

REPORT

Evaluation of MCC's Investments in Community Skills Development Centers in Namibia: Final Report

April 19, 2017

Evan Borkum
Kristen Velyvis
Arif Mamun
Malik Khan Mubeen
Anca Dumitrescu
Ananya Khan

Submitted to:

Millennium Challenge Corporation
1099 14th Street, NW
Suite 700
Washington, DC 20005
Project Officer: Algerlynn Gill
Contract Number: MCC-10-0114-CON-20 (MCC-13-TO-0001)

Submitted by:

Mathematica Policy Research
1100 1st Street, NE, 12th Floor
Washington, DC 20002-4221
Telephone: (202) 484-9220
Facsimile: (202) 863-1763
Project Director: Arif Mamun
Reference Number: 40233.363

This page has been left blank for double-sided copying.

ACKNOWLEDGMENTS

We greatly appreciate the support of the many people whose efforts contributed to this report. We especially thank our monitoring and evaluation colleagues at the Millennium Challenge Corporation (MCC) for their input and support throughout the evaluation: Algerlynn Gill and Emily Travis. We also appreciate the support provided during the compact by Kandi Shejavali, Kofi Owusu-Tieku, and Martin Wilkinson, formerly of the Millennium Challenge Account-Namibia (MCA-N), and Mao Tjiroze, formerly at the MCC Resident County Mission in Namibia. Jeremy Muller and Nicolas Limbo at COSDEF provided valuable insights and, together with the management of the COSDECs, generously assisted us in obtaining the sample information for the follow-up survey.

We are grateful to our local data collection partners in Namibia, Survey Warehouse (SW) and the Multidisciplinary Research Center (MRC) at the University of Namibia, who collected the quantitative and qualitative data, respectively. At SW, we thank Lizl Stoman and Piet Stoman for leading the follow-up survey effort, as well as the SW staff who conducted the interviews for their perseverance and patience. At MRC, we thank Nelago Indongo for leading the qualitative data collection; Alfons Mosimane, and Immaculate Mogotsi for their hard work and cooperation; and Cecilia Endunde, Angula Nahas Enkono, and Turkki Timoteus for excellent research support.

Our colleagues at Mathematica also provided valuable support. We thank our former colleague Luke Heinkel for supporting the qualitative data collection, as well as Anne Hower, Divya Parthasarathy, and Kathy Shepperson for their diligent work in programming the follow-up survey and processing the data. Delia Welsh carefully reviewed the draft report and provided excellent comments. We also thank Shantal Alston for formatting the report, and Molly and Jim Cameron for their careful editorial work.

This page has been left blank for double-sided copying

ACRONYMS

COSDEC	Community Skills and Development Center
COSDEF	Community Skills and Development Fund
MCC	Millennium Challenge Corporation
MCA-N	Millennium Challenge Account Namibia
MHETI	Ministry of Higher Education, Training, and Innovation
MRC	Multidisciplinary Research Center
NQA	Namibia Qualifications Authority
NQF	National Qualifications Framework
NTA	Namibia Training Authority
NTF	National Training Fund
NUST	Namibia University of Science and Technology
SME	Small and medium enterprise
VET	Vocational education and training
VTC	Vocational Training Center
VTGF	Vocational Training Grant Fund

This page has been left blank for double-sided copying

CONTENTS

ACKNOWLEDGMENTS.....	III
ACRONYMS	V
EXECUTIVE SUMMARY	IX
A. The COSDEC subactivity	xiii
B. Research questions	xiv
C. Evaluation design	xv
D. Data collection	xv
E. Summary of findings	xvii
F. Policy implications	xx
I. INTRODUCTION.....	1
A. The COSDEC subactivity	1
B. Literature review	5
C. Roadmap for the report	7
II. EVALUATION DESIGN, DATA, AND ANALYSIS APPROACH	9
A. Research questions	9
B. Evaluation design	10
C. Data	11
D. Analysis approach	16
E. Limitations.....	18
III. COSDEC EVALUATION FINDINGS.....	21
A. Implementation and evolution of the COSDEC subactivity	21
B. Characteristics of trainees and features of trainings in the new and renovated COSDECs.....	25
C. Trainee outcomes.....	31
1. Vocational training.....	31
2. Employment and productive engagement	36
3. Earnings and income	41
4. Health behaviors	43
5. Subgroup analysis.....	44
D. COSDEC management and perceived sustainability.....	48
E. Cost Analysis	52

- IV. CONCLUSION 54
 - A. Summary and discussion of findings 54
 - B. Implications for policy and practice 58
 - C. Next steps 59
- REFERENCES 61
- APPENDIX A RESULTS WITH THE ADDITION OF COSDEC BENGUELAA-1
- APPENDIX B ROBUSTNESS TO NONRESPONSE WEIGHTSB-1

TABLES

ES.1	Number of focus groups and key informant interviews.....	xvi
II.1	Number of focus groups and key informant interviews for the COSDEC evaluation	12
II.2	Timing of the COSDEC survey relative to the end of COSDEC training for the analysis sample (percentages, unless otherwise noted)	14
II.3	COSDEC survey sections	15
II.4.	COSDEC survey sample sizes and response rates	16
III.1	Characteristics of COSDEC enrollees in the analysis sample (percentages, unless otherwise indicated)	26
III.2	Features of COSDEC training for the July to December 2014 intake (percentages, unless otherwise indicated)	28
III.3	Perceived quality of COSDEC training by enrollees (percentages)	29
III.4	Completion of COSDEC training (percentages, unless otherwise indicated).....	32
III.5	Assessments associated with COSDEC training (percentages)	33
III.6	Enrollment in additional vocational training, by COSDEC enrollees (percentages)	34
III.7	Use of SME units among those enrolled in COSDECs in which SME units were available (percentages, unless otherwise indicated).....	37
III.8	Employment and productive engagement at the survey date among COSDEC enrollees (percentages)	38
III.9	Features of employment at the survey date (percentages, unless otherwise indicated).....	40
III.10	Earnings and income in the month prior to the survey date (percentages, unless otherwise indicated)	42
III.11	Health behaviors (percentages).....	43
III.12	Variation in outcomes by enrollee characteristics (percentages, unless otherwise indicated).....	45
III.13	Variation in outcomes by COSDEC course characteristics (percentages, unless otherwise indicated).....	47
III.14	Estimated costs of COSDEC training for 2015 (N\$ per trainee, unless otherwise indicated).....	53
A.1	Characteristics of COSDEC enrollees in the analysis sample (percentages, unless otherwise indicated)	A-3
A.2	Features of COSDEC training for the July to December 2014 intake (percentages, unless otherwise indicated)	A-4
A.3	Perceived quality of COSDEC training by enrollees (percentages)	A-5
A.4	Completion of COSDEC training (percentages, unless otherwise indicated).....	A-6

A.5	Assessments associated with COSDEC training (percentages)	A-6
A.6	Enrollment in additional vocational training by COSDEC enrollees (percentages)	A-7
A.7	Use of SME units, among those enrolled in COSDECs in which SME units were available (percentages, unless otherwise indicated).....	A-8
A.8	Employment and productive engagement at the survey date among COSDEC enrollees (percentages)	A-9
A.9	Features of employment at the survey date (percentages, unless otherwise indicated).....	A-10
A.10	Earnings and income in the month prior to the survey date (percentages, unless otherwise indicated)	A-11
A.11	Health behaviors (percentages).....	A-12
A.12	Variation in outcomes by enrollee characteristics (percentages, unless otherwise indicated).....	A-12
A.13	Variation in outcomes by COSDEC course characteristics (percentages, unless otherwise indicated).....	A-13
B.1	Key outcomes with and without nonresponse weights (percentages, unless otherwise indicated).....	B-3

FIGURES

I.1	Location of COSDECs in Namibia	3
I.2	Logic model for the COSDEC subactivity	4

This page has been left blank for double-sided copying

EXECUTIVE SUMMARY

To promote economic growth and reduce poverty in Namibia, the Millennium Challenge Corporation (MCC) signed a \$304.5 million compact with the Government of the Republic of Namibia in 2009. The compact, formally completed in September 2014, included three projects: tourism, agriculture, and education. The education project sought to address the shortage of skilled workers in Namibia and the education system's limited capacity to train such workers.

The vocational training activity (\$28 million) was one of the key activities of the education project, focusing on expanding the availability, quality, and relevance of vocational education and skills training in Namibia. It consisted of three subactivities: (1) a Vocational Training Grant Fund (VTGF) that provides grants to public and private providers offering training in high-priority vocational skills; (2) technical assistance to establish a National Training Fund (NTF), intended to provide a sustainable source of funding for vocational training programs in Namibia; and (3) improvement of Namibia's network of Community Skills and Development Centers (COSDECs), which are community-based institutions that provide basic levels of vocational training to clients from disadvantaged backgrounds, including out-of-school youth and low-skilled adults.

MCC contracted with Mathematica Policy Research to evaluate the vocational training activity, including all three subactivities. In this report, we present the findings from a performance evaluation of the COSDEC subactivity, which includes a qualitative analysis and a complementary quantitative outcomes analysis of COSDEC enrollees. The qualitative analysis uses data collected through interviews and focus group discussions during and after the compact to assess implementation of the subactivity, how it evolved after the compact, and its sustainability. The outcomes analysis draws on a follow-up survey of enrollees and focuses on their training and labor market outcomes.

A. The COSDEC subactivity

COSDECs aim to improve the employment prospects of their clients by offering two main types of programs: (1) national programs¹, which typically last between two and nine months (for example, bricklaying, plumbing, and carpentry); and (2) short courses, which can be taught as center-based programs at the COSDEC itself or as outreach programs delivered in the community on an ad hoc basis (for example, beadwork, jam making, and basic computer literacy), and typically last from one week to three months.

The compact funded the construction or renovation of seven of the eight COSDECs in Namibia, the provision of new tools and equipment in these COSDECs, and delivery of technical assistance. Four of the COSDECs received a small- and medium-enterprise (SME) unit that provides a physical workspace, subsidized materials, and other support to enable graduates to start their own small enterprises. To complement these physical improvements, the compact funded a consultant (Transtec) to provide technical support to the Community Skills and Development Fund (COSDEF), the umbrella body that supports the COSDECs, as well as to

¹ National programs are courses that are supposed to follow a national curriculum approved by the Namibia Qualifications Authority (NQA).

management of the COSDECs. The technical support for COSDEC management focused on improvements in financial management, the development of strategic plans, pedagogical training for COSDEC trainers, support for COSDECs to become registered and accredited institutions (and offer accredited courses), and the development of strategies to market the COSDECs in their catchment areas

B. Research questions

The evaluation of the COSDEC subactivity sought to address the following six key research questions, which can be grouped into three areas—implementation, trainee outcomes, and COSDEC management.

