptable ranges. In this case, a system of double blind entry must be used, where each filled-out questionnaire is entered electronically twice by two different people.

68. In order to avoid errors in data entry and cleaning, the instrument must use extreme care in coding variables that might lead to non-sampling errors. For instance, variables referring to "Not Applicable" (NA), "Not Provided" (NP), "Refused to answer" (REF), "Don't Know the answer" (DK) should be clearly identified with a 3-digit negative number as follows: DK = -666; NA= -777; NP = -888; and REF=-999.

69. Given the extreme difficulty in cleaning non-numeric variables (that is, text or string variables) numeric entries should be used wherever possible. For this purpose all the codes assigned to the core and modules are intended to be numeric. The only codes allowed to be "text" are those ending with the letter "…x" (such as "c205bx"). A special case in point are answers to "Yes / No" questions. They should always be entered as a numeric value, such as 1=yes and 2=no. Equally important, coding across questions should be consistent – for example, all "yes" responses should be represented by the same number in every survey question for which it is a valid response.

70. Often the interview teams gather valuable information that is not a part of the actual survey form. This information may help researchers understand the survey data or possibly identify problems that were not identified when the survey instrument was designed. This information should not be lost. It should be entered into a separate file of notes possibly in Word or another format. But these notes should not be mixed with the predominantly numeric information coming from the survey.

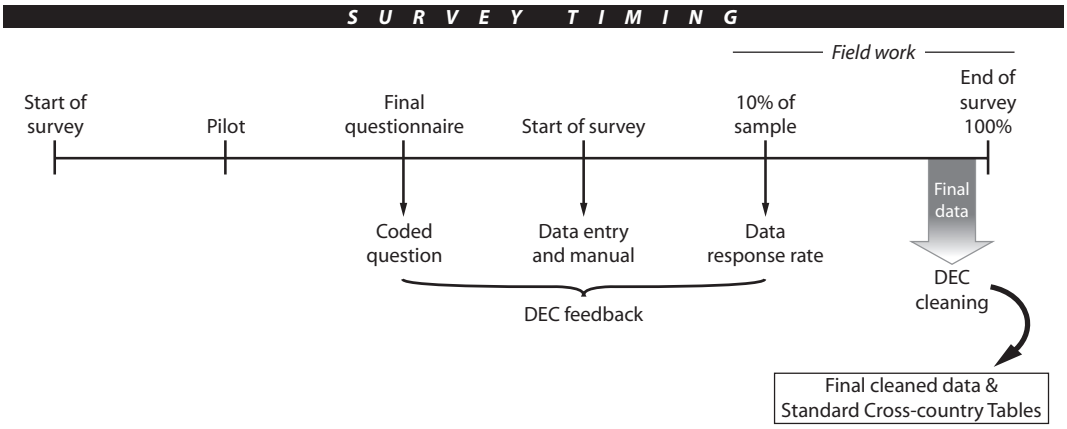
A. ICA Database

71. DECRG is responsible for maintaining a database of all of the data generated by investment climate surveys. This database will include a comprehensive dataset that harmonizes all of the variables in the core questionnaire and most frequently applied standard modules. The data base will allow authors of ICAs to easily make cross country comparisons. It will also provide researchers the ability to investigate investment climate issues and to pursue research on micro-economic issues using a large cross section of establishments from different countries.

72. Once the survey is completed, a copy of the data should be turned over to DECRG. DECRG will check the data for consistency, incorporate it into the comprehensive ICA database and provide the TTL with the harmonized dataset (with inconsistencies and out-of-range values removed). DECRG will also provide standard tables, which both provide the basis for comparing country data to other countries and break down results into key established categories, such as by establishment size, activity and ownership. DECRG will provide the standard tables within one working week of receiving the data and the required documentation.

73. DECRG will also help check data from the ICS for consistency and accuracy as the survey is being conducted. If possible, the survey manager will provide the entered data for the first 100 firms to DECRG immediately after they are entered. Then using the codes provided to match the survey's questions with the core questions, DECRG will check the data to ensure there are no out of range variables, that the most important questions are being entered and that the answers to the core questions are internally consistent. For example, a firm that does not have an overdraft should not have answered how much of its overdraft is unused. DECRG will provide immediate feedback to the survey managers so that it is possible to identify and correct mistakes before the survey field work progresses too far.

Figure 1: Timeline for DEC/Region Interaction



74. The survey manager is responsible for providing a cleaned version of the data to DECRG for inclusion in the World Bank cross country data base in return for the standard table. Each country's data provides additional points of comparison for all other countries, so this it is vital for each ICA team to contribute to the institutional database. DECRG staff will check the data for consistency and out of range variables as they generate the standard tables. However, DECRG has no ability to correct mistakes or impute values. Questions with errors will be deleted and the information will be lost. Consequently, the survey managers must ensure that the data is cleaned and errors corrected before it is sent to DECRG. Among other issues cleaning the data includes:

- All establishment id codes are unique.
- All core variables are numeric, except those specifically identified as character (such as names and where "other" is answered).
- In questions where the multiple parts sum to 100, all entries that should be 0 are not left missing and that the parts in fact sum to 100.
- Multiple part questions sum to the reported total.
- Skip patterns are correctly followed. For example an establishment that has a bank loan does not answer a question on why it does not have a loan.
- 3 digit negative number are used to identify DK, NA, NP and REF are consistent through the data set and match the agreed upon codes.
- All monetary values are entered in local currency values.
- Yes and No questions are coded consistently throughout the data set. Yes=1 and No=2 is preferred.

Careful survey preparation and a properly constructed and tested data entry program will eliminate most of the cleaning issues listed above.

75. To allow DECRG to provide standard tables with in a week, the survey manager must provide the following documentation along with the data:

- A file with the coded questionnaire[6]
- One Excel sheet containing the list of all the variables used in the survey questionnaire and the corresponding matching codes in the core questionnaire (see Annex 1)
- One Excel sheet containing the list of core and module questions used in the survey questionnaire (see Annex 2)
- A file listing any changes or rewording done to core questions that make them similar but not exactly comparable to core questions.
- A file describing any specific characteristic of the data that should be taken into account during the cleaning process (i.e. codes used for sector, location, enumerators), as well as any difference between the codes used in the core questionnaire and those used in the survey (i.e. yes=1 & no=0 instead of yes=1 & no=2; range 1–4 instead of range 1–6, etc. see example C).

6. Coded questionnaire = questionnaire with the codes assigned for each data entry variable. These codes can be the same or different from the codes assigned to the core and modules.

Annex 1

Example A: Description of Excel File Sheet with Coding Information

Assuming that questions V.3 and V.6 are asked in your Survey and are coded as follows:

25 Is your establishment/firm a member of a business association or chamber of commerce? _c225a_ YES NO

b) IF YES, for each of the following, please indicate if this is a service the business association or chamber that is most important to your firm provides, and if so, what the value of this service is to your firm?
0= no value; 1= minor value; 2= moderate value; 3= major value; 4= critical value to your firm

	Not Provided	Value to your firm	
a) Lobbying government	NP	0 1 2 3 4	c225ba
b) Resolution of disputes (with officials, workers or other firms)	NP	0 1 2 3 4	c225bb
c) Information and/or contacts on domestic product and input markets	NP	0 1 2 3 4	c225bc
d) Information and/or contacts on international product and input markets	NP	0 1 2 3 4	c225bd
e) Accrediting standards or quality of products; reputational benefits	NP	0 1 2 3 4	c225be
f) Information on government regulations	NP	0 1 2 3 4	c225bf

26 or each of the following business services, for your establishment over the last year, please assess whether it is affordable and evaluate the quality on a 1-4 scale where 1 is very poor and 4 is very good.
(Quality: 1 = very poor, 2 = somewhat poor, 3 = somewhat good, 4 = very good, N/A=not applicable to my establishment)

			Affordable?		Quality ?				
i.	Engineering	c226a1	Yes	No	1	2	3	4	c226b1
ii.	Management consultants	c226a2	Yes	No	1	2	3	4	c226b2
iii.	Marketing	c226a3	Yes	No	1	2	3	4	c226b3
iv.	Accounting	c226a4	Yes	No	1	2	3	4	c226b4
v.	Legal services	c226a5	Yes	No	1	2	3	4	c226b5
vi.	Insurance	c226a6	Yes	No	1	2	3	4	c226b6
vii.	IT services	c226a7	Yes	No	1	2	3	4	c226b7

And the corresponding core questions are:

V3 Is your establishment/firm a member of a business association or chamber of commerce? _s503a_ YES NO

b) IF YES, for each of the following, please indicate if this is a service the business association or chamber that is most important to your firm provides, and if so, what the value of this service is to your firm?

0= no value; 1= minor value; 2= moderate value; 3= major value; 4= critical value to your firm

	Not Provided	Value to your firm					
1) Lobbying government	NP	0	1	2	3	4	s503b1
2) Resolution of disputes (with officials, workers or other firms)	NP	0	1	2	3	4	s503b2
3) Information and/or contacts on domestic product and input markets	NP	0	1	2	3	4	s503b3
4) Information and/or contacts on international product and input markets	NP	0	1	2	3	4	s503b4
5) Accrediting standards or quality of products; reputational benefits	NP	0	1	2	3	4	s503b5
6) Information on government regulations	NP	0	1	2	3	4	s503b6
7) Access to business development services (training, consultancy, etc)	NP	0	1	2	3	4	s503b7
8) Access to bank credit and other financing	NP	0	1	2	3	4	s503b8

V6 For each of the following business services, for your establishment over the last year, please assess whether it is affordable and evaluate the quality on a 1-4 scale where 1 is very poor and 4 is very good.

