FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL FINAL TECHNICAL REPORT - ACCESS TO FINANCE FOR SMES IN LEAST DEVELOPED COUNTRIES: FOCUS ON TECHNOLOGY-BASED FIRMS AND WOMEN-LED SMES

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Research for Innovation and Equity

Final Technical Report -Access to Finance for SMEs in Least Developed Countries: Focus on Technology-Based Firms and Women-led SMEs

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Executive Summary

The project involved a scoping study identifying research focused on the development of small and medium-sized enterprises (SMEs) in the least developed countries (LDCs), and identifying initiatives supporting SMEs in these countries. The objectives were to:

- 1. Examine the state of research on SME development, women entrepreneurs and technology-based firms in LDCs.
- 2. Identify main policies and programs aimed at supporting SMEs in select LDCs and analyze their focus on supporting women entrepreneurs and technology-based firms.

In high income countries there has been active research on SME development, which has at times, informed the design of policies and programs supporting further development of SMEs in these countries. This scoping research was intended to find out if there was a body of research on SME development in the LDCs that could provide input for the development of policies and programs in this area. The goal was also to find out if LDCs, in general, are likely to have policies and programs in place to promote SME development. The contribution of this project has therefore been to advance the knowledge fronts in these areas. Ultimately, the goal was to explore the need and potential for programs that supports further research on SME development in the LDCs.

To address these questions, we used a mixed methods approach, combining bibliometric analysis of publications on SME development/entrepreneurship in the LDCs, with qualitative case studies in four select LDCs. These examined policies and programs promoting SME development. The bibliometric analysis examined publications listed in the Scopus and EBSCO databases from 2010 to 2019. The focal case study countries were Bangladesh, Cambodia, Ethiopia and Senegal.

This project has shown that, in general, there is very limited research on SME development in the LDCs. Over half of the LDCs have almost no research for the tenyear period we studied. Also, over 60% of the publications are focused on SME development/entrepreneurship in just four LDCs. There appears to be a very low and stagnant emphasis on technology in these papers, and research on women-led technology-based firms is absent. The research also showed that there is a relatively low involvement of locally affiliated authors in the SME focused papers which may reflect weak capacity for this type of research.

The case study research showed the motivations for these countries to stimulate SME development are to propel their economies forward and create employment opportunities

for their young populations. Governments in all case study countries have created policies aimed at stimulating their SME development. All countries have expended considerable efforts to build entrepreneurship ecosystems that other LDCs could learn from. Still, more efforts are required to strengthen SME development in these countries. There is limited access to finance; the business environments are not well aligned to the needs of SMEs and start-ups; there is a lack of skilled human resources; and there is limited coordination and integration in these entrepreneurship ecosystems, impeding efforts to promote SME development.

The project has advanced the knowledge frontier on SME development in the LDCs. It has examined the levels and characteristics of publications on SMEs/entrepreneurship in the LDCs, and identified policies and programs that are in place to promote SME development, women entrepreneurship and technology-based SMEs in select countries. It also has looked at challenges for SME development in these countries and identified areas for further research. The main findings were presented at two webinars and written up in three publications. The publications have analysed the levels and features of papers that have been published on SME development in LDCs and the policies and programs that are in place in select LDCs to promote SME development, women entrepreneurship and technology-based SMEs. The research findings have provided input for the development of a new program, jointly organized by IDRC and the UN Technology Bank for Least Developed Countries, which is aimed at supporting research on SME development in the LDCs.

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1, The Research Problem

The basic rationale for the research project was that women were likely to lack access to financing for their SME development in the LDCs. This would be detrimental for socioeconomic development of the countries. For promoting inclusive and sustainable development, it is crucial that women have access to finance so they can set up SMEs, and also be participants in technology-intensive development. It was considered likely that there is a gap in the literature on access to finance for women in LDCs in general and more specifically for technology-based SMEs. There is also a likely gap in the literature on knowledge on how to structure initiatives to promote SME development Systematic research was needed on what approaches are most promising for improving access and enhancing technological development spearheaded by women in LDCs. Such research could provide important insights and inform decisions and policies taken by national governments, donors, or multilateral organizations, such as the UN Technology Bank for the Least Developed Countries, on how to promote sustainable and inclusive SME development.