Implementation

1. Was the COSDEC subactivity implemented as planned?
 - a. How did actual implementation compare to planned implementation, and what were the reasons for any deviations from plans?
 - b. What were the main challenges to implementation, and how were these addressed?

Trainee outcomes

2. To what extent did the COSDEC subactivity increase the availability of training?
 - a. What types of trainings did COSDECs offer, how were they determined, and how did they affect training accessibility?
 - b. What percentage of trainees completed the different levels of trainings offered?
3. How did COSDEC training affect the employment outcomes of trainees?
 - a. What was the pattern of employment for trainees?
 - b. What was the role of SME support in the effects of the trainings on self-employment?
 - c. To what extent were increases in employment likely to be sustained?
 - d. To what extent did COSDEC trainees engage in further training?
4. How did COSDEC training affect the earnings and income of trainees?
 - a. What were the patterns of earnings and income for trainees?
 - b. To what extent are increases in earnings and income likely to be sustained?
5. Did the employment and earnings outcomes of COSDEC trainees vary by trainee characteristics?

COSDEC management

6. How were the new and renovated COSDECs managed?
 - a. What management practices did the COSDECs apply, and are the practices likely to change in the future?
 - b. Are the new COSDECs financially sustainable?

- c. Did COSDECs make progress toward adopting unit standards and accreditation, and did this progress affect “articulation”?

C. Evaluation design

The performance evaluation of the COSDEC subactivity integrates a qualitative analysis and a quantitative outcomes analysis:

- **Qualitative analysis.** The qualitative analysis explores implementation of the subactivity, how it evolved after the compact, and its sustainability. It relies primarily on two rounds of qualitative data collected from stakeholders through interviews and focus group discussions close to the end of the compact and again one year later. We used the data collected in each round to identify major themes related to the research questions by triangulating information from various data sources.
- **Outcomes analysis.** The outcomes analysis seeks to describe the characteristics and outcomes of enrollees in the seven new or renovated COSDECs. It relies on a survey of COSDEC enrollees that collected information about their training and labor market outcomes about one year after the end of COSDEC training. The outcomes analysis is largely descriptive in nature and presents numerical descriptions of average outcomes for the full sample of enrollees and relevant subgroups.

D. Data collection

1. Qualitative data

Mathematica conducted the first round of data collection in October and November 2014, close to the end of the Namibia compact, and the second round between October and December 2015, about a year after the end of the compact. We developed semi-structured protocols to guide focus group discussions and interviews. The Multidisciplinary Research Center (MRC) at the University of Namibia collected most of the data in each round and conducted all transcription, translation, and preliminary coding of the qualitative data. The qualitative data sources for each round of qualitative data collection are summarized in Table ES.1.

Using Atlas.ti qualitative analysis software, the MRC team coded the qualitative data collected in each round by employing high-level codes developed by Mathematica based on the research questions. We then conducted additional coding on the data categorized as relevant to each research question, using NVivo qualitative analysis software. We triangulated information from multiple data sources to identify emerging themes; with each review of the data, we further refined and organized the codes. Finally, we created summaries of the findings that accounted for similarities and differences in perspectives across different respondent groups.

Table ES.1. Number of focus groups and key informant interviews

Data source	Data collection method ^a	First round: Oct–Nov 2014	Second round: Oct–Dec 2015
COSDEC trainees	Focus groups	5	3
MCA-N staff	Interviews	1	--
MCC resident country mission staff	Interviews	1	--
Transtec ^b	Interviews	2	--
COSDEF staff	Interviews	1	1
COSDEF board members	Interviews	--	2
COSDEC managers	Interviews	7	7
Namibia Qualifications Authority (NQA) staff ^c	Interviews	--	1
Namibia Training Authority (NTA) staff and consultant ^d	Interviews	--	2
Employers ^e	Interviews	5	4
Namibia Chamber of Commerce and Industry staff	Interviews	1	1

^aAll interviews were individual, in-depth interviews, although on occasion more than one respondent was present for at least part of the interview to answer specific questions.

^bProvided technical assistance to COSDEF and the COSDECs.

^cResponsible for accreditation of training providers and courses in Namibia.

^dResponsible for registering training providers in Namibia and providing a majority of the COSDECs' funding.

^eEmployers in areas served by the COSDECs.

2. Survey data from enrollees

The outcomes analysis draws on a follow-up survey of enrollees in the seven new and renovated COSDECs. Survey Warehouse, a local data collection firm, conducted the survey from January to June 2016, with oversight from Mathematica, using a computer-assisted telephone interview system. The survey collected data on enrollees' demographic characteristics, as well as their vocational training history, employment status, and earnings and income. The survey sample included all individuals who enrolled in national courses starting between July and December 2014 in the targeted COSDECs. This intake was the first one expected to fully benefit from the subactivity (COSDECs typically have two main intakes per year, one in each half of the year, and the interventions were completed only by mid-2014). To administer the survey, we obtained information from the COSDECs on these enrollees' names, the courses in which they enrolled, and their contact information. We planned to conduct the survey approximately one year after the scheduled end of each training. We selected this one-year follow-up period, which is typical in the vocational training literature, to balance the desire to observe long-term outcomes with the risk of increased sample attrition and recall error associated with a longer follow-up period. In practice, Survey Warehouse conducted the survey between 12 and 16 months after the end of training, with the median respondent surveyed 12 months after the training, as planned (the mean was about 13 months).

The enrollee analysis sample consisted of 642 enrollees in the surveyed intake, who were enrolled in 36 COSDEC courses across the seven COSDECs. This analysis sample reflects a survey response rate of 69 percent. About 70 percent of respondents were female, the average

age at enrollment was about 27, and 85 percent were unmarried. About 41 percent had completed junior secondary school (grade 10), and about 42 percent had completed senior secondary school (grade 12) or further education. The courses in which trainees were enrolled were between two and nine months in duration, with a mean and median duration of about six months. Most trainees in the sample were enrolled in non-technical courses in skill areas such as office administration, food preparation and serving, information communication technology, and clothing production. A little over one-quarter of the trainee sample were enrolled in technical courses in skill areas such as bricklaying and plastering, plumbing and pipefitting, welding and metal fabrication, and carpentry and joinery.

E. Summary of findings

Our analysis focused on the changes experienced by the COSDECs one year after the end of the compact, and the training and labor market outcomes of COSDEC enrollees in the July to December 2014 intake. The key findings are as follows:

1. Implementation and evolution of the COSDEC subactivity

a. Key stakeholders reported that the construction and renovation components of the subactivity largely were successful, but some additional infrastructure improvements still are required.

A year after the end of the compact, the stakeholders we interviewed unanimously viewed the implementation of the construction and renovation as successful. These respondents commented that the new infrastructure had resulted in a more conducive learning environment, improved perceptions of the COSDEC in the community, and enabled progress toward COSDECs' meeting national registration and accreditation requirements. Nevertheless, a majority of COSDECs already have or plan to undertake additional construction to expand or modify their respective centers to address some design flaws and accommodate additional trainees, or conduct touch-ups and repairs to the work already done. Most COSDECs do not have a formal maintenance plan for the new facilities; however, they do conduct required maintenance using their annual budget, fee income, and trainee labor.

b. Providing the COSDECs with new tools and equipment was the least successful component of the interventions, although still an improvement over the previous situation.

During our first round of data collection, most respondents reported that the large machinery and power tools supplied under the subactivity worked well. However, many of the more modest new tools and equipment, such as trowels for bricklaying, wheelbarrows, and toolboxes, were delivered late and of low quality (they broke easily, did not match the specifications required, or did not work well or at all). The poor quality tools constrained the quality of some trainings, as trainees were not able to gain practical skills using all of the appropriate tools as much or as well as they expected. However, several COSDEC managers noted that, to the extent possible, they obtained new tools and equipment to replace the broken and substandard ones, through MCA-N or using the COSDEC's own budget. Despite problems with the quality of some of the tools, most of the respondents reported that the machinery was operational and most of the workshops were equipped with suitable tools and equipment at the time of the second round of qualitative data collection.

c. SME support units were constructed as planned and are serving entrepreneurs, but it is still too early to assess their success.

At the end of the compact, construction of the four SME units was complete but their utilization was generally still in the planning phase. One COSDEC not originally slated to receive an SME unit also reported the construction of a unit, which suggests a possible modeling of the subactivity's work. One year later, COSDEC managers reported that their units were 80 to 100 percent full, although many had to waive user fees because trainees were not able to pay. COSDEF staff, board members, and some COSDEC managers were optimistic about the role of the SME units in supporting entrepreneurs and wanted to see them do even more. However, they noted that, with only one year of operation, it was too early to tell how successful the SME units would be.

d. COSDECs had successfully incorporated many new management practices included in the technical assistance into their operations.

By the end of 2015, stakeholders reported that COSDECs could competently develop their annual budget plans, which play an important role in their funding approval. They were also taking an active and collaborative role in strategic planning with the COSDEF, and had introduced a more inclusive management style. In addition, the COSDECs continued to build on the instructor training conducted by Transtec through off-site training aimed at further improving instructors' pedagogical skills and the quality of instruction. However, the technical assistance related to marketing of the COSDEC in the local community had not resulted in meaningful changes in the relevant practices.

e. Most stakeholders, including trainees and employers, had positive perceptions of the quality of the COSDECs, and COSDECs perceived that there had been an increased demand for training.

The enrollee survey data suggest that trainees' perceptions of training quality were very positive regarding the instructors, written materials, tools, and overall quality. Consistent with these findings, the trainees in our focus groups all expressed satisfaction with their training. Many stakeholders in the second round of qualitative data collection thought that community perceptions of quality had improved, and that the infrastructure improvements had played a central role in this improvement. As the COSDECs' reputation in the community appeared to improve, they also experienced an increase in trainee applications, with several COSDECs having to turn applicants away. The employers we interviewed also had expressed positive perceptions of the COSDECs. They noted their satisfaction with the performance of COSDEC trainees, and many described how they interact closely with the COSDEC for job attachments and job placements (although these employers were selected based on their familiarity with COSDECs and thus might not be representative of employers in the community).

2. Trainee outcomes

a. Almost 9 in 10 enrollees in our sample completed their COSDEC training, but few had enrolled in further training despite high interest in doing so.

About 85 percent of enrollees in our survey analysis sample reported that they had completed their COSDEC training. However, only about 6 percent of completers had enrolled in additional training since the start of their COSDEC course, even though most expressed an interest in doing so. This could be related to the ongoing challenges with “articulation”—the ability of COSDEC graduates to enroll in subsequent levels of vocational education and training with other training providers without having to repeat levels they have already completed—due to the incomplete registration and accreditation processes. Because of these challenges, COSDEC graduates’ plans for directly enrolling in further training might not be realistic for the intake surveyed, at least in the short term.

b. One year after the end of training, the majority of COSDEC enrollees in our analysis sample were not employed; few were employed in a job related to their vocational training or held high quality jobs.