(Quality: 1 = very poor, 2 = somewhat poor, 3 = somewhat good, 4 = very good, N/A=not applicable to my establishment)

			Affordable?		Quality ?				
viii.	Engineering	s506a1	Yes	No	1	2	3	4	s506b1
ix.	Management consultants	s506a2	Yes	No	1	2	3	4	s506b2
x.	Marketing	s506a3	Yes	No	1	2	3	4	s506b3
xi.	Accounting	s506a4	Yes	No	1	2	3	4	s506b4
xii.	Legal services	s506a5	Yes	No	1	2	3	4	s506b5
xiii.	Insurance	s506a6	Yes	No	1	2	3	4	s506b6
xiv.	IT services	s506a7	Yes	No	1	2	3	4	s506b7

The Excel sheet containing the survey codes corresponding to the core codes should look like this:

	survey codes	**core codes**	
	.	.	
	.	.	
	s503a	--	
	s503b1	c225ba	
	s503b2	c225bb	
	s503b3	c225bc	
	s503b4	c225bd	
	s503b5	c225be	
	s503b6	c225bf	
	s503b7	--	
	s503b8	--	
	s503b9	--	
	s506a1	--	
	s506a2	--	
	s506a3	--	
	s506a4	--	
	s506a5	--	
	s506a6	--	
	s506a7	--	
	s506b1	c226a1	
	s506b2	c226a2	
	s506b3	c226a3	
	s506b4	c226a4	
	s506b5	c226a5	
	s506b6	c226a6	
	s506b7	c226a7	
	s506c1	c226b1	
	s506c2	c226b2	
	s506c3	c226b3	
	s506c4	c226b4	
	s506c5	c226b5	
	s506c6	c226b6	
	s506c7	c226b7	
	.	.	
	.	.	

Annex 2

Example B: Excel Sheet Containing the List of Questions Used in the Core and Module

CORE	Used (Yes/No)		Module 1 (Logistics)*	Used (Yes/No)		Module 2 (Health)*	Used (Yes/No)
Question 1	Y		Question 1	Y		Question 1	Y
Question 2	N		Question 2	N		Question 2	N
Question 3	N		Question 3	N		Question 3	N
Question 4	N		Question 4	N		Question 4	N
Question 5	N		Question 5	N		Question 5	N
Question 6	Y		Question 6	Y		.	.
Question 7	Y		Question 7	Y		Question 7	Y
Question 8	Y		Question 8	Y		Question 8	Y
Question 9	Y		Question 9	Y		Question 9	Y
Question 10	N		Question 10	N		Question 10	N
Question 11	Y		Question 11	Y		Question 11	Y
Question 12	N		Question 12	N		Question 12	N
Question 13	N		Question 13	N		Question 13	N
Question 14	Y		Question 14	Y		.	.
Question 15	Y		Question 15	Y		.	.
Question 16	Y		Question 16	Y		.	.
Question 17	Y		Question 17	Y		Question 20	N
.	.		.	.		Question 21	Y
.	.		.	.		Question 22	Y
.	.		.	.		Question 23	Y

continued on next page

.	.		.	.		.	.
Question 26	Y		Question 26	Y		.	.
Question 27	N		Question 27	N		.	.
Question 28	N		Question 28	N		.	.
Question 29	Y		Question 29	Y		.	.
.	.		.	.		.	.
.	.		.	.		.	.
.	.		.	.		.	.
.	.						
Question 78	Y						
Question 79	Y						

Annex 3

Code Examples

Examples of Codes Assigned to Specific Variables in the Survey Data Set

Sector codes (variable s545a)	
Garments	1
Textiles	2
Electronics	3
….	….

Location codes (variable s415c)	
Manila	1
Angeles	2
Olongapo	3
….	….

Enumerator codes (variable s385)	
John M.	31
George T.	32
Michael S.	33
….	….

NA, NP, DK, REF codes	
DK	-666
NA	-777
NP	-888
REF	-999

Examples of Codes Assigned to Specific Variables in the Survey Data Set

	survey codes	core codes
Yes	1	1
No	0	2

Appendix 1

PICS Core and Modules—Productivity and the Investment Climate Private Enterprise Survey

The purpose of this survey is to better understand conditions in the local investment climate and how they affect firm-level productivity. The goal is to advise government on ways to change policies that hinder private establishments like yours and to develop new policies and programs that support productivity growth. Your answers should reflect only your experience of doing business in your country. Please note that the information obtained here will be treated strictly confidentially. Neither your name nor the name of your firm will be used in any document based on this survey.

GENERAL INFORMATION

NOTE: QUESTIONS 1 THROUGH 6 APPLY TO YOUR ENTIRE FIRM, INCLUDING ALL ITS ESTABLISHMENTS (FACTORIES, STORES AND/OR SERVICE OUTLETS).

1. In what year did your firm begin operations in this country? _____

2. What is the current legal status of your firm? _____

Publicly listed company = 1
Private held, limited company = 2
Cooperative = 3
Sole proprietorship = 4
Partnership = 5
Other (specify:_____) =6

3. What percentage of your firm is owned by: Private Sector: a) domestic ____%
b) foreign ____%
Government/State ____%
Other ____%
100

4. Was your firm previously owned by the government (the state)? _____

Yes =1 No=2

If yes, when was it privatized? _____ (year)

5. a) What percentage of your firm is owned by the largest shareholder or owner? ____%

b) Which of the following best describes the largest shareholder or owner in your firm?

1. Individual *(multiple answers acceptable)* _____
2. Family
3. Domestic company
4. Foreign company
5. Bank
6. Investment fund
7. Managers of the firm
8. Employees of the firm
9. Government or government agency
*10. Other (Specify)*_____

If the largest shareholder is an individual (or family member):

c) Is this principal owner also the manager/director? _____

Yes =1 No=2

d) Is the principal owner male? _____

Yes =1 No=2

6. a) How many establishments (separate operating facilities) does your firm have in this country? _____

b) Does your firm have holdings or operations in other countries? _____

Yes =1 No=2

NOTE: FOR THE REMAINDER OF THIS SURVEY, PLEASE ANSWER WITH RESPECT TO THIS ESTABLISHMENT (FACTORY, STORE OR SERVICE OUTLET).

7. What year did this establishment begin operations? _____

8. Where are this establishment and your headquarters located in this country? (name of city)
(Enumerator, Please code as follows: 1= Capital City; 2=Other city of over 1 million people; 3=City of 250,000–1million; 4=City of 50,000–250,000; 5=Town or Location with less than 50,000 population)

This establishment _____ ____

Headquarters (if different) _____ ____

9. What is your main product line? (show lists) _____

10. a) Do you have other income generating activities beyond these main business lines? YES NO

b) If YES, what percent of your workers time is accounted for by:

i. Manufacturing : specify main line of business (e.g. textiles) _____ ____%
ii. Services: main service provided _____ (e.g. consulting, transportation): ____%
iii. Commerce (retail/wholesale trade) ____%
iv. Construction: ____%
v. Other (specify) _____ ____%
100%

SALES AND SUPPLIES

11. a) Within your main product line, what share of the local market in your city or town is made up by the sales of your establishment? ____ %

b) Within your main product line, what share of the national market is made up by the sales of your establishment? ____%

12. a) What percent of your establishment's sales are:

i) sold domestically _____%
ii) exported directly _____%
iii) exported indirectly (through a distributor) _____%
100%

b) Approximately what percentage of your domestic sales are to:

i) the government _____%
ii) state owned or controlled enterprise _____%
iii) multinationals located in your country _____%
iv) your parent company or affiliated subsidiaries _____%
v) large domestic firms (those with approximately 300 plus workers) _____%
vi) other (sales to small firms, individuals, etc. _____%
100%

c) If you export:

i) what was the year your establishment first exported? _____ (year)

ii) which countries are the biggest destinations for your exports?
_____ _____ _____

13. a) What percent of your establishment's material inputs and supplies are:

i) purchased from domestic sources _____%

ii) imported directly _____%

iii) imported indirectly (through a distributor) _____%
TOTAL 100%

14. At the time you receive delivery of your most important input or supply, how many days of inventory do you typically have on hand? ____ days of inventory of main input

15. What percent of your purchased material inputs/supplies are of lower than agreed upon quality? ____ %

16. What percentage of sales in the last year were lost due to delivery delays from suppliers? ____ %

17. (For the following questions, if respondent does not know the precise number, but knows it is more than 20, please code as "555")

a) Over the last year, within your main product line, how many competitors do you have in the domestic market that are private domestic enterprises, state-owned enterprises or foreign-owned enterprises?

Domestic Private Firms _____ State Owned Firms _____
Foreign Owned Firms _____ Firms Importing _____

b) Over the last year, within your main product line, how many suppliers of your main supply or input do you have that are private domestic enterprises, state-owned enterprises or foreign-owned enterprises?

Domestic Private Firms _____ State Owned Firms _____
Foreign Owned Firms _____ Firms located Abroad _____

c) Over the last year, within your main product line, how many customers do you have that are private domestic enterprises, state-owned enterprises or foreign-owned enterprises?

Domestic Private Firms _____ State Owned Firms _____
Foreign Owned Firms _____ Firms located Abroad _____

18. Now I would like to ask you a hypothetical question. If you were to raise your prices of your main product line or main line of services 10% above their current level in the domestic market (after allowing for any inflation) which of the following would best describe the result assuming that your competitors maintained their current prices?
_____ (select one of the options below).

1. Our customers would continue to buy from us in the same quantities as now
2. Our customers would continue to buy from us, but at slightly lower quantities
3. Our customers would continue to buy from us, but at much lower quantities
4. Our customers would stop buying from us.