Also, this research explored the extent of the knowledge gap on access to finance for women in LDCs, and whether programs and policies to promote this access were in place in select LDCs. This could provide an insight into the demand for further research in this area and whether there was enough going on in promoting women-led SMEs in the LDCs to warrant establishing a research program aimed at providing funds to research this problem.

While access to finance was always a core element of the research, as early as in the proposal development stag it was decided that a wider focus on what factors and conditions shape SME development in general, women entrepreneurs and technology based firms was preferable than a flocus solely on access to finance and a focus only on women. This wider focus would provide more data on SME development in the LDCs and a richer context to understanding women-led SME development.

2. Progress Towards Milstones

The project was broken down into different phases/milestones.

a. Background research

During this phase we conducted a bibliometric analysis of publications on SME development/entrepreneurship focused on LDCs. This milestone was exceeded. Instead of conducting a brief review, we systematically built a database on any publications listed

in either the SCOPUS or EBSCO databases that was on the theme of SME development/ entrepreneurship in the 47 countries classified as LDCs. We did this for a ten-year period (2010 to 2019). Our focus was also broader, looking at SME development rather than only on access to finance by SMEs. Based on this analysis we produced two documents. They are the workshop paper Scoping Research: Research on SME Development in Least-Developed Countries and the manuscript The Level and Features of Research on SME Development in Least Developed Countries: A Bibliometric Analysis.

We also carried out a background review which involved targeting searches on specific organizations to identify whether they support initiatives focused on SME development, technology-based firms and women entrepreneurs in the LDCs. These organizations included multilaterals such as the World Bank, United Nations Industrial Development Organization (UNIDO), United States Agency for International Development (USAID), Global Affairs Canada and others. We established that there is a wide scope of initiatives supporting SME development in the LDCs. However, the information provided by the different organizations on the internet was not comparable. We therefore decided not to focus our efforts on building a database of these initiatives, but rather use our review to direct our attention to the activities of these multilaterals/donors in our case study countries.

We also looked at private-impact investors and investment funds that support economic and social development initiatives in LDCs. This provided some information on specific initiatives and helped us understand this sector better. In the case study phase of this research, we interviewed some impact investors in the focal countries.

Overall, our background review was highly successful in analysing the existing research on SME development/entrepreneurship in the LDCs, and pointing out where there are gaps that need to be bridged. The background review was also successful in helping us understand which organizations, and other actors, are active in this area in LDCs. This was beneficial when planning subsequent phases of the research.

b. Key Informant Interviews

To augment the results from the background review we interviewed experts at multilateral organizations, and asked them about initiatives they know that support SME development in LDCs and/or initiatives in specific case study countries. We used the results from the background review and snowball sampling to identify the key informants who are likely to be knowledgeable about initiatives supporting SME development and women entrepreneurs in LDCs. In total we interviewed six key informants and used the interviews with them as input into our report *Cultivating Small and Medium-Sized Firms:*

Entrepreneurship Development, Gender, and Technology in Bangladesh, Cambodia, Ethiopia and Senegal.

c. Interviews with representatives from LDCs

Instead of interviewing representatives from around six LDC governmental bodies by phone or communication platforms and asking them about instruments that are used to support entrepreneurship in their countries, we decided rather to expand on the data collection in the subsequent phase (case study research). We found out that it is very difficult to identify the government representatives we should interview, and it takes a number of interviews just to identify whom to talk to. We also felt we would collect more useful data on entrepreneurship strategies by focusing on a more thorough analysis of the four case study countries rather than superficial analysis of more countries. We communicated this change in plan to IDRC.

d. Case study research

To gain a more in-depth understanding of issues around support for SME development, women entrepreneurs and technology sectors in LDCs, we conducted case studies in four countries. The focal countries were Bangladesh, Cambodia, Ethiopia and Senegal. With case study research, we could gain insights into the features of programs and policies that support SME development in the LDCs, and get input for developing the agenda on what issues on SME development merit further research. We looked widely at the different tools that governments, multilaterals, donors and others have used to promote SME development in the focal countries, with a particular emphasis on issues that shape women entrepreneurs and technology-based firms. Our original plan was to spend around five days in each country and interview representatives of government, multilaterals, donors, incubators and private sector firms. Because of COVID-19, we changed our plan and conducted the interviews over online platforms including Zoom and Google Meet. We continued to interview until we reached data saturation. As a result, this phase was more thorough than in our original plan.