At the time of the survey, one year after the end of training, about 40 percent of respondents reported that they were employed, and about 42 percent of respondents were productively engaged (defined as holding a paid job *or* being engaged in further vocational training). Only about 13 percent of all respondents reported that they were employed in a job related to their vocational training at the COSDEC. In addition, many of those who were employed held jobs that were temporary and/or with which they were dissatisfied. This finding suggests that considerable challenges remain not only in linking COSDEC graduates to jobs, but also linking them to high quality jobs.

c. Consistent with the low employment rate, most enrollees in the analysis sample had no earnings from employment in the month before the survey, and almost one-third had no individual income at all.

Our main outcome in the earnings and income domain is monthly earnings, defined as wages or profits from self-employment, in the month before the survey (earnings are zero for unemployed individuals). About two-thirds of respondents had no earnings in this month, and only about 18 percent earned more than N\$2,000 (about US\$130 at the average exchange rate in the survey period). Mean earnings were about N\$1,258 (about US\$82). Among those employed at the survey date, mean monthly earnings were about N\$3,948, or US\$257.

d. Female enrollees had similar training completion rates but significantly lower employment rates and earnings than male enrollees.

Female enrollees—who composed the majority of COSDEC enrollees in the July to December 2014 intake—appear to face substantial challenges in the labor market relative to male enrollees, although their training completion rates were similar. Specifically, a significantly higher fraction of male enrollees were employed at the time of the survey than female enrollees (48 percent compared to 36 percent, respectively), which was also reflected in a significantly higher fraction of male enrollees being productively engaged relative to female enrollees (52 percent compared to 38 percent). Mean earnings were almost three times higher for males (N\$2,316) than for females (N\$810), a strongly statistically significant difference. These gender differences are similar in statistical significance and even larger in magnitude after controlling

for differences in COSDEC and course, and cannot therefore be explained by differences in the types of courses males and females take.

3. COSDEC management

a. Stakeholders were confident that the COSDECs will be financially sustainable in the long term, mainly through government funding supplemented by additional sources.

The main funding for the COSDECs ultimately comes from the Namibian government, through the NTA and is channeled through COSDEF. COSDECs also receive tuition fees and revenue from other income-generating activities, which supplement the funding received from NTA. However, because COSDECs serve youth in disadvantaged communities, tuition fees must necessarily be kept low; even then, not all trainees are able to pay. Despite this reliance on government funding, most stakeholders did not see the long-term financial sustainability of the COSDECs as a problem, as they expect government funding to continue. Nevertheless, COSDECs were exploring additional funding sources besides the NTA to broaden their funding base, including funding from other government entities and nongovernmental organizations.

b. COSDECs have made progress toward registration and accreditation, but these complex and time-consuming processes are still not complete; this situation is especially problematic for the articulation of COSDEC graduates to further training.

COSDECs are expected to undertake both the registration and accreditation processes for their centers, as well as the accreditation process for the national courses they would like to run. In our second round of qualitative data collection, COSDEC stakeholders reported that the registration and accreditation processes (managed by the NTA and NQA, respectively) were lengthy, duplicative, and cumbersome. By the end of December 2016, communication with COSDEF revealed that none of the COSDECs was yet accredited or registered, although most were at an advanced stage with these processes. The absence of registration and accreditation poses challenges for the articulation of COSDEC graduates to higher levels of training because other training providers may not recognize COSDEC qualifications; thus, COSDEC graduates have to repeat the basic levels of training at the new provider. In addition, without accreditation, COSDECs will be unable to access funding for training disbursed through the NTF, a potentially valuable funding source.

F. Policy implications

1. The high unemployment rate among COSDEC graduates a year after they completed training suggests the need for a more effective process to align national course offerings at the COSDECs with market demand. The lack of alignment between vocational training and market demand is not unique to the COSDECs but a broader problem in the vocational training sector in Namibia that the NTF was specifically designed to address. In assessing market demand, COSDECs could also draw on broader national studies of market demand conducted for the NTF (although market demand for the basic skill levels taught at the COSDECs might still be limited). In addition, although trainees commonly participated in job attachments, relatively few completers reported being offered job placement help by their COSDEC. This finding suggests that COSDECs could consider extending their involvement in the job search process beyond arranging job attachments (for example, by assisting trainees with resume compilation, reference letters, and interview techniques). However,

given the small size of the private sector in Namibia, it might still be difficult to absorb all vocational training graduates in the formal sector; future policy might therefore need to focus more on the informal sector and encouraging entrepreneurship and self-employment.

2. Special attention should be given to enhancing the employment prospects of female COSDEC enrollees, who have significantly lower employment and earnings than male enrollees. These differences persist even after accounting for differences in the types of courses they take and are not explained by differences in training completion, labor force participation, or other characteristics. Although we do not have definitive evidence of the types of inherent barriers that females face in the labor market, efforts to support them could include linking them with female mentors in the community (for example, female-owned businesses) or undertaking affirmative action initiatives to provide direct and stronger support to female COSDEC graduates.
3. It will be important for the COSDECs to closely monitor the use of SME units and the labor market outcomes of users because it was too early to assess the success of these units as part of our evaluation. Maintaining systematic data on users (for example the number of users, their characteristics, the duration of use, and the type of support received) would provide the COSDECs with useful information about the profile of their users and patterns of use. For example, information about the types of users could be used to target information about SME units to enrollees in certain courses, and information about number of users and duration of use could be used to plan the allocation of SME unit resources. Focus group-type discussions between COSDEC managers and users would also be helpful to better understand the experiences and needs of the latter. Finally, a simple phone-based tracer survey of users would be helpful in assessing the extent to which users' enterprises were established and functional after use of the units ended, as well as the key challenges they face.
4. It will be important for the COSDEF and the COSDECs to persevere with the registration and accreditation processes, although they are complex and time-consuming. Completing these processes will be critical both for the receipt of funding for training through the NTF and for COSDEC enrollees to have the option of articulating to further training at other providers (as a large fraction of enrollees report being interested in doing). In addition, COSDEF may want to strive to make articulation effective retrospectively so that recent COSDEC graduates can take advantage of it. COSDEF also must engage closely with ongoing developments related to NQA's finalization and implementation of the NQF, which will be important in facilitating articulation in the future.
5. Several valuable lessons can be drawn from the implementation of the COSDEC subactivity for similar MCC interventions in the future. First, for future investments in the VET sector, MCC should continue to emphasize the importance of having a credible approach to identifying and addressing skills gaps in the labor market. Second, given the limited capacity at the COSDECs, it would have been ideal to start technical assistance earlier to build in more of a time cushion within the compact timeframe. This would have provided a crucial extra few months to solidify many of the new practices before the end of the compact. For example, it might have been possible to finalize COSDEC maintenance plans; implement any outstanding technical assistance regarding new managerial practices; and provide support as the COSDECs began to implement the new practices. Alternatively, funding and support for a few months into the post-compact period could have been coordinated through another donor, such as GIZ. Third, consulting with COSDEC staff earlier in the implementation

process would have helped avoid design flaws in the new infrastructure that required adjustments after the compact ended. Fourth, having the construction occur concurrently with changes in management practices was overwhelming for many centers. Relocating the COSDECs temporarily before renovations began could have allowed their staff to focus on the technical assistance changes without also managing the day-to-day operations of a training center in a construction zone. Alternatively, the technical assistance could have been started well before the construction work. Finally, the MCA-N procurement process for tools and equipment would have been more effective and resulted in better value for the project if it had not selected a supplier based solely on price, but had also considered quality.

I. INTRODUCTION

To promote economic growth and reduce poverty in Namibia, the Millennium Challenge Corporation (MCC) signed a \$304.5 million compact with the Government of the Republic of Namibia in 2009. The compact, formally completed in September 2014, included three projects: tourism, agriculture, and education. The education project, with a total investment of about \$142 million, was the largest project (Millennium Challenge Account-Namibia [MCA-N] 2014). It sought to address the shortage of skilled workers in the country and the education system's limited capacity to train such workers. These limitations are among the most serious constraints to Namibia's economic diversification and broad-based economic growth (African Development Bank et al. 2015; U.S. Agency for International Development 2003; World Bank 2013).

The education project consisted of several activities that aimed to improve the quality of the workforce by enhancing the equity and effectiveness of basic, vocational, and tertiary education. The vocational training activity (\$28 million) was one of the key activities, focusing on expanding the availability, quality, and relevance of vocational education and skills training in Namibia. It consisted of three subactivities: (1) a Vocational Training Grant Fund (VTGF) that provides grants to public and private providers offering training in high-priority vocational skills; (2) technical assistance to establish a National Training Fund (NTF), intended to provide a sustainable source of funding for vocational training programs in Namibia; and (3) improvement of Namibia's network of Community Skills and Development Centers (COSDECs), which provide vocational training for marginalized populations, including out-of-school youth and low-skilled adults.

MCC contracted with Mathematica Policy Research to evaluate the vocational training activity, including all three subactivities. In this report, we present the findings from a performance evaluation of the COSDEC subactivity, which includes a qualitative analysis and a complementary quantitative outcomes analysis of COSDEC enrollees. The qualitative analysis uses data collected during and after the compact to explore the implementation of the subactivity, how it evolved after the compact, and its sustainability. The outcomes analysis draws on a follow-up survey of enrollees in the seven COSDECs supported by the subactivity, seeking to describe enrollees' characteristics and their training and labor market outcomes.

In the rest of this chapter, we first describe the COSDEC subactivity and its program logic in further detail. We then review the research literature on vocational training programs in developing countries to provide context for the Namibia COSDEC evaluation, and also present a roadmap for the rest of the report.

A. The COSDEC subactivity

COSDECs are community-based institutions that provide basic levels of vocational training to clients from disadvantaged backgrounds—particularly out-of-school youth who lack access to the formal vocational training system—to improve their employment prospects. COSDECs offer two main types of programs: (1) national programs, which typically last between two and nine months (for example, bricklaying, plumbing, and carpentry); and (2) short courses, which can be taught as center-based programs at the COSDEC itself or as outreach programs delivered in the

community on an ad hoc basis (for example, beadwork, jam making, and basic computer literacy), and typically last from one week to three months.