INVESTMENT CLIMATE CONSTRAINTS TO THE ESTABLISHMENT

19. Please tell us if any of the following issues are a problem for the operation and growth of your business. If an issue poses a problem, please judge its severity as an obstacle on a four-point scale where:

0 = No obstacle 1 = Minor obstacle 2 = Moderate obstacle 3 = Major obstacle 4 = Very Severe obstacle

	No Problem	*Degree of Obstacle*
A. Telecommunications	0	1 2 3 4
B. Electricity	0	1 2 3 4
C. Transportation	0	1 2 3 4
D. Access to Land	0	1 2 3 4
E. Tax rates	0	1 2 3 4
F. Tax administration	0	1 2 3 4
G. Customs and Trade Regulations	0	1 2 3 4
H. Labor Regulations	0	1 2 3 4
I. Skills and Education of Available Workers	0	1 2 3 4
J. Business Licensing and Operating Permits	0	1 2 3 4
K. Access to Financing (e.g. collateral)	0	1 2 3 4
L. Cost of Financing (e.g. interest rates)	0	1 2 3 4
M. Economic and Regulatory Policy Uncertainty	0	1 2 3 4
N. Macroeconomic Instability (inflation, exchange rate)	0	1 2 3 4
O. Corruption	0	1 2 3 4
P. Crime, theft and disorder	0	1 2 3 4
Q. Anti-competitive or informal practices	0	1 2 3 4
R. Legal system/conflict resolution	0	1 2 3 4

INFRASTRUCTURE AND SERVICES

20. During how many days last year did your establishment experience the following service interruptions, how long did they last, and what percent of your total sales value was lost last year due to:

	# Days	*Avg. duration*	*Lost Value**	
a) power outages or surges from the public grid?	_____ Days	_____ Hrs	____% total sales	NA
b) insufficient public water supply?	_____ Days	_____ Hrs	____% total sales	NA
c) unavailable mainline telephone service?	_____ Days	_____ Hrs	____% total sales	NA
d) transport failures?	_____ Days	_____ Hrs	____% total sales	NA

*(*Please include losses due to lost production time from the outage, time needed to reset machines, and production and sales lost due to processes being interrupted.)*

21. a. What is your average cost of a kilowatt-hour (KwH) of electricity from the public grid? _____

b) Does your establishment own or share a generator? _____

Yes =1 No=2

c) If YES, what percentage of your electricity comes from your own or a shared generator? _____%

d) If YES, what was the generator's original cost to your establishment? LCU_____ Year _____

22. What share of your firm's water supply do you get from:

a) municipal/public sources? ____%
b) your own well or a shared well? ____%
c) purchased from private vendors? ____%

23. What percentage of the value of your average cargo consignment is lost while in transit due to breakage, theft, or spoilage? ___ % of consignment value

24. What percent of your workforce regularly uses a computer in their jobs? _____%

25. Does your enterprise regularly use e-mail or a website in its interactions with clients and suppliers?

a) E-mail? _____

Yes =1 No=2

b) A website? _____

Yes =1 No=2

26. a) Is your establishment/firm a member of a business association or chamber of commerce? YES NO

b) IF YES, for each of the following, please indicate if this is a service the business association or chamber that is most important to your firm provides, and if so, what the value of this service is to your firm?

0= no value 1= minor value 2= moderate value 3 = major value 4= critical value to your firm

	Not Provided	*Value to your firm*
a) Lobbying government	NP	0 1 2 3 4
b) Resolution of disputes (with officials, workers or other firms)	NP	0 1 2 3 4
c) Information and/or contacts on domestic product and input markets	NP	0 1 2 3 4
d) Information and/or contacts on international product and input markets	NP	0 1 2 3 4
e) Accrediting standards or quality of products; reputational benefits	NP	0 1 2 3 4
f) Information on government regulations	NP	0 1 2 3 4

27. For each of the following business services, for your establishment over the last year, please assess whether it is affordable and evaluate the quality on a 1–4 scale where 1 is very poor and 4 is very good.

1 = very poor 2 = somewhat poor 3 = somewhat good 4 = very good N/A=not applicable to my establishment)

	Affordable?		*Quality ?*				
a) Engineering	Yes	No	1	2	3	4	N/A
b) Management consultants	Yes	No	1	2	3	4	N/A
c) Marketing	Yes	No	1	2	3	4	N/A
d) Accounting	Yes	No	1	2	3	4	N/A
e) Legal services	Yes	No	1	2	3	4	N/A
f) Insurance	Yes	No	1	2	3	4	N/A
g) IT services	Yes	No	1	2	3	4	N/A

FINANCE

28. Please identify the contribution over the last year of each of the following sources of financing for your establishment's: i) ***Working Capital*** (i.e. inventories, accounts receivable and cash); and i i) ***New Investments*** (i.e. new land, buildings, machinery and equipment)

	Working Capital	*New Investments*
a) Internal funds or Retained earnings	_____ %	_____ %
b) Local commercial banks (loan, overdraft)	_____ %	_____ %
c) Foreign owned commercial banks	_____ %	_____ %
d) Leasing arrangement	_____ %	_____ %
e.) Investment Funds/Special Development Financing/ or Other State Services	_____ %	_____ %
f) Trade credit (supplier or customer credit)	_____ %	_____ %
g) Credit cards	_____ %	_____ %
h) Equity, sale of stock	_____ %	_____ %
i) Family, friends	_____ %	_____ %
j) Informal sources (e.g. money lender)	_____ %	_____ %
k) Other (specify source): _____	_____ %	_____ %
TOTAL	100 %	100 %

29. Do you have an overdraft facility or line of credit? Yes No

If YES, what percent is currently unused? _____%

30. For the most recent loan or overdraft:

a) When was this financing approved (year)? ____

b) Did the financing require collateral or a deposit? YES NO N/A (no loan)

c) If yes, what share of collateral was:
   i) Land and buildings? _____
   ii) Machinery? _____

iii) Intangible assets (accounts receivable, inventory)? _____
iv) Personal assets of owner/manager (e.g. house)? _____

d. What was the approximate value of collateral required as a percentage of the loan value? ____%

e) What is the loan's approximate annual cost/ rate of interest? ____%

f) What is the duration (term) of the loan? ____ months

31. What share of your total borrowing (loans, accounts payable) is denominated in foreign currency? ____%

32. How long does it take to clear the following payments through your financial institution (i.e. until the recipient can draw the funds)?

	Days	*Charge (% of transaction) or*	*fee (LCU)*
a) a check	_____	_____%	____
b) a domestic currency wire	_____	_____%	____
c) a foreign currency wire	_____	_____%	____

33. Does your establishment have its annual financial statement reviewed by an external auditor? YES NO

34. Of the land and buildings occupied by this establishment, what percent is owned or leased/rented?

	Owned	*Leased or rented*	*If leased/rented, av. contract length*
a) Land	_____%	_____%	____ months
b) Buildings	_____%	_____%	____ months

BUSINESS-GOVERNMENT RELATIONS

35. How would you generally rate the efficiency of government in delivering services (e.g. public utilities, public transportation, security, education and health etc.). Would you rate it as (read 1–6)?

1. *Very inefficient*
2. *Inefficient*
3. *Somewhat inefficient*
4. *Somewhat efficient*
5. *Efficient*
6. *Very efficient*

36. "In general, government officials' interpretations of regulations affecting my establishment are consistent and predictable." To what extent do you agree with this statement? Do you (read 1-6)?

1. *Fully disagree*
2. *Disagree in most cases*
3. *Tend to disagree*
4. *Tend to agree*
5. *Agree in most cases*
6. *Fully agree*

37. a) If you import, what was the average and the longest number of days in the last year that it took from the time your goods arrived in their point of entry (e.g. port, airport) until the time you could claim them from customs? _____ days on average NA (we don't import)
_____ days for the longest time in the last year

b) If you export, what was the average and the longest number of days in the last year that it took from the time your goods arrived in their point of exit (e.g., port, airport) until the time they clear customs?

i) _____ days on average
ii) _____ days was the longest time in the last year
NA (we don't export)

38. If you could change the number of regular full-time workers you currently employ without any restrictions (i.e. without seeking permission, making severance payments etc.), what would be your optimal level of employment as a percent of your existing workforce? _____ %
(e.g. 90% implies you would reduce your workforce by 10%, 110% means you want to expand by 10%)

39. In a typical week, what percentage of senior management's time is spent in dealing with requirements imposed by government regulations [e.g. taxes, customs, labor regulations, licensing and registration] including dealings with officials, completing forms, etc.? _____ %

40. We've heard that establishments are sometimes required to make gifts or informal payments to public officials to "get things done" with regard to customs, taxes, licenses, regulations, services etc. On average, what percent of annual sales value would such expenses cost a typical firm like yours? _____ %

41. Based on the experience of your establishment over the last two years, what is the actual delay experienced (from the day you applied to the day you received the service or approval) and was a gift or informal payment asked for or expected to obtain each of the following?

	Actual delay/Wait (days)	*Gift/payment expected?*	*If yes, value?*
a) A mainline telephone connection	_____ or N/A	YES NO	_____
b) An electrical connection	_____ or N/A	YES NO	_____
c) A water connection	_____ or N/A	YES NO	_____
d) A construction permit	_____ or N/A	YES NO	_____
e) An import license	_____ or N/A	YES NO	_____
f) Operating license	_____ or N/A	YES NO	_____

42. Recognizing the difficulties many enterprises face in fully complying with taxes and regulations, what percentage of total sales would you estimate the typical establishment in your area of activity reports for tax purposes? _____ %

43. On average, how many days last year were spent in inspections and mandatory meetings with officials of each of the following agencies in the context of regulation of your business? And what were the costs associated with these interactions?

	Total days spent in inspections, required meeting with officials	*% by local authorities*	*Total cost of fines or seized goods*	*Was gift or informal payment ever expected/requested?*	*If yes, value? (LCU)*
a) Tax inspectorate				YES / NO	
b) Labor and Social Security				YES / NO	
c) Fire and Building Safety				YES / NO	
d) Sanitation/Epidemiology				YES / NO	
e) Municipal Police				YES / NO	
f) Environmental				YES / NO	
g) TOTAL, all agencies				YES / NO	

44. When establishments in your industry do business with the government, how much of the contract value is typically expected in gifts or informal payments to secure the contract? _____ %

45. Think about national laws and regulations enacted in the last two years that have a substantial impact on your business:

a) Did your firm seek to lobby government or otherwise influence the content of laws or regulations affecting it? YES NO

b) How much influence do you think the following groups actually had on recently enacted national laws and regulations that have a substantial impact on your business?:

0 = No impact 1 = Minor influence 2 = Moderate influence 3 = Major influence 4 = Decisive influence
NA= Not Applicable DK=Don't know

	Degree of Influence		
a) Your firm	0 1 2 3 4	NA	DK
b) Other domestic firms	0 1 2 3 4	NA	DK
c) Dominant firms or conglomerates in key sectors of the economy	0 1 2 3 4	NA	DK
d) Individuals or firms with close personal ties to political leaders	0 1 2 3 4	NA	DK
e) Foreign firms	0 1 2 3 4	NA	DK
f) Business associations	0 1 2 3 4	NA	DK
g) Labor unions	0 1 2 3 4	NA	DK
h) Organized crime	0 1 2 3 4	NA	DK
i) Regional or local government	0 1 2 3 4	NA	DK
j) Military	0 1 2 3 4	NA	DK
k) International development agencies or foreign governments	0 1 2 3 4	NA	DK

46. In many countries, firms are said to give unofficial, private payments or other benefits to public officials to gain advantages in the drafting of laws, decrees, regulations, and other binding government decisions. To what extent have the following practices had a direct impact on your business.