Our in-depth research identified and explored key issues surrounding the promotion of SME development that merit further investigation in future programming. We analyzed our case study data and, based on it, wrote the report *Cultivating Small and Medium-Sized Firms: Entrepreneurship Development, Gender, and Technology in Bangladesh, Cambodia, Ethiopia and Senegal.*

3. Synthesis of Research Results and Development Outcomes

The specific objectives were:

1. Characterize the state of research on policy instruments to support SMEs in general, and technology-based and women-led SMEs, in particular.

Our bibliometric research showed that in general there is very limited research on SME development in the LDCs in general, and also on policy instruments to support SMEs more specifically. Over half of the LDCs have almost no research for the ten-year period we studied. Also, over 60% of the publications are focused on SME development/entrepreneurship in just four LDCs.

There appears to be a very low and stagnant emphasis on technology in the papers produced on SME development. When we looked at the whole dataset, more papers examined the use of technology, rather than the development of technology-based firms. Around 10% of the papers we examined involved some discussion of the use of technology. Typically, these papers discussed the use of e-commerce, internet-based or mobile banking, or use of information and communication technologies in marketing efforts. When looking at the entire database, around 3% of the documents (or 37 papers) discussed technology more generally for entrepreneurship/SME development (as distinct from a focus on technology use). They, for example, looked at the role of technology infrastructure, such as education and outreach spaces for digital literacy, or telecentres, in developing entrepreneurship.

There was a substantial emphasis on examining gender issues around SME development, with close to 20% of the documents involving a focus on women. Research on women-led technology- based firms appears, however, to be absent. None of the documents on technology-based SMEs focused on women entrepreneurs, or looked at gender issues around technology development. A total of three SME publications looked at gender elements in the use of technology. These papers, for example, discussed the use of fintech algorithms to generate data on women borrowers to replace traditional collateral requirements; how to unlock finance for women-owned SMEs; or examined the process of e-commerce institutionalization among women-led SMEs.

The research also showed that there is a, relatively, low involvement of locally affiliated authors in the SME focused papers. This may reflect weak capacity for technology-based entrepreneurship research in the LDCs.

2. Understand the design and performance of government SME support programs in a select number of LDCs.

We examined government SME support programs in the four case study countries. The four countries in this study have made considerable efforts to build entrepreneurship ecosystems that other LDCs can learn from. All the countries in this study have a long history of referring to SME development as one of their governments' priorities and have issued various policies that incorporate references to promoting their SME sectors. However, not all countries have a long history of taking the next step to promote SME development with dedicated support programs. Setting up an organizational infrastructure to stimulate the creation of SMEs has clearly been key to realizing these policy goals. The four countries differ in how long they have actively been pursuing SME development. Senegal was an early adopter and started to establish organizations to promote SME development in the early 2000s, whereas Cambodia started more recently to set up organizations that focus on SME development.

In all four countries, it has not only been government that has been supporting SME development. Diverse organizations, both public and private, are active in promoting SME development. Donors are also heavily pursuing entrepreneurship development in these countries, and have set up numerous programs and other initiatives to support SMEs. Often these are in partnership with local government entities. The donors have also played a strong role in promoting female entrepreneurship, frequently by an emphasis on skills development.

Still, SME development in all these countries has challenges, and more needs to be done to create SMEs, stimulate technology development and promote women entrepreneurship. There is an acute need to increase access to financial resources, both for men and women entrepreneurs, as lack of financing has made it challenging for SMEs in these countries to survive. All countries need considerable efforts to enhance their business environment and make it better adjusted to SME development. The legal and regulatory environments are generally too demanding for SMEs and are misaligned to their needs. Human resources are often a limiting factor for SMEs, and more effective approaches are needed to build capacity. There is also a need to showcase successful SMEs in the case study countries to encourage people to consider SME development. All this work needs to be integrated much better to encourage concerted efforts. Priorities need to be made clearer, both in order to coordinate local work and to increase the impact of donors' contributions.