The compact funded the construction or renovation of seven of the eight COSDECs in Namibia and the provision of new tools and equipment for them (the only COSDEC in Namibia not included in the subactivity was COSDEC Benguela, in Lüderitz).^{2,3} Four of the COSDECs received a small- and medium-enterprise (SME) unit that provides a physical workspace, subsidized materials, and other support to enable graduates to start their own small enterprises.⁴ Figure I.1 shows the locations of the COSDECs included in the subactivity and those that received SME units.

To complement these physical improvements, the compact funded a consultant (Transtec) to provide technical support to the Community Skills and Development Fund (COSDEF), the umbrella body that supports the COSDECs, and to the management of the COSDECs. The technical support focused on improvements in financial management, the development of strategic plans, support for COSDECs to become registered and accredited institutions (and offer accredited courses),⁵ and development of strategies to market the COSDECs in their catchment areas. It also included pedagogical training for COSDEC trainers, many of whom had vocational skills and industry experience but no formal pedagogical training.

By mid-2014, the subactivity interventions were completed in all of the COSDECs, with the exception of delivery of some of the new tools and equipment, which was delayed until the third quarter of 2014 in some cases.

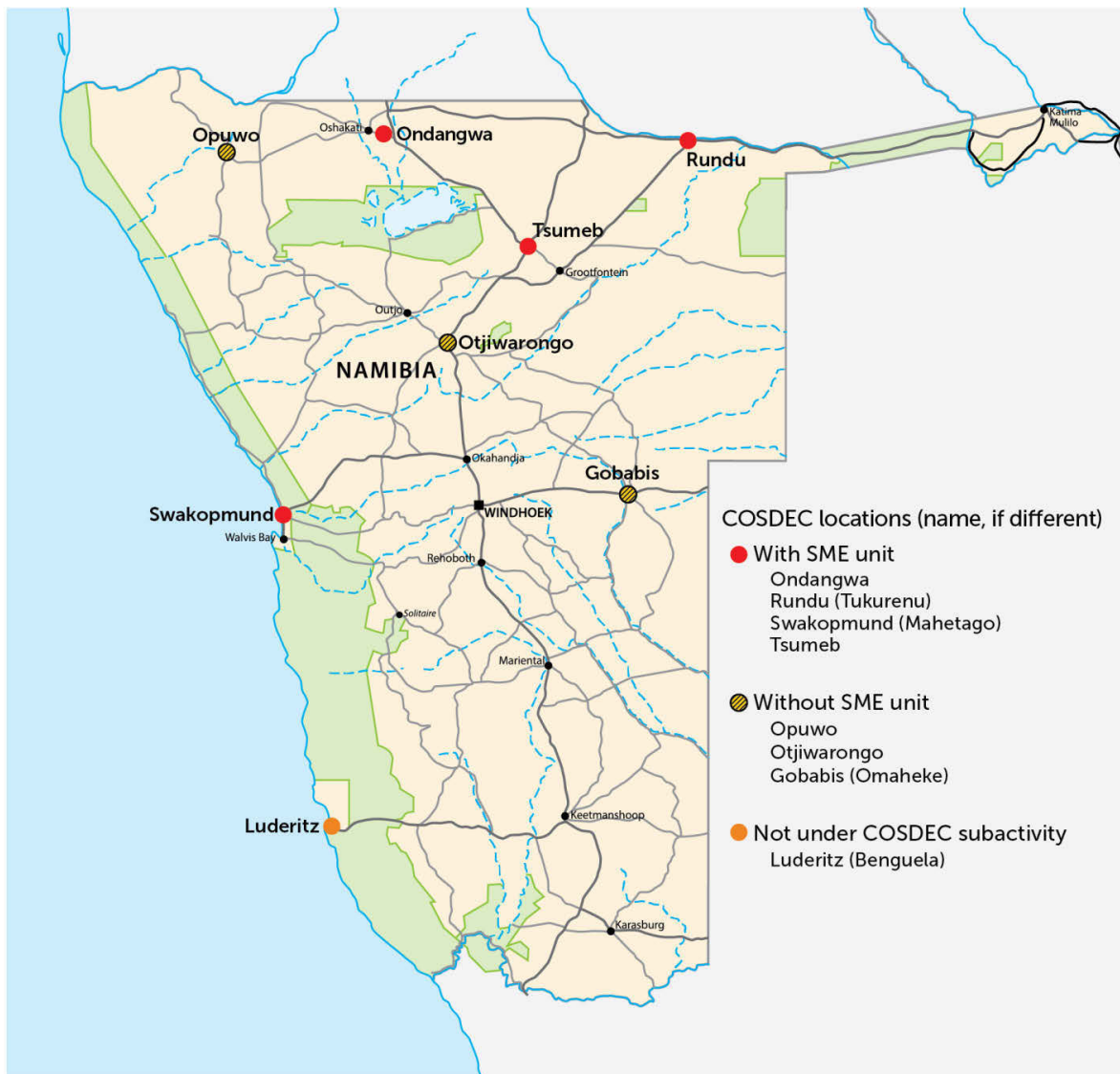
² Technically, three of the COSDECs were new and four were renovated. However, all seven COSDEC sites already had a COSDEC; the only substantive difference between new construction and renovation was that the newly constructed sites were in a different physical location in the same community (in most cases, the original site was retained to further increase the physical capacity of the COSDEC).

³ The subactivity also included the construction of an arts and crafts center in Swakopmund and a bulk store in Windhoek. However, neither of these interventions was directly related to the COSDECs: the arts and crafts center is conceptually distinct from a typical COSDEC, and the bulk store was funded by the COSDEC subactivity but was simply intended to allow the Namibian College of Open Learning to free up space for vocational training. Our evaluation focuses on the COSDECs themselves, not on these ancillary interventions. A stakeholder involved in implementation suggested that it was inefficient to include the arts and crafts center in the subactivity because it distracted implementing staff from the core COSDEC interventions and may have led to some delays in the implementation of these interventions (such as procuring tools and equipment).

⁴ Although these are called SME units, their focus is on enabling trainees to use their skills to start small and micro enterprises, not medium enterprises. A better term for them might be “micro- and small-enterprise” (MSE) units. The COSDECs in Swakopmund, Rundu, Ondangwa, and Tsumeb received these SME units. COSDEF chose these sites based on their locations, the number of people involved in micro- and SME activities at each location, and the potential for growth of micro- and SME activities there.

⁵ The registration process is managed by the National Training Authority (NTA); it includes such infrastructure requirements as sufficient physical space and appropriate tools. Accreditation is managed by the Namibia Qualifications Authority (NQA) and includes similar (but not identical) requirements such as registration, as well as additional requirements, such as adequate management systems and trainer qualifications. The NQA also accredits specific courses offered by accredited training providers, which must include defined competencies or “unit standards.”

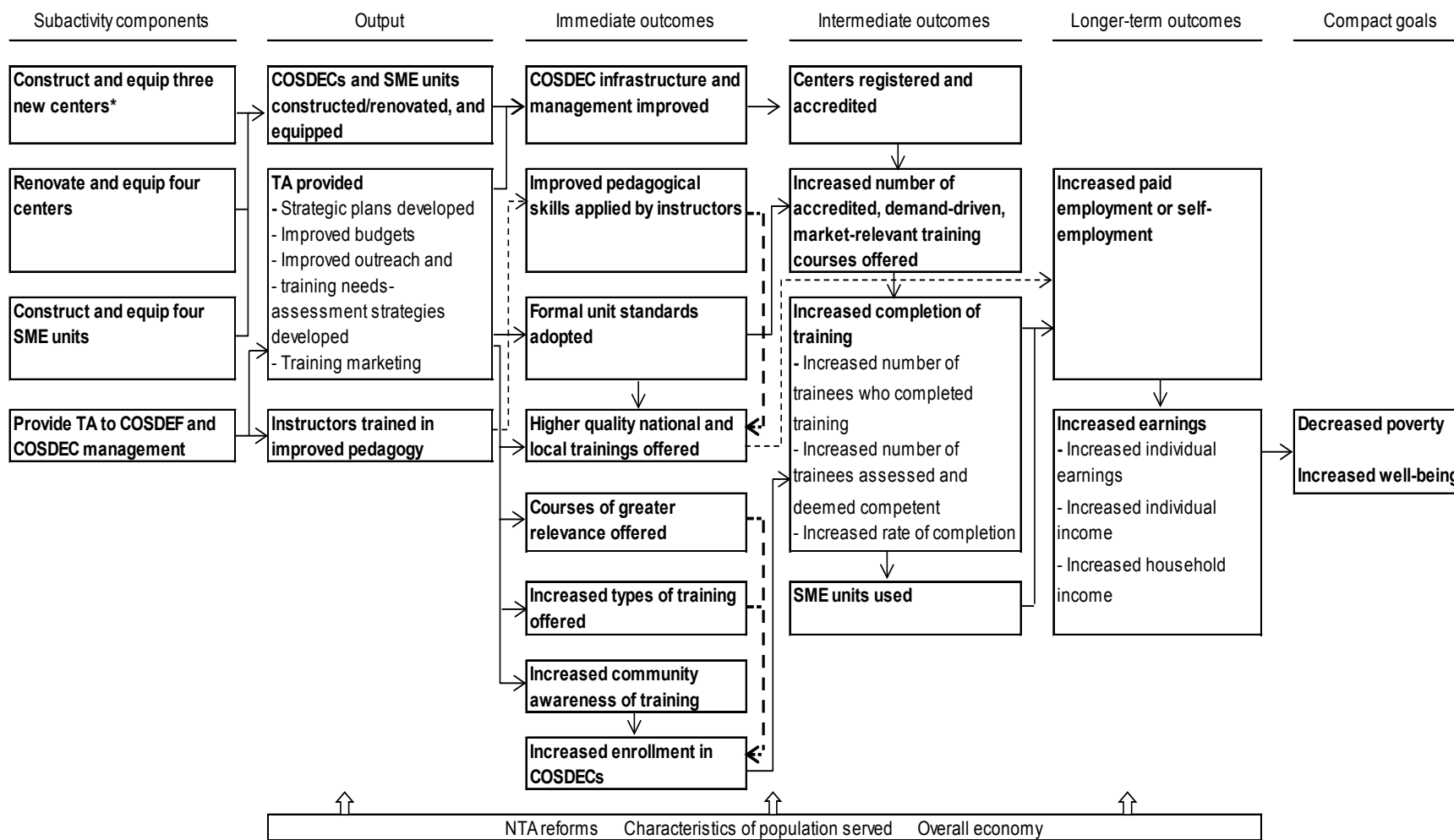
Figure I.1. Location of COSDECs in Namibia



In Figure I.2, we provide a logic model developed jointly by MCC, MCA-N, and Mathematica; it illustrates how the components of the COSDEC subactivity were expected to contribute to the ultimate compact goals of decreased poverty and increased economic well-being. As the logic model illustrates, in the immediate term, the physical improvements to the COSDECs were expected to increase access to trainings and enable them to offer additional types of training, thus increasing overall enrollment. The technical support to the COSDECs was expected to result in improved management practices, increased awareness of COSDECs in the catchment area (through marketing initiatives), and adoption of accredited unit standards.⁶ In addition, both the physical improvements and the improved pedagogical skills of instructors were expected to result in an improved quality of trainings.