0 = No impact 1 = Minor influence 2 = Moderate influence 3 = Major influence 4 = Decisive influence
NA= Not Applicable DK=Don't know

	Degree of Influence		
a) Private payments or other benefits to Parliamentarians to affect their votes	0 1 2 3 4	NA	DK
b) Private payments or other benefits to Government officials to affect the content of government decrees	0 1 2 3 4	NA	DK
c) Private payments or other benefits to judges to affect the decisions of court cases	0 1 2 3 4	NA	DK
d) Illegal contributions to political parties and/or election campaigns to affect the decisions of elected officials	0 1 2 3 4	NA	DK

CONFLICT RESOLUTION / LEGAL ENVIRONMENT

47. "I am confident that the judicial system will enforce my contractual and property rights in business disputes." To what degree do you agree with this statement? Do you (read 1–6)?

    1. *Fully disagree*
    2. *Disagree in most cases*
    3. *Tend to disagree*
    4. *Tend to agree*
    5. *Agree in most cases*
    6. *Fully agree*

48. a) What percent of your establishment's sales are pre-paid? _____ %

    b) What percent of your establishment's sales are sold on credit (i.e. full payment is not due at the time of delivery)? _____ %

    c) What percent of your sales to private customers involve overdue payments? _____ %

    d) What percent of your sales to government agencies or state-owned enterprises involve overdue payments? _____ %

    e) How long does it typically take to resolve an overdue payment from private customers ? _____ weeks

    f) Over the last 2 years, what percent of your establishment's disputes over payments were resolved by court action? _____ %

    g) On average, how many weeks did those court cases take to resolve? _____ weeks

CRIME

49. Please estimate your establishment's costs (as a percent of its total sales) of providing:

    a) security (equipment, personnel, or professional security service)? _____ %

    b) protection payments (e.g. to organized crime to prevent violence)? _____ %

50. a) Please estimate the losses (as a percent of total sales) of theft, robbery, vandalism or arson against your establishment in the last year? _____ %

    b) What share of the incidents did you report to the police? _____ %

    c) Of these reported incidents, what share were solved (the perpetrator was caught, etc.)? _____ %

CAPACITY, INNOVATION, LEARNING

51. a) What was this establishment's average capacity utilization over the last year? (Capacity utilization is the amount of output actually produced relative to the maximum amount that could be produced with your existing machinery and equipment and regular shifts.) _____ %

b) How many shifts does this establishment normally operate? _____

52. How much have your sales changed (grown or declined) in each of the last 3 fiscal years?
(Circle "+" for growth, "–" for decline.)

1999 + – _____ % 2000 + – _____ % 2001 + – _____ %

53. Approximately what share of net profits were re-invested in your establishment last year (that is, not distributed to owners or shareholders)?

_____ % (-222=No Profit)

54. a) How many products does your establishment produce? _____

b) How many new products (i.e. those that involve a significant change in the production process) has your establishment introduced in the last three years? _____

55. Does your establishment use technology licensed from a foreign-owned company? YES NO

56. Right now, how many months ahead has the management of your enterprise planned its activities with regard to:

a) product mix and target markets: ____ months

b) human resources (employment and training) ____ months

c) investments: ____ months

57. Thinking of your main product line or main line of services and comparing your production process with that of your closest competitor, which of the following best summarizes your position: _____ (select one)

*1. My firm's technology is **less advanced** than that of its main competitor*
*2. My firm's technology is **about the same** as that of its main competitor*
*3. My firm's technology is **more advanced** than that of its main competitor*

58. Has your firm received ISO (e.g. 9000, 9002 or 14,000) certification? _____

1=Yes, 2=No

59. Has your company undertaken any of the following initiatives in the last three years?

	Undertaken	
	Yes	*No*
1. Developed a major new product line	1	2
2. Upgraded an existing product line	1	2
3. Introduced new technology that has substantially changed the way that the main product is produced	1	2
4. Discontinued at least one product (not production) line	1	2

5. Opened of new plant	1	2
6. Closed at least one existing plant or outlet	1	2
7. Agreed a new joint venture with foreign partner	1	2
8. Obtained a new licensing agreement	1	2
9. Outsourced a major production activity that was previously conducted in-house	1	2
10. Brought in-house of a major production activity that was previously outsourced	1	2

60. Over the last two years, what were the leading ways in which your establishment acquired technological innovations? Please identify which of the following is (read 1 through 12):

(i) the most important? ____ ii) the second most important? ____ iii) the third most important? _____

1. Embodied in new machinery or equipment
2. By hiring key personnel
3. Licensing or turnkey operations from international sources
4. Licensing or turnkey operations from domestic sources
5. Developed or adapted within the establishment locally
6. Transferred from parent company
7. Developed in cooperation with client firms
8. Developed with equipment or machinery supplier
9. From a business or industry association
10. Trade Fairs and/or Study Tours
11. Consultants
12. From universities, public institutions

61. Which of the following is the most important influence on your establishment to reduce the production costs of existing products or services? Pressure from:

1. *domestic competitors*
2. *foreign competitors*
3. *customers*
4. *shareholders*
5. *creditors*
6. *government or government agencies*

62. Which of the following is the most important influence on your establishment to develop new products or services and markets? Pressure from:

1. *domestic competitors*
2. *foreign competitors*
3. *customers*
4. *shareholders*
5. *creditors*
6. *government or government agencies*

LABOR RELATIONS

63. The following table refers only to ***permanent workers*** of your plant:

	Total	*Management*	*Professionals*	*Skilled production workers*	*Unskilled production workers*	*Non-production workers*
Average number of workers during fiscal year 1999						
Average number of workers during fiscal year 2000						
Average number of workers during fiscal year 2001						
of which: % female						
Total wages (LCU)						
Total compensation* (LCU)						

** Wages and all benefits, including food, transport, social security (i.e., pensions, medical insurance, unemployment insurance), etc.*

64. The following table refers only to temporary workers of your plant:

	FY2001	*FY2000*	*FY1999*
Average number of temporary workers employed during fiscal year 2001			
of which, average number of female workers			
Average length of employment for each worker	_____ *months*	_____ *months*	_____ *months*
Total compensation of all temporary workers (wages and benefits) (LCU)			

65. What percent of your permanent management, professional and skilled production workers are foreign nationals? _____ %

66. a) In 2001, how many new employees did your plant hire? _____ (number)

b) In 2001, how many employees from your plant:
i) were dismissed or laid off? _____ (number)
ii) left due to sickness or died? _____ (number)
iii) left for other reasons? _____ (number)

67. Within the last two years, how much time did it take to fill your most recent vacancy through external recruitment for a:
i) skilled production worker? ____ days NA
ii) unskilled production/service worker? ____ days NA

68. a) Do you offer formal (beyond "on the job") training to your permanent employees? YES NO

	Skilled	Unskilled
b) What percentage of your total permanent employees received formal training in 2001?	____ %	____ %
c) What was the average number of weeks of training for each employee (in weeks)?	____ %	____ %

69. What percent of your workforce is unionized? _____ %

70. How many days of production last year did you lose due to
    a) strikes or other labor disputes? _____ days

    b) civil unrest? _____ days

    c) employee absenteeism due to illness, death, funerals? _____ days

71. What percent of the workforce at your establishment have the following education levels?

    a) Less than 6 years ("some elementary") _____%

    b) 6–9 years _____%

    c) 10–12 years _____%

    d) More than 12 years (some university of higher) _____%
    100%

    ii) Of those who did not complete primary school (6 years), what percent are female? _____%

72. What is the highest level of education of the top manager?

    1) Did not complete secondary school
    2) Secondary School
    3) Vocational Training
    4) Some university training
    5) Graduate degree (BA, BSc etc.)
    6) Post graduate degree (Ph D, Masters)

73. What percent of the senior management is male? ____ %

74. How many years of experience working in this sector did the top manager have before running this establishment? _____ years

    a) Of these, how many years were with a domestic firm? _____ years

    b) Of these, how many years were with a foreign firm? _____ years

    c) Did any of these prior firms export? YES NO

SECTION II: PRODUCTIVITY

75. Please provide the following information on your establishment's production, sales and expenses.

	Value in thousands of local currency units		
	FY2001	*FY2000*	*FY1999*
Total sales			
Direct raw material costs (excluding fuel)			
Total market value of production *			
Total purchases of raw materials (excluding fuel)			
Consumption of energy:			
Electricity			
Fuels			
Other			
% of energy costs to run generator			
Manpower costs:			
Wages and salaries			
Allowances, bonuses and other benefits			
Interest charges and financial fees			
Other costs (i.e., overhead expenses, selling and general administration expenses, design dept., etc.)			

** Market value of production = (total number of units produced) x (unit sales price)*

76. What was your establishment's sales revenue in thousands LCU five years ago: _____

77. How much did your establishment spend on additional machinery, equipment, vehicles, land, buildings?

	2001		*2000*		*1999*	
	amount ('000 LCU)	*of which % imported*	*amount ('000 LCU)*	*of which % imported*	*amount ('000 LCU)*	*of which % imported*
a) New machinery and equipment						
b) Secondhand machinery and equipment						
c) Land, buildings, improvement in leasehold						
d) Vehicles						

78. a) Of this, was any of it spent on creating a new establishment? YES NO

b) If yes, how much in fiscal year 2001? LCU_____

79. Please give the value (in thousands of LCU) of any equipment or property your establishment sold.

	2001	*2000*	*1999*
a) Machinery and equipment			
b) Land and buildings or leasehold			
c) Vehicles			

80. How much did the following cost ***your establishment*** in thousands LCU during the fiscal year of …?

	2001	*2000*	*1999*
a) Rent for machinery and equipment (if owned, please enter value of depreciation)			
b) Rent for land or buildings (if owned, please enter value of depreciation)			
c) Rent (lease) of vehicles			
d) Royalty or license fees			

81. How much did your establishment spend on design or R&D in 2001? [Spending includes wages and salaries of R&D personnel, such as scientists and engineers; materials, education costs, and subcontracting costs.] _____ (thousand LCU)

82. Please provide information on the following balance sheet items for your establishment:

	Value in thousand LCU as of end of the fiscal year of		
	2001	*2000*	*1999*
Total assets			
Property, plant and equipment:			
Gross value (acquisition cost)			
Machinery and equipment (including transport)			
Land, buildings, and leasehold improvement			
Net book value			
Machinery and equipment (including transport)			
Land, buildings, and leasehold improvement			
Current assets:			
Inventories and stocks			
Finished goods			
Work-in-progress			
Raw materials excluding fuel			
Fuel			
Accounts receivable			
Cash on hand and in bank			
Other			

83. Please provide information on the structure of your establishment's liabilities:

	Value in thousand LCU as of end of the fiscal year of		
	2001	*2000*	*1999*
Total liabilities			
Long-term liabilities (i.e., more than 1 year)			
Short-term liabilities (i.e., one year or less)			
Of which: payables			
Equity — Share capital			
— Retained earnings (reserves and surplus)			

Note: Total assets must equal total liabilities.