3. Outline opportunities for research and technical support to inform the design and scaleup of such programs. To address this objective, we directly asked all the interviewees in our four case study countries to identify opportunities for research to support SME development. In general, they indicated that more research was needed in a number of areas that can provide input into the development of SME support programs. The topics included the need for holistic and systematic research on the entrepreneurship ecosystems. This included the extent to which government initiatives are aligned with each other, as well as with the banking and financial sectors, the legal landscape, taxation authorities and other bureaucratic structures.

There is a range of opportunities for research on programs supporting technological development. In general, there is a huge gap in such research. Some interviewees focused on the challenges faced by tech start-ups, whereas other emphasized technological areas like fin-tech. Interviewees also pointed out that much could be learned about how best to launch a successful tech start-up from in-depth case studies.

Another agenda for research, that many interviewees identified, was training of entrepreneurs – both in terms of research on developing appropriate training curriculum, and also in terms of designing incubation centres. Some discussed that their countries needed a vast network of incubation centres which can offer training to entrepreneurs on how to become export oriented, how to utilise e-commerce, how to navigate through digital technologies, to help them expand their businesses. Some felt there was also a lack of research on how to help the cluster of initial stage start-ups to get to the next phase, in becoming investment ready.

When asked about the needs for gender-related research on SME development in their countries, nearly every respondent agreed that more research would be welcome. Research that identified and documented the barriers faced by women in the SME sector was one topic mentioned by several interviewees. This could be done across the board, or in specific sectors, or in particular regions.

There clearly are a lot of gaps in the stock of knowledge on how to promote SME development in the LDCs.

We also solicited advice from our interviewees on how to design and structure programs aimed at supporting research into SME development. Most interviewees emphasised that when designing such a research program, a consortium of different types of actors should be involved. Such a program would benefit from setting up a platform where diverse perspectives that are needed to support SME development are shared and discussed. Many emphasised that such a consortium arrangement would also be necessary when running the program in each country, and when designing specific research projects.

We highlighted in the email inviting potential interviewees to take part in the study, that we will keep the interviewees answers confidential and not share them with anyone outside the research group unless we seek, and interviewees provide, their permission. We also pointed out that interviewees were free to withdraw from this study at any time. When we quoted the interviewees in the research outputs, we did not name the interviewees, thereby, keeping their answers confidential.

The research results provided input into the development of a joint research program by IDRC and the UN Technology Bank for the Least Developed Countries on SME development in the LDCs. The program has been designed and will be launched in May 2021, when a report based on this project will be released.

4. Methodology

a) Background research.

To carry out the background research we conducted a bibliometric analysis of publications on SMEs and entrepreneurship involving a focus on the LDCS. To attain the widest possible coverage, we used both the Scopus and the EBSCO databases to retrieve publications on entrepreneurship and SME development. Scopus is a multidisciplinary database with over 75 million records. Apart from journal articles and conference papers, Scopus includes books and book chapters. EBSCO is a database platform that connects to a number of different databases, including JSTOR, ERIC, SciELo, World Bank eLibrary, African Journals Online and Google Scholar. Its coverage is wider than typical research databases, and it also includes academic dissertations, reports and working papers that are not typically peer-reviewed.

We searched the databases using the key words 'SME,' 'Small and medium firms,' Small and medium enterprises' and 'entrepreneur'. The latter also includes 'entrepreneurial' and 'entrepreneurship'. We paired these keywords with 'least developed countries' or 'LDCs' and the names of the 47 countries listed as LDCs by the United Nations Office of the High Representative for Least Developed Countries, Landlocked Countries and Small Island Developing States. Before selecting a publication for our dataset, we read each paper's abstract to evaluate whether the paper was focused on promoting entrepreneurship or SME development. If the paper was, for instance, primarily on promoting energy development, or agriculture by involving a SME, we rejected the paper as an entry in our dataset.