⁶ Technical assistance to the COSDECs was also expected to result in more relevant short courses through improvements in the community needs assessments that COSDECs conduct to identify which short courses to offer. However, we do not focus on this aspect of technical assistance because it was not implemented in practice.

Figure I.2. Logic model for the COSDEC subactivity



In the intermediate term, the new infrastructure and tools, as well as management improvements, were intended to enable COSDECs to be formally registered and accredited, and offer officially accredited courses. More trainees were expected to complete training through the COSDECs and use the SME units to help start their own enterprises. In the long term, it was anticipated that this approach would increase training, employment, and earnings for enrollees—particularly among the disadvantaged—and contribute to the ultimate compact goals of decreased poverty and increased economic well-being.

B. Literature review

Our performance evaluation of the COSDEC subactivity does not estimate the impacts of the trainings offered in the improved COSDECs on trainees' labor market outcomes, given the lack of a comparison group. However, the program logic for this subactivity anticipated that it would result in increased employment and incomes (as we discussed in Section A of this chapter). Therefore, the findings from impact evaluations of vocational training programs in developing countries provide an important context for the evaluation.

A review by Tripney et al. (2013) identified 26 relevant impact evaluations in lower- and middle-income countries. On average, these studies found positive impacts on outcomes such as paid employment and earnings. However, the impacts varied substantially across studies, and the average impact on employment was much lower when the review considered only higher quality studies. Given the variation in the quality of the studies and their estimated impacts, we caution that it is difficult to draw strong inferences about the impacts on vocational training programs more generally from the available literature. This inconclusive evidence could be due, in part, to substantial variation in the features of vocational training programs and the contexts in which they are implemented.

There have been a number of impact evaluations of vocational training and related programs in developing countries that have used an experimental design, which provides the highest standard of evidence. As mentioned above, the results are mixed. They include the following:

- Card et al. (2011) conducted an experimental evaluation of a subsidized training program for low-income, out-of-school youth in the Dominican Republic. The program provided about three months of classroom training, including training in “soft” skills (work habits and self-esteem) and vocational skills in a variety of areas, followed by a two- or three-month internship with a local firm. The authors found no statistically significant impacts on employment approximately a year after graduation, but marginally significant and positive impacts of about 10 percent on wages among those employed. Ibararán et al. (2014) conducted another study of the same program with a later cohort and again found no overall impact on employment but an impact of about 17 percent on formal sector employment for men and an impact of 7 percent on wages for those employed. A six-year follow-up study found that, in the long term, there were still no impacts on overall employment, but sustained and growing impacts on formal employment (Ibararán et al. 2015).
- In contrast, Attanasio et al. (2011) found more positive results from an experimental evaluation of a similar vocational training program for disadvantaged youth in Colombia, with positive impacts of about 7 percent on employment and almost 20 percent on wages for female trainees approximately a year after the program ended. Although there were no

significant impacts on these outcomes for men, the program had a significant positive impact on the probability of formal sector employment for both women and men (7 and 5 percent, respectively), which was one aim of the program. A follow-up study of the same program (Attanasio et al. 2015) found that positive impacts on the probability of formal sector employment persisted up to 10 years after the end of the program, although the impacts for men were no longer statistically significant.

- Hirshleifer et al. (2016) conducted an experimental evaluation of a large-scale vocational training program in Turkey, which provided three months of training to unemployed individuals through a range of private and public providers. The evaluation found no statistically significant impacts on employment or labor income one year after training; even impacts on outcomes that seemed positive and significant after one year (such as measures of employment quality) had dissipated after three years, based on administrative data.
- Cho et al. (2013) conducted an experimental evaluation of an on-the-job vocational training program in Malawi that placed vulnerable youth (orphaned school dropouts) as apprentices to master craftspeople in a variety of trades for up to three months. The authors found that the program's dropout rate was high, especially among women. Nevertheless, the training had significant positive impacts on participants' self-reported skills, continued investment in human capital, and subjective well-being in the short run—about four months after the training ended. However, there were no associated improvements in labor market outcomes such as employment and earnings.
- Alcid (2014) experimentally evaluated a program that provided youth in rural Rwanda with a five-month training related to work readiness skills and specialized technical skills (including vocational training), as well as opportunities for three-month internships and job placement services or business start-up coaching. Six months after the program ended, youth in the treatment group had significantly higher work readiness skills and were 12 percentage points more likely to be employed than those in the control group.
- Maitra and Mani (2014) conducted an experimental evaluation of a six-month vocational training program in stitching and tailoring for unemployed women in India. Six months after training, program participants were significantly more likely to be employed (6 percentage points), work additional hours (2.5 hours per week), and earn more (150 percent) than nonparticipants. These short-run impact estimates were all sustained in a second follow-up conducted 18 months after training.

Additional evidence on the implementation and effects of vocational training programs in developing countries is drawn from performance evaluations of specific programs. These evaluations often use mixed qualitative and quantitative methods and—in contrast to impact evaluations—are characterized by the lack of a rigorously defined comparison group. A review of the literature on youth workforce development over the past decade (U.S. Agency for International Development 2013) identified approximately 15 performance evaluations of vocational training programs in developing countries. As with the impact evaluation literature, the findings on the success of these programs in terms of employment and earnings, workforce readiness, and skills development were mixed, and depended on the features and context of the particular program (for examples of specific performance evaluations, see Asian Development Bank 2013 and Kelly et al. 1998).

Our performance evaluation of the COSDEC subactivity will provide a complete description of the improvements to the COSDECs, as well as the training and labor market outcomes of their enrollees. Although the findings will not contribute to the impact evaluation evidence on vocational training programs, they will provide additional data points on which researchers can draw to synthesize broader lessons about the features of successful programs and common challenges faced. The evaluation will also provide valuable evidence for MCC in implementing similar projects in the future and inform efforts by the Namibian government to further strengthen the COSDEC network, including integrating it into the wider vocational training sector. Because COSDECs typically target disadvantaged youth, these efforts could help alleviate disadvantages and marginalization among this group regarding access to and completion of vocational training.

C. Roadmap for the report

The rest of this report describes our evaluation of the COSDEC subactivity and presents the evaluation findings. In Chapter II, we review the key research questions for the evaluation and its design. We also discuss data collection, the analysis approach, and some limitations of our evaluation. In Chapter III, we present the evaluation findings, drawing on both the qualitative data and quantitative survey data. We also provide a simple description of the cost of trainings at the COSDECs to provide additional context. In Chapter IV, we review the main findings, identify implications for policy and practice, and describe our plans for disseminating the findings.

This page has been left blank for double-sided copying

II. EVALUATION DESIGN, DATA, AND ANALYSIS APPROACH

In this chapter, we review the design for the COSDEC evaluation and describe the data collection and analysis we conducted. We begin by listing the key research questions and providing an overview of the type of evaluation we implemented. We then describe the data we collected for the evaluation and our analysis approach. We conclude with a discussion of some limitations of the evaluation.

A. Research questions

The evaluation of the COSDEC subactivity sought to address six key research questions, which can be grouped into three areas—implementation, trainee outcomes, and COSDEC management.

Implementation

1. Was the COSDEC subactivity implemented as planned?
 - a. How did actual implementation compare to planned implementation, and what were the reasons for any deviations from plans?
 - b. What were the main challenges to implementation, and how were these addressed?

Trainee outcomes

2. To what extent did the COSDEC subactivity increase the availability of training?
 - a. What types of trainings did COSDECs offer, how were they determined, and how did they affect training accessibility?
 - b. What percentage of trainees completed the different levels of trainings offered?
3. How did COSDEC training affect the employment outcomes of trainees?
 - a. What was the pattern of employment for trainees?
 - b. What was the role of SME support in the effects of the trainings on self-employment?
 - c. To what extent were increases in employment likely to be sustained?
 - d. To what extent did COSDEC trainees engage in further training?
4. How did COSDEC training affect the earnings and income of trainees?
 - a. What were the patterns of earnings and income for trainees?
 - b. To what extent are increases in earnings and income likely to be sustained?
5. Did the employment and earnings outcomes of COSDEC trainees vary by trainee characteristics?

COSDEC management

6. How were the new and renovated COSDECs managed?
 - a. What management practices did the COSDECs apply, and are the practices likely to change in the future?

- b. Are the new COSDECs financially sustainable?
- c. Did COSDECs make progress toward adopting unit standards and accreditation, and did this progress affect “articulation”?⁷

These research questions are closely related to the COSDEC logic model described in Chapter I. The first question seeks to analyze implementation of the COSDEC subactivity, including the construction, retooling, and technical assistance components. Analyzing the implementation process is related to the outputs and immediate outcomes in the logic model, and is important for understanding why the intermediate- and long-term outcomes in the model have or have not been achieved. The remaining research questions focus on these intermediate- and long-term outcomes, and their underlying assumptions. In particular, they are designed to explore the extent to which the subactivity led to meaningful and sustainable changes in the COSDECs’ operations (in management practices, course offerings, registration and accreditation, and so on), and to measure COSDEC trainees’ training and labor market outcomes. These research questions also explore some of the important mechanisms in the logic model, including the role of the new SME units in self-employment and the extent to which COSDEC graduates continue on to further training.

B. Evaluation design

As mentioned previously, the performance evaluation of the COSDEC subactivity integrates a qualitative analysis and a quantitative outcomes analysis. In this section, we briefly describe each of these components (further details on the data collection and analysis approach are provided in Sections C and D, respectively, of this chapter).