PICS CORE QUESTIONNAIRE INSTRUCTIONS

General Instructions

The questionnaire is designed for an establishment. All figures should apply to the establishment being interviewed and not for the entire firm if it has multiple establishments. In cases where firms keep consolidated books for multiple establishments, every effort should be made to disaggregate. If this is not possible then all figures should apply to the same unit and the questionnaire should be internally consistent. Do not mix answers for establishments and firms.

All blanks should be filled in. If a respondent does not know or the question is not applicable, then DK or NA should be written. This helps the data checkers know that a question has not been skipped. It also helps ensure that where there should be 0 the enumerator does not leave a blank.

In questions which sum to 100 (such as questions about percentages), all blanks must be filled in with a 0 or a number. The column must sum to 100. This is how the data entry program will check for proper entry and computers can not add blanks.

When ever a question is answered as "other" then the enumerator must ensure that he writes what "other" refers to in the proper blank. If the category other does not apply then a 0 or NA should be entered, what ever is appropriate. Again there should be no blanks.

All entries should be numeric except where text is specifically called for. Symbols such as $ or abbreviations such as USD should not be entered into a blank. The questionnaire is designed so that almost all entries are in local currency unit and where this is not so, there should be a place to specify currency. Numbers should be written completely, with not truncation, except for where the form calls for the entry to be in 000s.

Specific Question Guides

The first six questions refer to the firm. All of the following questions are for the establishment being interviewed, except where specified.

Q1. "When did the firm begin operating in the country". If the establishment you are interviewing is an expansion of an existing company this question refers to the firm and when it began operation, not the establishment you are visiting. If it was a privatized firm and the current manager does not know when the firm was founded, then it should be answered as don't know (DK).

Q6. Separate operating facilities refers to production facilities only, not headquarters or warehouses. If a firm has one production facility in a outlying area and a separate headquarters then the answer is one.

Q6b. "Operations in other countries" refers to having production facilities in other countries, not merely exporting or sales offices. If the establishment being interviewed is a subsidiary of a multi-national it is considered to have plants in other countries only if the establishment being visited, manages the plants in the other countries.

Q7. This date is the year a company began actual operations in the country. It does not refer to when the company was incorporated or registered. If the company changed product lines or ownership after it was established this question still refers to date of initial operations. However, if there was a change in management and product along with a substantial change in the work force then this is essentially a new establishment.

Q9. To determine what is the product line, the interviewer is told to show a list of possible product lines. This list must be prepared in advance for each individual survey.

Q10. This refers to the percentage of productive workers. If a firm engages in trade and manufacturing but the administrative and support staff serve both operations, then the administrative and support staff should be distributed among manufacturing and trade proportionally, which is equivalent to dropping the administrative and support staff from consideration. For example, if a firm has 120 workers, 25 in trade, 75 in manufacturing and 20 service and administrative, then 25 % of the work force should be considered in trade and 75% in manufacturing.

Q10. In many cases firms will be competing with imports and have a tiny share of the market. If it is below .01% then write .01%.

Q12a. Managers may not know what percent of sales are indirectly exported. They have to estimate this. The total must be 100 and no line can be blank.

Exported indirectly refers to output that the manager believes is ultimately exported as finished products. It does not refer to products that are used as components in goods that are exported. If a firm produces car parts for a local manufacturer, which then exports the cars, the car parts are not considered exports.

Q12c. The refers to both direct and indirect exports.

Q13. If the input is of imported origin it should fit into either ii or iii.

Q14. If the firm only buys inputs when it has orders or uses inputs provided by the customer this figure could be 0.

Q16. Since firms maintain large stocks many firms lose no sales to delivery delays so 0 is an acceptable answer, even where transportation facilities are poor.

Q17a. Imports should be considered foreign owned companies exporting into the local market. If the manager does not know how many firms are doing this than he should code it as 555.

Q20a. When asking about days and hours of insufficient power or interrupted power this means in a 24 hour period for all calendar days. It does not mean how many working days they did not have power or how many working hours their were power interruptions. Thus, a power outage on a day when the establishment is not operating is considered a day with a service interruption.

Q20b. "Insufficient water supply" means water needed for production. This question refers to cases when production was reduced because the firm did not have adequate water from the public supply. If a firm often loses water but does not need water for production or has its own source, then the answer could be 0. Questions on the number of times a firm suffers outages may have to be asked as the average every month and then aggregated up to a year.

Q21a. In order to learn the cost of electricity the enumerator must review the electrical bill. Often times this question must be answered by the accountant. This refers to the average cost and not the marginal cost. In most countries there are large fixed charges. The fixed charge must be divided by the number of Kw. hours used and then added to the usage fee per Kw. hour.

Q22. This refers to all water from utility providers, not just water used in production. It refers to water used for toilets, washing, etc. This question is relevant

even for enterprises that do not use water in their production process because it gives information on how often water is unavailable in the area.

Q26 and **Q27.** NP means that the service is not provided by the business association. N/A means that either the firm does not need that type of service or has no experience trying to obtain it.

Q28. Separating internal funds from family sources is always problematic. Line (a) refers to funds generated by the plant's activities. If the money is coming from the owner's pocket or other business owned by the same owner or his family, but not from the establishment being interviewed then it should go on the line for family, friends. If a firm has not made investments in the last year then the column for how investment is financed is filled in with NA not 0.

Q29. If the firm has both line of credit and an overdraft, both sources of credit should be considered when estimating how much is currently unused.

Q30. This question refers to a currently outstanding loan. If a firm received a loan in past years but has no recent loans then this question should be answered as NA.

Q30c. These are percentages and lines (i) – (iv) should sum to 100.

Q34. If the firm has a long term lease (such as 99 years) and owns the building, which conveys right of land use, as is common in Africa, then the land is still considered leased or rented. Often, in this situation firms will report the land as owned and the enumerator must be careful to distinguish between land owned by companies where land use rights are conveyed via building ownership.

Q38. This question does not refer to market conditions but to regulatory barriers. If an enterprise is retaining excess workers because it expects the market to change then it is 100%. If the company is retaining excess workers because it is too costly to pay severance then the answer should be less than 100%. If the company can not pay high enough salaries to attract workers then it is not more than 100%. But if a company does not want to hire more workers only because they are scared of being stuck with them or do not want the administrative problems of taking on more full time workers, then this should be more than 100%. This number is likely to be more than 100% in cases where companies are restricted from hiring temporary workers or paying piece rate. A firm that was recently privatized and can't lay off workers as quickly as it likes is an example of where it might be less than 100%.

Q41. Gift or payment refers to unofficial payments or bribes to get standard service.

Q43. If these groups did not inspect in the last year than the answer is 0. If the firm is not subject to inspections by this agency then the answer is NA. Local authorities include state of provincial authorities, anything but national government officials. The total figure refers only to the inspections listed above and the total should be the sum of the categories listed.

Q45. NA is answered when the group is not in existence in the country. For example in many African countries organized crime does not exist in the same sense that it does in Eastern Europe. If the group has exists in the country but has no influence the answer is 0. If the firm does not know if the cited group has influence the answer is DK.

Q46. NA refers to cases where the question is not possible. For example, in a country where there are no restrictions on campaign contributions the answer would be NA. When the respondent suggest that such payments are not made then the answer is 0 not NA.

Q48a. This refers to the amount that customers pay in advance, not cash payments. Often companies will not begin production without having a down payment. Since no time frame is given let the manager decide what he thinks is his establishment's normal operating procedures.

Q48b. This refers to trade credit. On average what percentage of the value of overall sales are made on credit.

Q48c. On average what percentage of sales were not paid on time.

Q48e. If there is a significant difference between the length of time it takes to collect overdue payments from government and private customers, this question should refer to which ever group has the largest proportion of overdue payments.

Q48f. This means actually filing court papers and not merely threatening or hiring a lawyer.

Q48g. The length of time refers not only to the time it takes to get a judgment but also to enforce the judgment. If the respondent won in court but was never able to collect then the case is not resolved and the question should be left blank with a marginal note.

Q49a. Includes all security related expenses including equipment, fences, alarms, security personnel, etc. in the last accounting year.

Q49b. This includes payments to police or government officials as well as organized crime in the last accounting year.

Q51. Capacity utilization refers to production capability given the current capital under the normal number of shifts worked by that company. Workers are a variable cost and should not be considered in this question.

Q52. This refers to the amount of change between years. For example 2001 refers to the difference in sales from 2001 to 2000.

Q54a. Different product lines refers to major product lines that require a different production process or have different marketing. A soft drink bottler may have two or three different brands of beverages. These would be considered different products. However, different size bottles would not be differentiated products. The manager should ultimately decide how many products he is producing.

Q54b. If a furniture establishment is making chairs and begins to produce another style, this is not a new product line. However, if a garments factory making shirts and begins to produce trousers this is a different product line because it requires retraining, even though it uses the same machinery. Let the manager decide what is a new product line.

Q55. This refers only to technology where the firm has an explicit licensing agreement. If the technology was embedded in a machine that was purchased then this is not considered licensed technology.

Q59-4. This means that the company ended the production of a certain product. If a firm has two lines producing the same item and closes one line the answer is no, the firm did not discontinue a product line. This is not discontinuing a production line merely reducing the amount of production by closing a line.