We then cleaned the dataset and ensured that it did not include the same publication multiple times. Afterwards we examined the volume, the changes over time and the focal country/countries of the papers. We then conducted a theme analysis of each paper. We read the abstracts again and identified and coded the main two themes each paper addressed. We also specifically examined, and recoded, whether the paper had a gender focus, a micro credit focus or a technology focus.

In the end we carried out an analysis of the authors' affiliations to examine who is conducting this research. We build a dataset of authors' affiliations for all the SME focused papers. We looked at whether the author(s) were affiliated with a local institution in the focal country of the paper. If they were not locally affiliated, we classified whether they were from a high-income country or another low-middle income country. We then examined if the paper included authors with an affiliation with both a low-and-middle income country and a high-income country (therefore involving a North-South collaboration), or if they had affiliations in two or more low-and-middle income countries (therefore involving a South-South collaboration).

The bibliometric analysis was more thorough than we had planned in the initial proposal and focused on more features than originally planned.

We also searched databases of multilaterals and donor organizations to identify projects on SME development, women entrepreneurs and technology-based firms. These organizations include multilateral organizations such as the United Nations Industrial Development Organization (UNIDO), the World Bank, United States Agency for International Development (USAID), Global Affairs Canada and others. We established that there were initiatives supporting SME development in the LDCs but the information provided by the different organizations on the internet was not comparable and did not seem to be complete. As discussed above, we therefore decided not to focus our efforts on building a database of these initiatives, but rather to use our review to direct our attention to the activities of these multilaterals in our case study countries.

b) Key informant interviews

To gain further insight into initiatives that support SMEs in the LDCs we conducted six interviews with representatives of multilateral organizations. We conducted the interviews using online communication software including Meet Now and Zoom. The interviews were semi-structured and lasted approximately 60 minutes. In the interviews, we explored

respondents' views on a wide range of issues relating to SME development (see interview guide in Appendix A). For example, we asked them to tell us about initiatives their organizations had promoting SMEs in the LDCs; the role of research in shaping their initiatives; what kind of evidence is needed to develop new initiatives in this area; which LDCs are active in supporting SMEs; and which other multilaterals are active in supporting SME development. We used the interview data from these interviews to plan and to provide additional data to our case study research.

c) Case study research

To examine the development of SMEs in the LDCs, we conducted case studies on four select countries. We chose countries that were relatively active in publishing research on entrepreneurship and SME development, based on the bibliometric analysis in phase 1 of this research. We chose to focus on two countries in Africa and two in Asia. Further, we wanted to include countries where English or French were widely spoken. In the end, we chose Ethiopia and Senegal in Africa, and Bangladesh and Cambodia in Asia. Both Bangladesh and Ethiopia have large populations, with 163.0 and 112.1 million respectively, whereas Cambodia and Senegal are smaller, with 16.5 and 16.3 million, respectively.

For each case study, we reviewed a wide range of background documents concerning SME development, technology-based firms, and female entrepreneurs in the select countries. These background analyses included reviews of policy documents from governments in the case study countries, reports from multilaterals, academic publications, material from the websites of organizations, and local newspaper articles describing SME-related initiatives.

To gain a deeper understanding of SME development in the four countries, we interviewed experts directly involved in promoting entrepreneurship and SME development in these LDCs. We chose experts with diverse roles in their entrepreneurial ecosystems. Some were representatives from governments or multilateral/donor organizations, whereas others were entrepreneurs themselves, or representatives from organizations that support SME development such as incubators, accelerators, universities or professional associations. In total, we interviewed 61 experts as a part of these case studies (Table 1). We included the key informant interviews in the analysis of case study data, so the case studies are, therefore, based on interviews with 67 experts.

We conducted the interviews using online communication software including Zoom, and Google Meet. The interviews were semi-structured; lasted approximately 60 minutes; and were conducted from April to September 2020. We adjusted the interview guides to each

country and to the different roles the experts played in promoting SME development in the case study countries. In the interviews, we explored respondents' views on diverse issues bearing on SME development (see interview guide in Appendix A). For example, we asked them to tell us about initiatives they were involved with on promoting/carrying out SME development; to summarize the main strategies governments followed in stimulating entrepreneurship; their emphasis on promoting women entrepreneurs and technology-based firms; and the main challenges they saw in promoting SME development in the case study country. We also solicited their advice on what could be done to strengthen SME development. The interviews were conducted in either English or French, according to interviewee preference.