- **Qualitative analysis.** The qualitative analysis explores subactivity implementation, how it evolved after the compact, and its sustainability. It relies primarily on qualitative data collected from stakeholders through interviews and focus group discussions in two rounds of data collection. We conducted the first round in late 2014, close to the end of the compact, focusing on implementation of the subactivity. We conducted the second round in late 2015, about a year after the end of the compact, focusing on post-compact experiences and sustainability. We used the data collected in each round to identify major themes related to the research questions by systematically coding the data, categorizing and sorting the coded data, and triangulating information from various stakeholders.
- **Outcomes analysis.** The outcomes analysis seeks to describe the characteristics and outcomes of enrollees in the seven new or renovated COSDECs. It relies on a survey of COSDEC enrollees that collected information about their training and labor market outcomes about one year after the end of training. We selected this one-year follow-up period to balance the desire to observe long-term outcomes with the risk of increased sample attrition and recall error associated with a longer follow-up period. This period is typical in

⁷ As described in Chapter I, the technical assistance component included support for COSDECs in developing a plan to be registered and accredited within the national qualifications framework, thus integrating them into the national vocational training system. If successful, it would enable “articulation” of COSDECs with Vocational Training Centers (VTCs) and other institutions of higher education and training, whereby COSDEC trainees would have the opportunity for further training beyond the basic levels offered at the COSDEC. In turn, further training could play an important role in improving trainees’ labor market outcomes.

the vocational training literature (see, for example, Card et al. 2011 and Attanasio et al. 2011), and is the same one we used for the impact evaluation of the VTGF subactivity (Borkum et al. 2016). The outcomes analysis is largely descriptive in nature and presents numerical descriptions of average outcomes for the full sample of enrollees and relevant subgroups.

C. Data

In this section, we describe the data used to inform the COSDEC evaluation, including the two rounds of qualitative data we collected from a variety of stakeholders and the quantitative data we collected from enrollees.

1. Qualitative data

This evaluation of the COSDEC subactivity draws on two rounds of qualitative data. We collected the first round in October and November 2014, close to the end of the Namibia compact. We collected the second round between October and December 2015,⁸ about a year after the end of the compact. Mathematica developed semi-structured protocols to guide focus group discussions and interviews. The Multidisciplinary Research Center (MRC) at the University of Namibia collected most of the data in each round and conducted all transcription, translation, and preliminary coding of the qualitative data. Two Mathematica evaluation team members traveled to Namibia for training and piloting of the protocols, and to conduct a few interviews before the bulk of the data collection began. They conducted these interviews with key informants to inform the data collection and capture data from stakeholders who would not be available during the full data collection. The Mathematica team monitored data collection and post-collection data processing through weekly meetings or updates, depending on the availability of the field team and the stage of the work.

The data collection targeted a range of stakeholders (Table II.1). The first round included COSDEC trainees, staff from the organizations involved in implementation (including MCA-N, MCC, and the Transtec consultants), COSDEF staff, the heads of the seven COSDECs, employers in areas served by the COSDECs, and the Namibia Chamber of Commerce and Industry. The stakeholders for the second round were similar except for the omission of organizations involved in implementation (because implementation had already been completed by the first round) and the addition of COSDEF board members and staff from the National Training Authority (NTA) and NQA; the latter added perspectives on registration and articulation—issues we knew were challenges. We determined the number of interviews to conduct by balancing the different perspectives we sought for developing a full picture of the subactivity and answering the research questions against our resource considerations. Through these focus groups and interviews, we obtained in-depth descriptions of the implementation of the COSDEC subactivity in practice; the experiences of COSDEC trainees, as well as those of COSDEF and COSDEC management, during and after the end of the compact; perspectives on trainees' employment prospects; and other relevant topics. Mathematica prepared a report

⁸ We conducted the piloting in October. We conducted the full implementation of the data collection between mid-November and mid-December.

presenting findings from the analysis of the first round of qualitative data (Mamun et al. 2015); we summarize the key findings from that round in Chapter III of this report.

Table II.1. Number of focus groups and key informant interviews for the COSDEC evaluation

Data source	Data collection method ^a	First round: Oct–Nov 2014	Second round: Oct–Dec 2015
COSDEC trainees	Focus groups	5	3
MCA-N staff	Interviews	1	--
MCC resident country mission staff	Interviews	1	--
Transtec ^b	Interviews	2	--
COSDEF staff	Interviews	1	1
COSDEF board members	Interviews	--	2
COSDEC managers	Interviews	7	7
NQA staff ^c	Interviews	--	1
NTA staff and consultant ^d	Interviews	--	2
Employers ^e	Interviews	5	4
Namibia Chamber of Commerce and Industry staff	Interviews	1	1

^aAll interviews were individual, in-depth interviews, although on occasion more than one respondent was present for at least part of the interview to answer specific questions.

^bProvided technical assistance to COSDEF and the COSDECs.

^cResponsible for accreditation of training providers and courses in Namibia.

^dResponsible for registering training providers in Namibia and providing a majority of the COSDECs' funding.

^eEmployers in areas served by the COSDECs.

A more detailed description of the data sources included in the second round of qualitative data collection is as follows:

- **COSDEC trainees.** We conducted focus group discussions with trainees at three of the seven COSDECs, two of which had SME units. We chose these three for convenience within the prescribed subgroups. All focus groups had female and male participants; all focus group participants were current COSDEC trainees from a mix of training skills areas. COSDEC staff gave moderators a list of all trainees, moderators then randomly selected names, and COSDEC staff helped recruit the selected trainees. The focus groups included between 5 and 10 participants. The focus group discussions focused on the COSDEC application process, impressions of training and the COSDEC, use of SME units, and post-training goals and perceptions.
- **COSDEF staff.** We conducted one interview with two COSDEF staff members together. We selected these staff members purposively from the small main office staff based on their knowledge of and participation in the subactivity. We focused on their perceptions of the post-compact evolution of the subactivity; maintenance, management, and operations of the COSDEF and the COSDECs; and progress of the SME units.
- **COSDEF board members.** We conducted two interviews with COSDEF board members. We selected these respondents purposively from a list of about a dozen members, based on

location, gender, and responsiveness. These interviews focused on perceptions of the COSDEC system, perceptions of the subactivity interventions, and operations and management of COSDEF and COSDECs post compact.

- **COSDEC center managers.** We interviewed the COSDEC center managers in all seven new and renovated COSDECs to understand implementation of the subactivity, staff perceptions, management of the COSDECs post compact, SME unit use, operations of the COSDECs, and whether and how COSDECs were changing.
- **NQA staff.** We interviewed an NQA staff member knowledgeable about the accreditation process and the issues related to duplication of accreditation and NTA registration. We selected this staff member purposively from the large organization based on the person's knowledge of both NQA and NTA. We focused on the processes, challenges, and solutions related to accreditation, as well as perceptions regarding the role of accreditation in the vocational education and training (VET) system. We conducted this interview before the main data collection effort to help develop the topics to be covered in that effort.
- **NTA staff and consultant.** We conducted two interviews with staff at the NTA—one permanent staff member and one consultant. We selected these participants purposively from this large organization based on their experience with the COSDEC subactivity. We focused on evolution of the COSDEC interventions post compact, the registration and accreditation processes, and articulation of COSDEC graduates into further training. We identified the relevant staff for interviews based on experience with NTA staff from previous rounds of data collection and monitoring. We conducted both interviews before the main data collection effort to help develop the topics to be covered.
- **Employers and Namibia Chamber of Commerce and Industry staff.** We identified and interviewed four employers and a member of the Namibia Chamber of Commerce and Industry (NCCI) in areas served by the COSDECs. We selected the participants based on recommendations by COSDEC center staff regarding employers in the community who had some experience with COSDEC trainees. The NCCI participant was purposively chosen from the branch representing the northern regions, where most of the COSDECs are located. We chose someone whose role on the executive committee was to work with youth entrepreneurs. We designed the interviews to gather information on participants' experiences and perceptions of the COSDECs, and how these had changed over time.

The data collection included site visits to all seven COSDECs and the main, high-level stakeholders with wide-ranging perspectives. The strengths of the set of stakeholders we interviewed included that they offered a broad set of perspectives on the various facets of the implementation and operations of COSDEF and the CODECs, which informed the research questions. A weakness of the sample we selected was that the number of employers we chose was small and each was recommended by COSDEC staff.

2. Survey data from enrollees

The outcomes analysis draws on a follow-up survey of enrollees in the new and renovated COSDECs. Survey Warehouse, a local data collection firm, conducted the survey from January to June 2016, with oversight from Mathematica, using a computer-assisted telephone interview system. The survey collected data on enrollees' demographic characteristics as well as their

vocational training history, employment status, and earnings and income. The targeted sample for the survey included all individuals who enrolled in national courses that started between July and December 2014 in the seven new and renovated COSDECs. This group was the first intake expected to fully benefit from the subactivity. (COSDECs typically have two main intakes per year—one in each half of the year—and the interventions were completed only by mid-2014.)⁹ To administer the survey, we obtained information from the COSDECs on these enrollees' names, the courses in which they had enrolled, and their contact information.

We designed the survey to be conducted approximately one year after the scheduled end of training for enrollees in each training. Because each COSDEC offered multiple training courses with different start and end dates, the timing of data collection varied across trainings, and Survey Warehouse conducted data collection over a six-month period. In practice, it conducted the survey between 12 and 16 months after the end of training, rather than exactly 12 months later (Table II.2) because interviewers made further attempts to contact respondents periodically if they could not contact them initially. In some cases, they made successful contacts several months after the sample was released. However, the median respondent was surveyed 12 months after the end of training, as planned (the mean was about 13 months).

Table II.2. Timing of the COSDEC survey relative to the end of COSDEC training for the analysis sample (percentages, unless otherwise noted)

Time	Analysis sample
12 months	58.4
13 months	15.0
14 months	20.6
15 months	3.4
16 months	2.6
Mean (months)	12.8
Median (months)	12.0
Sample size	642

Source: Computed using information from the COSDEC survey (survey date) and enrollee information provided by the COSDECs (training dates).

⁹ The targeted intake might not have fully benefitted from the tools and equipment component of the subactivity because the delivery of some of the new tools and equipment was delayed until the third quarter of 2014 (Mamun et al. 2015). However, communication with COSDEF and the COSDECs suggested that only some COSDECs (and only some courses in these COSDECs) were affected by the delays in provision of the new tools; most reported that the effects on the quality of training were limited. Thus, we continued to target the intake that enrolled between July and December 2014, for which we had already gathered the necessary contact information.