Q63. This question refers to full time, permanent workers who receive benefits and can not be made redundant without compensation. Temporary workers, even those who work full time and year round, who do not receive full benefits are listed in the table for question 63.

Labor category definitions	
Management	Persons making management decisions. Please exclude those involved only in shop floor supervision.
Professionals	Trained and certified specialists outside of management such as engineers, accountants and chemists.
Skilled production worker	Those person involved in production processes or direct supervision of such processes and whom management considers to be skilled.
Unskilled production worker	Persons involved in production processes but whom management considers to be unskilled.
Non-production worker	Support, administrative, sales workers not included in management or among professionals.
Temporary workers	All (paid) short term (i.e., for less than a year) employees with no guarantee of renewal of employment contract. Includes all part-time workers, seasonal workers and those working a full work schedule but do not have a contract to work for a year or more.
Permanent workers	All paid workers that are not temporary.

Most firms do not break their total wage bills into skill categories. In this case the enumerator must ask the firm what the average wage for each category is and multiply it by the number of workers in each category.

The same is true for total compensation. The enumerator must ask the average benefits and multiply this by the average number of workers and then add the benefits to the wages to obtain total compensation (to make computations easier it is useful to add two additional lines to the table, one for average wage and one for average benefits).

Q64. This table refers to all non-permanent workers. Even if a worker is working full time, year round. If they are not legally considered permanent they go into this table.

Q66 This Question refers to all full time employees not merely permanent employees. It does not however, refer to seasonal or part time employees. In many countries a substantial part of the work force is made up of full time workers who do not have full benefits of protection. Since we are interested in how much the actual work force is changing we must include all full time workers.

Q67. This question should use a five day work week as the norm for cross country comparability. If it took one day or less than the answer is .20 and 3 days is answered as .6 even in countries with a 6 day work week.

Q68. Formal training refers to any training not conducted on the job by supervisors, as a part of normal work. This training can be done in-house or exter-

nally. It does not just refer to production workers but to all workers including managers, professionals, support staff, etc.

Q70. This question is not asking for how many days workers were on strike, but how much production was lost. If the plant suffered a strike but was able to keep up production, for example using supervisory staff then the answer is 0. If the company suffered a strike but was able to make up production through overtime after the strike then the answer is also 0. This question asks about lost production not the number of strike days, which can be different, especially when establishments are not operating at full capacity.

Q74. This refers only to experience in the sector that this plant is operating in. Other work experience is not considered.

Productivity Section

The productivity section is designed to collect information needed to estimate enterprise performance. This includes estimates of productivity, growth, investment, labor productivity etc. This section is designed to look like a common balance sheet in order to make data collection easier. It is important to understand the basic concepts of what we are seeking so that in cases where firms do not have balance sheets the enumerator can construct the most important figures.

Value Added

A. Value Added Defined

Value added is a critical concept in measuring enterprise productivity. Value added is defined as:

$$VA = Q - R - OC$$

Where *Q* is the market value of production, *R* is the cost of raw materials used in production and *OC* are other costs.

Q—is the third line in question 76: The "Total Market Value of Production". This refers to the actual amount of production in the year valued at the price at which it is sold. This is not total sales. Some firms both trade and produce.

Therefore their sales will be a combination of what they have produced and goods they bought for re-sale. A part of total sales can also come out of inventories and would not have been produced in the year for which the question is asked. In addition some production may not be sold in the year it is produced and will be put in inventory. This refers to the value of production in a given year, whether or not it is sold. Firms do not usually have this figure in their books and it must be calculated. An alternative approach is to use total sales but this must be adjusted for inventories.

Enumerators should be aware that the value of manufactured goods produced differs from the accounting term of "cost of goods sold". Cost of Goods Sold refers to the direct cost of producing a product or service. It includes things such as labor, raw materials, and fuel. It usually does not include indirect costs, such as marketing and advertising. For our purposes we want the market value of goods produced, that is goods valued at their selling price.

R—is the cost of raw materials used in the production of goods in the given year. It does not matter if these inputs were bought the current year or come out of inventory. We want to know how much raw material was used in the year's production. The raw material is valued at its current market price.

Other Costs—include fuel, energy, water, utilities and other costs directly associated with production. Some researchers include transportation and maintenance. Rent, interest payments and general administrative costs are not included.

Value added should never be zero and one way to check accuracy is to do a quick calculation and ensure that the data do not give a negative value added.

B. Practical Example of Value Added

Consider a firm that produces and sells blue jeans but also imports and sell blue jeans on the local market.

In the past year it had a total sales of $500,00 and each pair of blue jeans sells for $25. Thus it sold 20000 pairs in the year. Assume the sales come from the following sources:

- 4000 pairs are imported
- 1000 pairs come from inventories
- 15,000 are produced that year

Assume that the total cost of production is $23 per pair for both those they produce and those they buy.

Each pair require $15 worth of cotton and the company purchased $200,000 worth of cotton last year. They used $25,000 of cotton out of inventories.

Labor costs were $5 per pair or $75,000.

All other direct costs were $1 per pair or $15,000.

In this case the table would be filled in as follows.

Total sales	$500,000
Direct raw material costs (excluding fuel)	$332,000
Total market value of production *	$375,000
Total purchases of raw materials (excluding fuel)	$200,000

Since the firm only produced 15,000 of the 20,000 pairs they produced this year the value of production is $375,000 (15,000 x $25) an amount less than sales. This production used $225,000 worth of cotton, but $25,000 came of inventories so the cost of raw material used is more than purchases. The cost to the company of each pair is $23 so the cost of goods sold would be $345,000 but this figure is not needed.

In this case direct raw material costs of $332,000 include the $225,000 of cotton used in production, of which $25,000 came out of inventories. Direct raw material costs also include the $92,000 spent on imported jeans for resale. In addition direct raw material costs include the cost of cotton used in the jeans sold from inventory valued at this years cost of $15 a pair. But direct raw material costs are not needed for value added calculations unless we use totals sales instead of actual production.

To accurately determine the value added of the $375,000 of goods actually produced, one needs to add inventory changes to the amount of raw material purchased.

$$VA = 375{,}000 - 225{,}000 - 15{,}000$$

$$VA = (\text{value of goods produced}) - (\text{raw materials used in these goods}) - (\text{Other costs})$$

The 15,000 in other costs is not directly asked but calculated by adding the reported cost of energy, utilities, transportation etc.

Capital Stock

One of the most important numbers used in productivity calculations is the value of capital stock. In question 82, the survey instrument asks for the acquisition cost of buildings and machinery (the cost when they were purchased) and the book value. Book value is the value of the land, buildings and machinery after it has been depreciated using the standard depreciation rules of the country.

Neither of these is actually the concept we are looking for. In economic terms what we need to measure for productivity estimates is the replacement value of the equipment at market rates. This gives the true measure of how much capital the firm is using. Because in many developing countries markets for used machinery are thin, often managers can not put a value on their equipment. Thus, we ask for book value and gross value, which are usually reported in the books.

In cases where firms do not have books the enumerator will have to construct a value for capital stock. He should seek the replacement value of capital. The enumerator should ask the manager how much he would receive if he were to sell all of his equipment and then his land and buildings. If the manager has no idea, the question can be rephrased to say how much would he be willing to pay for his own stock of equipment, land and buildings, knowing what it can produce. An alternate way to get a value of capital stock is to have the manager list all of the equipment and when it was bought. Then the enumerator can apply a standard rate of depreciation (however they decide to determine the standard rate) to construct book value. The most important figure is for equipment, since that is what is mostly used in calculations of productivity.

Labor Productivity

Labor productivity is a key determinant for firm performance. The best measure is unit labor cost. This is a measure of the amount of labor that goes into the production of each unit of a product. However, this requires a measure of physical output, which is hard to obtain. A good approximation is value added divided by the cost of labor. Value added was discussed above. Manpower costs in the table in question 75 are the denominator in this calculation.

Manpower costs are a combination of wages, salaries and bonuses for all workers. It should also include payroll taxes. This should be the sum of the total compensations reported in the tables of question 63 and 64. If those tables are not filled out then as a minimum the enumerator must obtain the total cost of all labor used. For labor productivity calculations we would like to know how much labor was used only for production. Since this is difficult, we ask in question 75 total labor costs. We estimate the share used in production from the information in question 9 on what share of the work force is devoted to production, trade, services, etc.

Continuation of Questions

Q75 line eight, the % of energy costs to run generators is the (Cost of fuel for generators/cost of electricity + cost of all fuel + other energy costs). The denominator is the sum of lines 5,6 and 7 directly above.

Q77 is designed to elicit information on investment. As will all questions in the investment section the figures are in 000s of local currency.

Q78 refers to the information in question 77 and wants to know how much of the investment went to opening a new establishment, either a production facility or trading outlet. This would be for an establishment under the same management that reports on a consolidated balance sheet with the enterprise being interviewed. If it is an entirely new establishment, with separate books and different management, then the investment should not be reported on this questionnaire, because we are gathering data at the establishment level.

Q80. Rent and lease payment on leased equipment should be combined with depreciation of owned equipment and reported as an aggregate number. The same is true for land and buildings.

Q82. Total assets are from the balance sheet. The categories below do not necessarily add up to total assets as something may be left out. The line property plant and equipment is a heading and should not be filled out, despite the fact that there is a code for it on the coded questionnaire. If Property, Plant and equipment were filled out it would be necessary to know if it was gross or book value. Gross Value and Net Book Value can be filled out if the company provides a summation, even though they are shaded .

If a firm does not have a balance sheet then it is vital to construct figures for the value of machinery and equipment and land and buildings to obtain capital stock measures.

The enumerator is not expected to provide a figure for the total of current assets or inventories and stocks. However, if the company provides figures for these totals they can be entered though they are shaded. However, what is most important are the sub categories listed below. The lines below do not necessarily add up to total current assets as some things may have been left out. Fuel refers to stocks of fuel.

If a firm does not have audited books and available balance sheets the enumerator must ask how much the company is owed by suppliers and customers to determine receivables. Receivables is an important figure for determining the availability of credit in the economy.