All the interviews were recorded and transcribed for further analysis. We coded each interviewee's answers to questions according to themes. We then clustered related themes together when analyzing the data. We compared the answers from the different case studies to explore which themes were more specific to each country, and which were more widely shared. When writing up the results, we triangulated the findings from the interview data with results from the background review, and statistics that related to the themes examined.

	Bangladesh	Cambodia	Ethiopia	Senegal	Other inform- ants	Total
Government	2	3	4	3		12
Industry/ incubators	2	4	3	3		12
Financial institutions/ investors	4	1	2	2		9
Multilaterals/ Donors	4	3	5	6	6	24
Academic/ Research Organisations/ Think Tanks	3	3	1	2		9

Table 1. Interviewees interviewed for the case studies

Associations		1				1
Total	15	15	15	16	6	67

By interviewing experts who have experience working in LDCs in Africa and Asia, and who have played diverse roles in their innovation ecosystems, we had the opportunity to collect diverse views on SME development in the LDCs. This multi-pronged approach to gathering and collecting data has, we believe, yielded a nuanced picture of SME development in the LDCs.

7. Project outputs

The outputs of this project were:

- Scoping Research: Research on SME Development in Least-Developed Countries. The report examined he levels and main features of research on SME development focused on LDCs.
- Webinar Workshop: Research on SME Development in Least-Developed Countries. The workshop featured presenters from the Small Globe team and researchers and practitioners from Bangladesh, Senegal and UNCTAD. It discussed the main findings presented in the Scoping Report and perspectives from the case study countries. Participants were select interviewees of the research project and representatives from IDRC and the United Nations Technology Bank for Least Developed Countries.
- Cultivating Small and Medium-Sized Firms: Entrepreneurship Development, Gender, and Technology in Bangladesh, Cambodia, Ethiopia and Senegal. The report presents and contrasts initiatives that the four case study countries have engaged in to foster SMEs; to bolster information and communication technologies; and to stimulate women entrepreneurship. This report will be open access, archived at the website of the UN Technology Bank for the Least Developed Countries with links at the IDRC and Small Globe's websites.
- The Level and Features of Research on SME Development in Least Developed Countries: A bibliometric Analysis. This manuscript is close to completion and will be submitted to an international peer reviewed journal May 2021. This publication will be open access.

 Report and Research Funding Launch: Cultivating SMEs: Entrepreneurship Development, Gender, and Technology in Bangladesh, Cambodia, Ethiopia and Senegal. The webinar will be held on the 11th of May, 2021. The main results from the case study research will be presented; select interviewees from the case study countries will take part in a panel discussing their perspectives on SME development in the focal countries; and IDRC will introduce a new program supporting research on SME development in the LDCs, partly informed by this research.

8. Problems and challenges

One of the main problems with the research project is that, because of the COVID-19 pandemic, we could not conduct face-to-face fieldwork in the case study countries as intended. Instead, the case studies had to rely on online meeting platforms. This change in plan was both an extra burden for our research and an opportunity.

COVID caused our fieldwork to be more labour intensive than the fieldwork would have been if we had carried it out in person. In our experience, we had to put more time into recruiting potential interviewees for online interviews than in-person ones. We often needed to write people multiple customized emails to get them to agree to an interview. There were also several cases of 'no-shows' when interviewees did not log on to the meetings at the set time. No-shows are rare when interviewing in person.

But the on-line 'fieldwork' also provided the opportunity to do more interviews for the case studies than we could have done during brief fieldwork visits. Because of the limited budget we couldn't plan for more than five days of fieldwork in each case study country. Instead, we were able to continue interviewing in the case study countries until we reached data saturation. We also were able to ensure that perspectives of different types of organizations were included. As a result, we have ended up with a larger spectrum of interviewees, with more diverse experiences/perspectives, and ultimately better case study data than we would have been able to collect during short site visits.