The COSDEC follow-up survey comprised several sections (Table II.3). It collected data on enrollees' demographic characteristics and a range of outcomes relevant to the research questions (which we discuss in further detail in Section D of this chapter). These outcomes focus on enrollees' experiences with vocational training since enrollment in the COSDEC, employment and earnings since the end of COSDEC training, and their recent income. They also include exploratory outcomes related to HIV/AIDS knowledge and parenthood, which are relevant because accredited courses offered by the COSDECs often include HIV/AIDS modules that promote safe sex, and because unplanned parenthood is an important contextual factor that might affect enrollees' training and labor market outcomes.¹⁰

Table II.3. COSDEC survey sections

Section	Key topics covered
Identifying information	Name; date of birth or age; national identification number
Education and vocational training	Highest level of education; enrollment in vocational training (as of survey date and since July 2014); number of training programs attended; dates of vocational training; institution, skill area, and level of vocational training; dropout from vocational training; job attachments; use and perceptions of SME unit; training assessment and certification; job placement assistance; perceived quality of vocational training
Employment and earnings	<i>Employment status</i> : whether employed (as of survey date and in previous year) <i>Among those employed since the end of training</i> : number of jobs held; dates of employment; occupation; whether employment was part of a job attachment; hours and days worked; type of employment (part-time, full-time, or self-employed); source of information about job; earnings from employment; satisfaction with employment; size and sector (formal or informal) of workplace; relevance of employment to training <i>Among those not employed since the end of training</i> : whether actively sought work in previous 12 months; availability for work in previous 12 months
Income and household demographics	Monthly individual income (previous month); number of dependents; marital status; household size; monthly household income (previous month); town and region of origin; language spoken at home
Health behaviors	Awareness of AIDS; knowledge of benefits of condom use; children conceived in previous 24 months (including births)

The targeted sample for the survey consisted of all enrollees in the 36 national courses that started in the seven new and renovated COSDECs between July and December 2014. Based on a request from COSDEF, we also administered the survey to enrollees in COSDEC Benguela (Lüderitz)—the only COSDEC not affected by the subactivity—for completeness. The results in the body of this report focus on enrollees in the seven new and renovated COSDECs; Appendix A presents these results along with the inclusion of COSDEC Benguela enrollees, covering all COSDECs in Namibia.

There were 934 unique enrollees in the targeted intake in the seven COSDECs, of which 642 completed a follow-up survey—a response rate of 69 percent. These 642 respondents constitute

¹⁰ In this context, HIV/AIDS knowledge can be viewed as a type of transferrable skill, also known as a soft skill or life skill. A recent systematic review of transferrable skills programs in low- and middle-income countries (Brown et al. 2015) found many examples of transferrable skills programs being inserted into formal schooling or vocational training programs. However, sexual and reproductive health programs were more common in formal schooling (targeting younger individuals), whereas livelihood skills programs were more common in vocational training programs.

the analytic sample used for the COSDEC outcomes analysis in the body of this report.¹¹ With the addition of COSDEC Benguela, the analysis sample for the outcomes analysis in Appendix A increases to 705, reflecting a response rate of almost 70 percent.¹²

Table II.4. COSDEC survey sample sizes and response rates

COSDEC name (location, if different)	Targeted sample size	Completed surveys	Response rate (percent)
Omaheke (Gobabis)	45	34	75.6
Ondangwa	66	58	87.9
Opuwo	150	72	48.0
Otjiwarongo	135	86	63.7
Tukureno (Rundu)	166	117	70.5
Mahetago (Swakopmund)	227	175	77.1
Tsumeb	145	100	69.0
Benguela (Lüderitz) ^a	82	64	78.0
Total, excluding COSDEC Benguela (Lüderitz)	934	642	68.7
Total, including COSDEC Benguela (Lüderitz) ^a	1,016	705	69.4

^aCOSDEC Benguela (Lüderitz) was not targeted by the COSDEC subactivity but was included in the COSDEC survey at the request of COSDEF. The results in the body of this report exclude the sample from this COSDEC; it is included in the results in Appendix A.

D. Analysis approach

In this section, we describe the analysis approach for the qualitative analysis and the outcomes analysis.

1. Qualitative analysis

Using Atlas.ti qualitative analysis software, the MRC team coded the qualitative data collected in each round by employing high-level codes that Mathematica developed based on the research questions. Mathematica staff then conducted additional coding on the data that were categorized as relevant to each research question, using NVivo qualitative analysis software. We

¹¹ Because the response rate to the COSDEC survey varied across courses, the analysis sample for the outcomes analysis might not be representative of enrollees in these courses. We thus explored the robustness of our results by the inclusion of nonresponse weights designed to make the weighted analysis sample reflect the enrollee sample in its distribution across courses. More specifically, we weighted each follow-up respondent by the inverse of the response rate in the course in which he or she was enrolled. The weighted results for key outcomes were very similar to the unweighted results (see Appendix B); thus, we focus here on presenting the simpler unweighted results.

¹² Table II.4 excludes from both the “targeted sample size” and “completed surveys” columns 53 individuals who completed a survey but reported not having enrolled in a COSDEC training between July and December 2014. Of these individuals, 30 reported not having enrolled in any training, 14 reported having enrolled in a non-COSDEC training, and 9 reported having enrolled only in a later COSDEC training (in which they were still enrolled at the time of the survey). These 53 individuals might have applied for or accepted a place in a COSDEC between July and December 2014 but did not complete their enrollment. Thus, we view them as ineligible for the survey and exclude them from Table II.4 and the analysis. In Chapter III, we discuss the implications of this decision for the calculation of dropout rates.

triangulated information from multiple data sources to identify emerging themes; with each review of the data, we further refined and organized the codes. Finally, we created summaries of the findings, including themes and quotes that give voice to stakeholders in their own words. This analysis enabled us to develop a key set of qualitative findings that accounted for similarities as well as differences in perspectives across different respondent groups, thus enabling us to address the key research questions in a comprehensive manner.

2. Outcomes analysis

The COSDEC outcomes analysis is a descriptive analysis of enrollees' outcomes in four key domains: (1) vocational training, (2) employment and productive engagement, (3) earnings and income, and (4) health behaviors. The outcomes were very similar to those we examined for the VTGF impact evaluation (Borkum et al. 2016), with some additional outcomes specifically relevant to the COSDEC subactivity (for example, trainees' use of SME units). The key outcome measures we focus upon in this report, organized by domain, include the following:

- **Vocational training.** The main measures in this domain are binary measures for completion of COSDEC training by enrollees and enrollment in additional training (besides the targeted COSDEC training) since July 2014. Additional measures explore enrollees' experiences with the COSDEC training in more detail. These include, among others, experience with job attachments or internships during training, completion of assessments and certification of training completion, and use and perceptions of the SME unit.
- **Employment and productive engagement.** The main measure of employment is a binary measure of whether an individual held any paid job (including self-employment) at the time of the survey. Additional measures, such as the type of employment, hours worked, and job tenure, provide more evidence on the patterns of employment at the time of the survey. The main measure of productive engagement is a binary measure of whether an individual held any paid job or engaged in vocational training at the time of the survey. This measure helps account for the fact that COSDEC graduates might proceed to further training and substitute further training for employment in the short term—especially if articulation occurs as envisaged.
- **Earnings and income.** The main outcome measure in the earnings and income domain is an individual's monthly earnings from paid or self-employment in the month before the follow-up survey. This measure is computed using information on wages for those in paid employment and profit (positive or zero) for those in self-employment.¹³ To provide an accurate description of the full sample of enrollees, these measures are unconditional and take the value of zero for those not employed. Because the ultimate goal of the COSDEC subactivity is to improve total individual income (which includes any earnings from employment and other sources of income) and household income, we also measure these as additional outcomes, again focusing on the month before the follow-up survey.

¹³ Some respondents reported hourly or weekly wages; we converted them into monthly wages by multiplying by the number of hours worked per week and/or four weeks per month. The vast majority of those employed (about 86 percent) reported their pre-tax wages. We measured profits as the money the respondent kept per week after paying for business expenses, multiplied by four.

- **Health behaviors.** Although the intervention did not directly target health outcomes, enrollees' sexual health outcomes are relevant to the COSDEC evaluation for two reasons. First, many of the COSDEC trainings follow a set of prescribed course modules (unit standards) that include HIV/AIDS modules. Assessing enrollees' knowledge concerning HIV/AIDS and safe sex can therefore indicate the extent to which this information is being communicated effectively, which is important in view of the high prevalence of HIV/AIDS in Namibia. Second, unplanned parenthood is a potentially important issue for youth enrolling in COSDECs that might affect their training and labor market outcomes (for example, those who become pregnant might be more likely to drop out). Documenting the extent of this issue might therefore be informative from a policy perspective. For these reasons, we include HIV/AIDS knowledge and parenthood as exploratory outcomes.

E. Limitations

Although our performance evaluation of the COSDEC subactivity seeks to answer the key research questions comprehensively, we recognize that it has some limitations:

- **Absence of a counterfactual.** We could not include a counterfactual in our design for the COSDEC evaluation; consequently, we cannot determine what the labor market outcomes of trainees would have been without COSDEC training. Therefore, we emphasize that our outcomes analysis is purely a descriptive exercise and not an estimate of the impact of the COSDEC trainings. Such an estimate would require a rigorous impact evaluation, which we determined was not feasible in this context.
- **Limited time to assess long-term sustainability.** We conducted the second round of qualitative data collection about one year after the end of the compact (about 18 months after completion of most of the subactivity interventions). It is possible that this time was insufficient for COSDECs to have entered a post-compact "steady state"—for example, they were still making progress toward accreditation and may still be progressing toward the institutionalization of new management and pedagogical practices, expanding their course offerings, and so on. Therefore, it may be too soon to definitively assess the sustainability of the subactivity interventions.
- **Differences between COSDEC intakes.** Our outcomes analysis applies to the first intake that experienced the improved COSDECs and might not reflect the experiences of subsequent intakes if COSDECs further evolve over time. To address this, our second round of qualitative data collection sought to capture ongoing changes in the COSDECs and perceptions about the likely long-term sustainability of the interventions. In addition, the second intake of the calendar year, the intake surveyed for this evaluation, might have different characteristics to the first intake of the year. In particular, as we describe in Chapter III, the second intake might include fewer traditionally male courses (some of which are offered only once a year), which could lead to a high fraction of females in our outcomes analysis sample. Therefore, the outcomes estimated for our targeted intake might not be fully generalizable to all those enrolled in the COSDEC throughout the year.
- **Possible non-random attrition in the follow-up survey.** If only certain types of COSDEC enrollees responded to the follow-up survey, it is possible that the findings from the outcomes analysis are not fully generalizable to the full population of COSDEC enrollees. For example, if only those with better outcomes responded, the means of these outcomes

might be overestimated. We do not have sufficient information about the characteristics of nonrespondents to conduct a detailed nonresponse analysis to assess this concern by comparing them to respondents. However, the relatively high response rate to the survey (69 percent) should mitigate this concern to a large extent.¹⁴

- **The integration of the qualitative research design, data collection, and analysis teams was not complete.** To benefit from cultural, lingual, and budgetary advantages, a skilled team of local researchers conducted the bulk of the qualitative data collection. However, the local researchers were not involved in the design of the study or data collection instruments, or the analysis. At the same time, the Mathematica team was not in the field during the entire data collection process because this would have been prohibitively expensive. This lack of complete integration limited our ability to probe interview and focus group participants based on their initial responses to the data collection instruments, develop early findings, and adapt the data collection on the ground in response to emerging findings. Having recognized these limitations before the second round of data collection began, we instituted efforts to collect field notes frequently throughout the data collection period and host weekly calls to discuss the evolution of the data collection. These processes mitigated some of the limitations of the data collection set up, but more insight might have been obtained if better integration were possible.