Q83. Under liabilities payables are defined as the firm defines them. It could be what is due in 30 days, 60 days etc. If the firm does not keep books then the enumerator should try and construct the information. The enumerator can ask how much the firm owes suppliers and customers. He can also ask how many loans the company has and when they are due. This will allow the enumerator to estimate long term, short term liabilities and payables.

Appendix 2

Principles for Enumerators

1. Enumerators should be dressed formally at all interviews and arrive punctually for every appointment or properly apologize for unavoidable delays. Interviews should also start and conclude with appropriate expression of thanks to the respondent.

2. An interview should ideally begin with the enumerator thanking the respondent for participating in the survey. The enumerator should also ensure that the respondent has grasped the purpose of the survey, before proceeding with the main part of the interview. Normally, the respondent will have received a letter explaining the objectives of the survey, but may not have had the time to go through it, or might have forgotten important parts of the its content. A very brief reminder of what the survey is all about should therefore be part of the preliminaries of the interview. The legal obligation of the implementing agency-and of the survey firm, if one is involved, to maintain the confidentiality of responses should also be stressed. Often the implementing agency also undertakes to provide a summary of the survey results to all respondents.

3. Responses should only be recorded on a copy of the questionnaire, which the enumerator should also constantly refer to in the course of the interview. Enumerators are encouraged to read the questions verbatim as written on the instrument. Engaging the respondents in a conversational mode may make the interview more pleasant and flow easier, but it also risks missing or misinterpreting questions. However, the enumerator must be prepared to re-phrase

questions in the event that the respondent does not understand the questions as written. Consequently, all enumerators must have a thorough understanding of the instrument and the purpose of all of the questions. On complicated questions where there are multiple responses, the enumerator should be prepared to show a list of possible choices to the respondent.

4. Following preliminaries, the enumerator should get into the substantive part of the interview by posing a general question encompassing basic information such as current line of business and date of start-up. For example one way of starting off is to pose a general question such as: "Tell me about your business: when was it started, by whom and where?…"As a rule, a question like this prompts a narrative in the course of which the answers for several of the questions in the first section will be given without the interviewer directly soliciting for them. This makes it easier to transition to reading the questions directly.

5. In the course of responding to specific questions managers often provide answers to others that the interviewers will have raised at a later stage. The interviewer should naturally take note of these answers so as to avoid inadvertently asking the respondent to repeat himself. Apart from saving the interviewer from possible embarrassment, this practice is a very effective time-saving device.

6. A second means of saving time spent at the interview is to record responses as quickly as possible. Often this may mean that we simply jot down answers without worrying too much about exactly where and how we write things down. The preoccupation at an interview session should be with getting the answers to our questions rather than with recording responses in specified ways. The latter is no doubt ultimately as important, but it can always be taken care of immediately after the end of the interview without unnecessarily detaining the respondent. Jotting down answers quickly for subsequent recoding would, in turn, be easier if pencil, rather than ink, is used at the interview. However, immediately upon completion of the interview the enumerator must completely and accurately fill out the questionnaire.

7. Unable to supply a ready answer to a question, a respondent might offer to contact someone else by phone on the spot. If the interviewer is convinced that this would take too long, he should ask to proceed to the next question in the meantime, or request that the search be postponed until after the end of the main interview.

8. In some cases a large number of questions are knitted together into a table of several rows and columns. Here the speed with which the table is completed

depends on how well the underlying issue is introduced and on the sequence in which items are posed to the respondent. In some cases, speed is gained by sequencing items row by row rather than column-wise. In others, the reverse would lead to a quicker completion of the table. In still others, the quickest way could be to complete the first column and then pick off items of a certain kind of response—"yes", for example—row by row.

9. Large tables of questions that require the respondent to rate scenario's or options may sometimes be difficult to administer by reading items out to the respondent. Instead, the quickest way could be to explain the nature of the table to the respondent before letting him or her fill it out according to the stated rules of response.

10. Some questions, though simply stated in a line or two, presuppose implicit answers to other unstated questions. In many cases, a quicker way of delivering questions in this category is to explicitly pose the assumed questions.

11. There are a number of quantitative questions in the manager's section for which exact figures are not likely to be available. All we need in such cases is the best possible estimate that management can provide. As yet another way of saving time, enumerators should insist on getting exact figures only for variables that are on record.

12. The enumerator should give the accounting and personnel departments of the establishment sufficient time to organize the information required for the accounting and human resources section. In some cases this may mean the need to leave behind a copy of this part of the questionnaire with the accountant after the completion of the manager's interview or send it out to respondents in advance. However, it is the responsibility of the enumerator to ensure that answers to questions of those parts are entered properly. This will inevitably mean that the enumerator spends a considerable amount of time at the plant assisting the departments in filling out the answers.

Appendix 3

Survey Manager Checklist

The following is a listing of the major steps involved in planning and implementing a PICS in the order in which they should be accomplished.

1. Consultations with Country Team and CICIC/DEC-IC

    - Determine need and timing of the ICA along with funding and other support requirements. Secure a commitment from the country team to help produce and fund the ICA. It should be a part of the regional work program and be approved by the country director and regional PSD manager.

2. Consult with In-Country Stakeholders

    - Identify local partners, including counterparts in government, the private sector and consultants. Determine how the ICA can contribute to the current policy debate and what areas the ICA should focus on. Outline dissemination plan.

3. Develop Sample

    - In conjunction with local partners identify an appropriate sample frame and draw the sample. Sample should allow the ICA to make both

cross country and inter-regional comparisons of the investment climate and firm performance.

4. Draft Instrument

   - Instrument should be based on the ICA core and suggested modules but may contain questions tailored to the country's unique needs.

5. Prepare Data Entry Program

   - Automated data entry program based on the instrument that prevents illegal values and blocks inconsistent entries.

6. Send Draft Instrument for Review

   - Allow all stakeholders to suggest improvements to instrument.

7. Finalize Contract and Support Requirements

   - Finish negotiations with country team on funding and timing. Select and contract with the implementing agency.

8. Pilot Instrument

   - Field test the instrument with all types of firms and in all regions covered by the sample.

9. Finalize Instrument

   - Using results of the piloting make necessary changes to instrument.

10. Send Instrument for Review

    - Instrument must be reviewed by the IC unit management before implementation to ensure integrity of the core.

11. Finish and Test Data Entry Program

    - Data entry program must be finished and tested prior to implementing the survey.

12. Provide DEC-IC with Instrument and Necessary Supporting Documentations

    - DEC-IC must have a file matching codes on the survey with the core codes so they can begin writing codes to incorporate the data in the comprehensive data base and to check consistency of the data.

13. Begin Training and Field Work

    - Field work begins with a training period for the local implementing staff. Training may begin during piloting but must be completed before survey implementation.

14. Check Data for Consistency

    - Data must be entered as the survey is conducted and extracts from the data should be sent to DEC-IC to check data quality. Ideally, the data should be sent to DEC-IC when 10 percent or the first 100 firms have been entered.

15. Complete Survey Field Work

16. Clean Data

    - The survey manager is responsible for cleaning and organizing data before providing it to DEC-IC.

17. Share data with DEC

    - Once the data is organized and cleaned, a copy should be sent to DEC-IC. DEC-IC staff will conduct consistency checks, harmonize the data and add it to the comprehensive data base to facilitate cross-country comparisons. One week after receiving the data and all necessary documentation, DEC will provide standard tables.

Appendix 4

Sample Terms of Reference

The following sample TOR was used in Zambia by the RPED group. While every TOR will be structured to meet the unique circumstances found in a country, they must all cover the same basic issues. This sample is an example of a well-done TOR that addresses all of the major issues arising when implementing an Investment Climate Survey. It can be used as an outline to help Task Team Leaders ensure that they cover the most important areas when drafting new TORs.

TABLE OF CONTENTS

1. Introduction

The objectives of an Investment Climate Assessment are to (1) evaluate the state of the private sector (2) identify the key constraints to increasing firm productivity (3) evaluate how competitive firms in a particular country are with respect to their neighbors or firms in other regions of the world (4) identify policies that will alleviate obstacles and improve firm productivity and export competitiveness.

The methodological approach consists of conducting a survey of firms in the manufacturing (and other sectors). About 300 firms are surveyed from the population of firms; these firms are sampled scientifically in order to maintain a statistically rigorous approach to the data generated by the survey. The survey questionnaire enables an analysis of six key areas:(1) the determinants of firm productivity, including the productivity of labor and capital (2) firms' access to finance (3) characteristics of the labor market including investment in training

and skill-building (4) the impact of HIV/AIDS on the private sector and (5) the business environment, including regulatory and administrative barriers that impact the cost of doing business and (6) obstacles to increasing exports in the regional and international marketplace.

The Investment Climate Assessment can be used in several ways. Most importantly, it can be used to facilitate a dialogue with the government regarding private sector policies, and can be used by the private sector as a tool in its own dialogue with the government. The ICA can also provide useful input into the Bank's own dialogue; parts of the analysis can be incorporated into Country Economic Memoranda or other Bank products that are central to the Bank's work.

The mandate of AFTPS and the Regional Program on Enterprise Development (RPED) is to carry out Investment Climate Assessments for the Africa Region. The data from these ICAs can be compared with data from other regions in order to benchmark the competitiveness of the private sector in any given country or region. Surveys carried out every 3-5 years will help determine whether the private sector is growing and whether government policies have had a positive impact on firm productivity. RPED has thus far carried out surveys in Kenya, Tanzania, Zambia, Zimbabwe, Zambia, Nigeria, Eritrea, Ethiopia, Côte d'Ivoire, Cameroon, Ghana and Mauritius.

In the context of a continuing policy dialogue, Government of Zambia discussed with FIAS the launching of a major firm survey project in Zambia. FIAS and AFTPS will coordinate the survey in order to deliver both the FIAS administrative barriers study and the AFTPS Investment Climate Assessment. At the policy and technical level, the proposed Zambia Firm Survey would aim at achieving the following objectives:

- Provide an up-to-date information base to analyze the characteristics and performance of firms, as well as the business and policy environment in which they operate
- Allow an international comparison of Zambia's enterprises and business environment
- Inform the design of the development strategy in the areas of industrial competitiveness and export-orientation
- Help facilitating a better dialogue between the Government and the private sector regarding key challenges and opportunities facing the enterprises; and
- Build local capacity to regularly mount similar surveys in the future.