These richer case study data provided the opportunity to prepare a comparative report on SME development in the four case study countries. In our original plan for the project, we had only planned a scoping report, combining the bibliometric data and the more limited case study data. It was not aimed at being officially released, but rather designed to provide input for the workshop discussing the main bibliometric findings and opportunities for future research.

9. Administrative reflections and recommendations

Because of time and resource limitations, our research only touched the surface in studying SME development in the LDCs. There is scope for much more detailed studies on the four countries included in this work. More detailed research can provide information on important design elements of policies and programs to encourage SME development in these countries. There is also the scope to extend this type of research to many more LDCs. As our bibliometric analysis demonstrated, there is a serious dearth of research on SME development in most LDCs.

Two issues underscore the importance of increasing the research in this area. One is the large emphasis national governments, multilaterals and donors are placing on promoting SME development as a strategy to create jobs, enhance economic growth, and promote inclusive and sustainable development. With such a large emphasis on SME development, research that can inform policies and programs is in high demand.

The other issue that underscores the importance of increasing research on SME development in the LDCs is the recognition that SME development is shaped deeply by the wider cultural and social contexts in each country. It is questionable to copy and paste strategies from leading countries in this field and apply them in LDCs without considering how these strategies are embedded in very different social and cultural contexts. Research focused on strategies in specific LDCs is therefore urgently needed.

Another reflection based on this research is the applicability of using online platforms for data collection in the LDCs. As mentioned above, because of the COVID-19 pandemic we had to change our plan and instead of interviewing people with face-to-face fieldwork we conducted the interviews mostly with Zoom. We were concerned that there would be challenges in using online meeting software. We thought that the interviewees internet connections might be too weak to be able to communicate effectively over Zoom. We were pleasantly surprised how successful the Zoom interviews were. In only a couple of cases were we unable to successfully conduct the interviews.

It still was challenging to use Zoom interviews instead of face-to-face interviews. As mentioned, in our experience we need to put more time into recruiting potential interviewees for online interviews than in-person ones. Also, there were several cases of 'no-shows' when interviewees did not log on to the meetings at the set time. Another challenge was that, due to the time difference, the researchers had to start some of the interviews at very early hours. Interviews starting at 5:00AM or 6:00AM were not

uncommon for the interviews in Bangladesh and Cambodia. For Africa, it was easier to schedule the interviews during normal business hours.

We also decided that doing focus group discussions over Zoom would be extra challenging. Under normal conditions one needs to pay careful attention to subtle body language, or tone of voice, in focus group discussions. This is particularly important when conducting the discussion with diverse participants from different cultures.

As discussed above, interviewing using online meeting platforms also provided the opportunity to collect interview data until data saturation was achieved. This would have been more difficult to accomplish with brief fieldwork visits, as originally planned. Altogether this arrangement worked well, and we are enthusiastic to continue to interview over Zoom in our future projects.

Appendix A Interview Guides

INTERVIEW GUIDE – KEY INFORMER INTERVIEWS

Thank you for agreeing to be interviewed for our study on SME development in the LDCs. As we mentioned in our email the main objective of the research project is to examine initiatives aimed at promoting SMEs in LDCs, and to analyze their focus on supporting women entrepreneurs and technology-based firms.

The project involves:

- A bibliometric analysis on publications on SME development/entrepreneurship in LDCs
- An examination of sources of funding that support entrepreneurship provided by multilaterals/donors; and
- A deeper analysis of entrepreneurship strategies in four select LDCs, and

Ultimately we want to explore the need for programming that supports research on SME development in the LDCs and gain insight into what research agenda could be beneficial.

The interview should take approximately 40-50 minutes. You will not be identified in any report/publications based on this study without your consent. IDRC will neither have access to audio files nor notes of your interview. Do you give us permission to record our conversation, in order to increase accuracy?

- 1. Can you start by summarizing your involvement in promoting SME development in LDCs?
- 2. What are the main features of the initiatives you have been involved with? *i.e. focused on: business environment, versus direct support to firms particular populations such as women technology firms etc*
- 3. Why did [name of organization] decide to focus on these particular aspects of entrepreneurship?
- 4. Did your organization consult with other groups when deciding on this (these) initiative(s)? *if so, which groups or individuals did they consult with*?
- 5. Do you think the need for initiatives to stimulate SME development in LDCs is wellarticulated?