The Zambia Firm Survey questionnaire is a joint product of FACS (DEC) FIAS and RPED (AFTPS) and focuses on the following important policy issues: entrepreneurship, enterprise performance (including revenue, cost and productivity indicators), technological capabilities, access to finance, competition with imports and in export markets, contract enforcement problems in product, finance and labor markets, and infrastructure problems. Enterprise respondents would also be asked about the "compliance costs" of dealing with the existing business environment, in terms of various government (and state) economic policies and regulations. In addition, in each firm a cross-section sample of workers (generally about 10 workers) was interviewed to gather information about wage and benefit profiles, the workings of labor markets, and training needs. The survey instrument is compatible with questionnaires used in other African countries surveyed by RPED (although customized to deal with the policies and special problems of Zambia) to facilitate a comparison of Zambia with other countries in the Africa region.

The Bank's task manager for the RPED survey and Investment Climate Assessment is Mr. xxxx. The task manager for the FIAS study is Mr. xxxxx.

2. Scope of Work

The Local Consultants will be required to work under the expert supervision of the World Bank Staff and carry out the following:

1. Administer the set questionnaire to approximately 375 enterprises based in Zambia's major cities of Lusaka, Livingstone, Kitwe and Ndola;

2. Segment the target enterprises into major economic sectors and sub-sectors to ensure representativeness of the sample. This sample should also cover export oriented enterprises;

3. Establish office support infrastructure for data input, analysis and report generation; and,

4. Complete the set tasks within a timeframe of 12 weeks.

The World Bank will provide training to the survey team and provide field supervision including advise on computer-based data capture and analysis procedures. Prior to the commencement of the full survey exercise, a pre-test run is

expected to be conducted. This is to ensure that the questionnaire and its administration amongst local enterprises achieves expected objectives.

3. Proposed Approach

In response to the above, a team of eight IMCS consultants will work under the direct technical supervision of the World Bank staff and carry out the survey. This team will be supported by IMCS secretarial staff and a statistician who will provide computer data input and communications support. The basic operating infrastructure including office space and meeting room is required to accommodate the World Bank team. This will be put to the disposal of the assignment by IMCS.

4. Targeting of Enterprises

Based on their past experience and knowledge of the productive sectors, IMCS will develop a lists of target enterprises in close collaboration with the World Bank team. In order to achieve the survey sample set for this exercise, IMCS will target the following number of enterprises in each town.

Town	*Target Enterprises*	*Strike Rate*	
		Number	*Percentage*
Lusaka	240	180	7
Livingstone	60	35	58
Kitwe	120	87	6
Ndola	120	80	67
Total	**540**	**375**	**70**

The above targets take into account our knowledge of enterprises that can be captured in each town based on size of economic activities. The above is also based on the assumption that not all enterprises will cooperate or provide sufficient data required for the survey. In order to achieve the set target, it will be important to cover a larger sample for planning purposes. Following the

arrangement of appointments, a much more clearer position should emerge to facilitate efficient use of consultants when they proceed for the fieldwork.

5. Assignment Schedule

These have been broken down to take account of four phases of distinct but inter-related activities as follows:

Phase 1 – Mobilisation and Training of Consultants

This will involve the mobilisation of lists of target enterprises and consulting team, including the World Bank counterparts. During this phase, the World Bank counterparts will provide training support in both questionnaire administration and, data input and analysis.

The survey report format and deliverables will also be confirmed, supported by a detailed time schedule for the remainder of the survey activities including the report structure and content.

Phase 2 – Confirmation of Appointments

A critical part of this phase will be devoted to confirming the list of target enterprises and appointments for the consultants. During this period, the World Bank counterparts will provide "hands on" fieldwork supervision to the local consultants. This will involve visits to selected enterprises in Lusaka and preliminary input of completed questionnaire.

Phase 3 – Survey Questionnaire Administration

This phase will involve allocation of target enterprises to the consultants for each of the 4 cites. The local consultants will be divided into 4 teams of 2 persons per team.

One team will be deployed to cover Copperbelt cities of Kitwe and Ndola. Livingstone will also have one team. Lusaka will have two teams given the volume of work. It is estimated that each team will cover at least 2 enterprises per day. The estimated questionnaire administration time for each city is as follows:

Town	*Target Enterprises*	*Fieldwork Days*	*Elapsed Time (weeks)*
Lusaka	180	90	10
Livingston	35	18	3
Kitwe	80	40	4
Ndola	80	45	4
Contingency			
Total	**375**	**188**	**1**

The above is based on a total elapsed time of 10 weeks that will be spent in actual survey questionnaire administration. It is expected that the teams allocated to cover Lusaka will, on completion, complement the teams allocated Kitwe and Ndola based enterprises.

It is also expected that completed questionnaire will be dispatched weekly to Lusaka for data input. Those arising from work undertaken in Lusaka will be submitted for input on a daily basis. During the fieldwork period, IMCS support staff will maintain regular communications with both the consultants and target enterprises. This is to facilitate confirmation of appointments and tracking of fieldwork activities.

Phase 4 – Data Input & Analysis

It is anticipated that data input will be conducted on a daily basis. As such, final data analysis is expected to be completed one (1) week after the conclusion of the fieldwork and submitted to the World Bank for review.

The above phased approach is intended to ensure that the assignment is carried out in progressive steps leading up to the achievement of objectives. In addition, it offers opportunities for the World Bank to closely monitor the survey at every stage of the process.

6. Staffing Time Input and Assignment Budget Estimates

As indicated above, IMCS will deploy a core team of eight (8) consultants who will be directly responsible for administering the survey questionnaire. IMCS will establish plans of consultants, matching seniors with juniors so as to achieve a balance in a cost effective manner. Supporting this staffing structure will be the following:

- The IMCS Director to provide overall assignment management and technical supervision in liaison with the World Bank counterparts;
- Two secretaries to assist in communications (scheduling of appointments) and data input;
- A statistician to provide backstopping support with data input, integrity checks and generation of statistical tables of results; and,
- An assistant accountant to provide assignment administration services including payment of claims to cover assignment expenses and reconciliation of costs/budgets including related reports. The main role of the position holder will be to make and confirm all appointments for the consultants. He / she will initially be assisted by one of the secretaries.

This staffing structure should enable the successful accomplishment of deliverables. Based on the above, IMCS will expend the following time inputs over an elapsed period of twelve (12) weeks:

	Staff Time Inputs Phase (person days)				
Staff Category	*Phase 2*	*Phase 3*	*Phase 4*	*Phase 5*	*Total inputs*
IMCS Director	5	2	10	3	20
Senior Consultant 1	5	5	34	10	54
Senior Consultant 2	5	5	34	10	54
Senior Consultant 3	5	5	34	10	54
Senior Consultant 4	5	5	34	10	54
Junior Consultant 1	5	5	34	–	44

Junior Consultant 2	5	5	34	–	44
Junior Consultant 3	5	5	34	–	44
Junior Consultant 4	5	5	34	–	44
Secretary 1	3	5	20	2	30
Secretary 2	3	5	20	2	30
Statistician	3	2	20	5	30
Assistant Accountant	5	5	20	2	32
Total	**60**	**61**	**365**	**54**	**534**

As can be noted from the above, junior consultants will not be directly involved in the data analysis and report preparation stage (Phase 4). The IMCS Director will undertake periodic field visits during Phase 3 and provide quality control checks throughout the assignment processes.

Against the above time inputs, IMCS professional fees will not exceed US $ xxxx broken down by category of staff as follows:

Staff Category	*Role*	*Person days*	*Daily rate*	*Professional fees (US$)*
IMCS Director	Assignment management	15.5		
4 x consultante	Survey questionnaire administration	216		
4 x Junior Consultants	Survey questionnaire administration	176		
2 x Secretaries	Secretarial and data input	60		
1 x Statistician	Data input and report generation support	30		
1 x Assistant Accountant	Assignment administration support	30		
	Total	**434**		

Travel

Lusaka @ US $0.XX/km over 4,000km	$
Livingstone @ US $0.XX/km over 1,750km	$
Kitwe/Ndola @ US $0.XX/km over 4,800km	$
Director supervisory visits @ US $0.XX/km over 2,200km	$
Sub Total	$

DSA (covering activities out of Lusaka)

Livingstone: 2 persons @ US $ xx/day over 18 days	$
Ndola: 2 persons @ US $xx/day over 40 days	$
Kitwe: 2 persons @ US $ XX/day over 40 days	$
IMCS Director Supervisory visits US $XX/day over 8 days	$
Sub Total	$

Document Courier Service

Livingstone: weekly postings over 2 weeks	$
Kitwe/Ndola: weekly postings over 7 weeks	$
Sub Total	$

Stationery and photocopying	$
Telecommunications	$
Pilot expenses	$
Report production expenses	$
TOTAL DIRECT COSTS	**$**
TOTAL LABOR COSTS	**$**
GRAND TOTAL FEES & DIRECT COSTS	**$**

Other Requirements

1. All members of the survey team must be acceptable to the World Bank field work task manager ( ). Any personnel that the tasks manager believes are not performing adequately must be replaced by IMCS.

2. There must be trained accountants or book keepers familiar with Zambian accounting standards on the survey team.

3. The quality of the data will be assessed by the World Bank task manager and he will decide if a firm interview is complete. For the project to be successful 375 firms must be completed.

4. IMCS must arrange all appointments and deliver letters of introduction.

5. IMCS is not responsible for pre-launch publicity.

6. The final deliverable is data for 375 completed firm interviews completely and accurately entered into an Access data base.

7. IMCS is responsible for all logistical support of the teams, including photocopying the questionnaire, transportations and communications.

8. The World Bank will provide a data entry program and training on its operation.

9. IMCS is responsible for supervising data entry and ensuring that all data is entered accurately.

10. Any costs incurred by delays, not caused by the World Bank changing the TOR must be borne by IMCS.

11. IMCS is responsible for providing all computers and other IT equipment.

12. IMCS must ensure that the all of the interviewed companies fall within the parameters of the sample.

PAYMENT SCHEDULE

Signature Payment:: $

Survey prep/sample/training: $

Data Collection/Data entry
- First 125 completed: $
- Next 125 completed: $
- Final 125 completed: $

Upon receipt of survey
Questionnaires and
Data set: $

Total Contract Amount: $