By governments or other groups in LDCs? Is the articulation informed by research results on the particular countries? If based on research, who has conducted it?

- 6. Have results from research on SME development shaped your work with [name of organization]?
- 7. Do you see any particular gaps in research on SME development in the LDCs that you feel that should be bridged? If so, what are these gaps?

- 8. Do you think there is a need for research focused on promoting SMEs to develop the technology sectors in the LDCs?
- 9. Do you see think there is a need for research focused on women entrepreneurs in tech sectors in the LDCs?
- 10. Which LDCs do you think are at the forefront of promoting SMEs? *What are the main strategies they have applied?*
- 11. Can you suggest somebody we could talk to in these countries about their work in this area?
- 12. Which LDCs do you think are most active in research on entrepreneurship?
- 13. Which multilaterals/donors or other organizations do you think are doing the most to support SME development in the LDCs?
- 14. The Covid-19 pandemic seems to be particularly tough on SMEs. Does [name of organization] have any initiatives to help them out?
- 15. Part of our research involves looking in depth at a selection of countries. In Africa, we will be focusing on Senegal and Ethiopia. Do you have any contacts in Senegal or Ethiopia who are designing or implementing initiatives to encourage SME development, or who are knowledgeable about entrepreneurship in their countries? *If not, can you direct us to someone else who can?*
- 16. In Asia we will be looking in greater depth at Cambodia and Bangladesh. Do you have contacts in Cambodia or Bangladesh who are designing or implementing initiatives to encourage SME development there, or who are knowledgeable about entrepreneurship in their countries? If not can you direct us to someone else who can?
- 17. Is there anything else about SME development in LDCs that you want to discuss?

INTERVIEW GUIDE – CASE STUDIES

Thank you for agreeing to be interviewed for our study on entrepreneurship in the LDCs. As we mentioned in our email, the main objective of the research project is to examine initiatives aimed at supporting SMEs in LDCs, and to analyze their focus in general and their emphasis on supporting women entrepreneurs and technology-based firms.

The project involves:

- A bibliometric analysis of publications on entrepreneurship in LDCs;
- An examination of sources of funding that support entrepreneurship provided by multilaterals/donors; and
- A deeper analysis of entrepreneurship strategies in four select LDCs.

Ultimately we want to explore the need for programming that supports research on SME development in the LDCs, and gain insight into what research agenda could be beneficial.

The interview should take approximately 40-50 minutes. We will keep the interview data confidential and you will not be identified in any report/publications based on this study without your consent.

Do you give us your permission to record our conversation for accuracy?

- 1. Can you start by summarizing your involvement in promoting SME development in [name of country]? What are the main features of the initiatives?
- 2. Is there an emphasis by your organization to support technology-based firms?
- 3. Is there an emphasis by your organization to promote entrepreneurship by women? Women in technology areas?
- 4. What do you see as the main impact of your work in the country?
- 5. How do your initiatives align with the strategies of the government in [name of country] to promote SME development?
- 6. What have been the main challenges in your work in [name of country]?
- 7. What do you see the main challenges in general for entrepreneurship development in the country?
- 8. What do you see as the strengths of the SME sector of the country?
- 9. Do you see any particular gaps in research on entrepreneurship in [name of country] that you feel that should be bridged? If so, in what areas are those gaps?
- 10. When planning a new initiative, does [name of organization] rely on research on SME development in the country?

Your own research or research in the literature?

11. If an external organization wants to set up a program to support research on entrepreneurship in [name of country], do you have any thoughts on how to structure such a program?

Who should be supported to do the research?

What can be done to ensure the research is relevant to local needs?

- 12. The Covid-19 pandemic seems to be particularly tough on SMEs. Does [name of organization] have any initiatives to help them out?
- 13. If you had the opportunity to advise the head of state of [name of country] and tell him/her what to do to strengthen entrepreneurship in the country, what would be your main two pieces of advice?
- 14. Is there anything else about entrepreneurship in [name of country] that you want to discuss?