¹⁴ Most of the nonresponse was due to invalid phone numbers, as opposed to refusals. As mentioned earlier, the findings from our outcomes analysis are robust to adjustments for differential nonresponse rates across courses and COSDECs.

This page has been left blank for double-sided copying

III. COSDEC EVALUATION FINDINGS

In this chapter, we present the findings from the COSDEC evaluation. In section A, we summarize the key findings related to implementation of the COSDEC subactivity and how it evolved after the compact. In section B, we examine the courses offered in the new and renovated COSDECs, including the availability of different types of training, the characteristics of enrollees, and perceptions of training quality. Section C examines enrollee outcomes and explores the variation in key outcomes by enrollee and training program characteristics. Section D presents findings on current management practices at the COSDECs and the sustainability of management-related reforms introduced by the subactivity. Finally, in Section E, we present summary information about training costs at the COSDECs to provide additional context for our findings.

A. Implementation and evolution of the COSDEC subactivity

Implementation of the COSDEC subactivity consisted of physical improvements and technical assistance. The physical improvements included the construction or renovation of the COSDECs and providing them with new tools and equipment. SME units were also constructed in four COSDECs. In addition, MCA-N hired Transtec as a consultant to work with COSDEF to provide technical assistance to the COSDECs related to management and budgeting, registration with the NTA, and instructor training. As described in Chapter II, we analyzed qualitative data collected from stakeholders toward the end of the compact and again one year later to better understand implementation of the COSDEC subactivity and how it evolved after the compact. This section describes the main findings from our analysis. (Although we reported the detailed implementation findings from the first round of qualitative data in Mamun et al. 2015, we summarize some of those findings in this section, as indicated.)

Key stakeholders reported that the construction and renovation components of the subactivity largely were implemented as designed and were successful, but some additional infrastructure improvements still are required.

Our analysis of the qualitative data at the end of the compact indicated that the construction and renovation of the COSDECs largely had proceeded as planned, despite delays to the timeline and some implementation challenges. A year later, the stakeholders we interviewed unanimously viewed implementation of the construction and renovation as successful. Stakeholders at all levels were impressed with the infrastructure improvements, and COSDEF staff commented that the COSDEC environment was now conducive to learning—a benefit to trainers and trainees alike. Positive changes included higher numbers of enrollees (because of increased physical capacity and improved perceptions of the COSDECs’ infrastructure) and progress toward meeting registration and accreditation requirements (which include infrastructure-related requirements).

However, stakeholders noted that some lessons were learned and some work remains. One stakeholder involved in implementation noted that it might have been a mistake to design the workshops first and then put in the machinery. The stakeholder noted that in the future, designers should determine what machines are to be installed for all trades and then design the workshops around them, not the other way around. “*We ran out of room,*” the respondent noted. However, a

stakeholder involved in implementation suggested that some of these perceived design flaws were an attempt to meet standards from the NTA and NQA related to registration and accreditation (for example, limits on the number of trainees in a workshop and the need for computer rooms), although it later emerged that there was confusion about these standards. Perhaps because of design flaws or increased demand for training in the new and renovated COSDECs, a majority of them either have or plan to undertake additional construction to expand or modify their respective centers, or conduct touch-ups and repairs to the work already done. Two COSDECs had to renovate additional buildings or modify workshops to meet the required standards for expanded courses, storage facilities, offices, and so on; three COSDECs had to address repairs, such as plumbing problems and leaky roofs. Toilets seemed to be a particular problem, with four COSDEC managers specifically mentioning toilet facilities in need of repairs and upgrades, although a stakeholder involved in implementation suggested that the toilet facilities were well constructed but required more robust preventative maintenance. Some maintenance problems were major, such as leaking roofs and broken pipes, whereas others were small, such as wall cracks and peeling paint.

Providing the COSDECs with new tools and equipment was the least successful component of the interventions, although still an improvement over the previous situation.

During our first round of data collection, most stakeholders, including COSDEC managers, MCA-N, and trainees, reported that the big machinery and power tools supplied under the subactivity worked well. However, many of the more modest new tools and equipment, such as trowels for bricklaying, wheelbarrows, and toolboxes, were delivered many months later than originally anticipated, and failed to meet their expectations once received. They were procured via a supplier from India who won the procurement based on the lowest price and provided tools and equipment of very low quality, which broke easily, did not match the specifications required, or did not work well or at all.

One year later, we found that the repercussions of this procurement were still being felt. The poor quality tools constrained the quality of some trainings, as trainees were not able to gain practical skills using all of the appropriate tools either as much or as well as expected. In addition, the poor quality and broken tools still were taking up space in the COSDECs, although MCA-N had refused to pay for them and offered the supplier to take them back. Several COSDEC managers noted that, to the extent possible, they obtained new tools and equipment to replace the broken and substandard ones through MCA-N (which was able to procure some through local suppliers) or using the COSDEC's own budget. Other COSDECs were continuing to negotiate with suppliers who did not deliver tools and equipment of the expected quality; however, two COSDEC managers noted that because the compact has ended, it is hard to get those suppliers to respond.

Despite problems with the quality of some of the tools, most of the machinery was operational and most of the workshops were equipped with suitable tools and equipment at the time of the second round of qualitative data collection. Although the situation was not perfect, respondents remarked that what they have now is still an improvement over what they had previously. As one COSDEC manager reported, “[*In the past*] you might find 15 in a group because there is only one tool. Now it is no longer the case. At least we have improved.”

SME support units were constructed as planned and are serving entrepreneurs, but it is still too early to assess their success.

As mentioned earlier, SME units were established in four COSDECs; they were intended to help prospective entrepreneurs start their own enterprises by providing space, mentoring, training, and resources for them to further develop their businesses. The units and the services associated with them are offered preferentially to COSDEC graduates, but people from the community can also use them if there is sufficient space available. During the first round of qualitative data collection, COSDEF respondents and COSDEC managers highlighted the importance of providing an integrated set of business development services to successfully “incubate” new micro- and small enterprises in the SME units, and strengthen them once they are established. These services include equipment and a workspace and/or office space, project-based entrepreneurship training using national modules, mentoring and demand-driven advisory services, marketing support, assistance in networking with partners and professional organizations, guidance on accessing financial capital, and assistance in contract negotiations. Ideally, COSDECs would provide these services to users over a one-year period. At the end of the compact, construction of the SME units at the COSDECs was complete but their utilization was generally still in the planning phase, although two COSDECs had recently hired a dedicated coordinator to manage their SME unit and lead the effort to engage prospective entrepreneurs.

One year later, many of the stakeholders in our sample for the second round of qualitative data collection—including COSDEC managers, COSDEF staff, and COSDEF board members—viewed the SME units as a critical part of the COSDECs in which they were constructed. Each COSDEC has four or five units,¹⁵ and all COSDEC managers reported that their units were 80 to 100 percent full when the second round of qualitative data collection was conducted. COSDEC managers reported that almost half of the entrepreneurs using the units were female, and that trade areas for which the SME units were used included welding and fabrication, food preparation, joinery and cabinet making, leather turning, clothing production, candle making, and security services. A fifth center manager from a COSDEC not originally slated to receive an SME unit also reported the construction of a unit, suggesting possible modeling of the subactivity’s work. However, the incubation services at the SME units have not been fully implemented as envisaged due to lack of funding.

Although the COSDEC managers noted that they were supposed to charge fees for the use of the SME units, some had not started charging because they thought the trainees were unable to pay yet. As one manager said, “...*these are just young guys who graduated from COSDEC...they do not have money...it is really difficult just finding basic tools or [inputs] that they need to produce and enable them to sell.*” They took this position despite the fact that COSDEC managers described the fees to use the SME units as reasonable, ranging from N\$200 to N\$500 per month (about US\$15 to US\$37 based on the current exchange rate). At the time of data collection, most of the COSDECs were charging some nominal fee; some managers said they would assess users and begin charging them after they determined that their business was growing or after a set time period.

¹⁵ Four or five units are normally housed within one building; each is a chamber or room within which an enterprise can operate.

Overall, although COSDEF staff, board members, and some COSDEC managers were optimistic about the role of the SME units in supporting entrepreneurs, and wanted to see them do even more, they noted that, with only one year of operation, it was too early to tell how successful the units would be.

Some aspects of technical assistance were delivered as designed and well received; those aspects continue to bear fruit.

The technical support for COSDEF and COSDEC management provided under the COSDEC subactivity included support for improvements in financial management, the development of strategic plans, and pedagogical training for COSDEC trainers. It also included support for COSDECs to become registered institutions and the development of strategies to market them in their catchment areas.

The findings from the first round of qualitative data collection, conducted directly after the compact ended, found the results of the technical assistance to be mixed (Mamun et al. 2015). Most COSDEC and COSDEF stakeholders viewed Transtec's technical assistance to the COSDECs in management and budgeting, formal registration, and instructor training as valuable and having made a substantive change in COSDEC operations, despite reports of difficult working relationships among the relevant stakeholders (that is, Transtec, COSDEF, and the COSDECs). However, they did not see the technical assistance provided as sufficient to fully address the challenges in these areas, and thought that further support was needed to fully implement and integrate the new practices. COSDEC managers underscored the need for further investment in instructor training because well-trained instructors are essential for a well-functioning COSDEC. Another area in which the new and renovated COSDECs appeared to need further assistance was in marketing themselves to potential trainees and the wider community.

One year later, many COSDEC managers noted that they were still using the technical assistance trainings they had received, especially in financial management and strategic planning, and most stakeholders continued to see the technical assistance as having significantly improved COSDEC operations. More specifically, several respondents noted that the technical assistance helped COSDECs to improve training courses, increase the services they offer, improve their visibility, compile accurate budgets, focus on strategic goals, and better integrate staff in decision making. One COSDEF staff member noted that he thought the strategic planning process was one of the subactivity's major successes, and stated that, "*holistically, the system has really improved internally how people work, [and] the corporate focus of the organization.*" However, respondents noted that the local management systems still needed strengthening. As one respondent said, "*50 percent [of COSDEC managers] are getting it, and 50 percent seem a bit lost.*"

Asked if there was any additional technical assistance that should have been provided, respondents focused on marketing and branding, and linkages to national VET policies. Also, COSDEF staff and others involved in implementing the interventions still thought that the time frame for technical assistance was too short and began too late. One respondent noted that it could have made a large difference if the technical assistance had continued for three to six months longer.

Stakeholders expect the physical improvements to provide a foundation for further expansion of COSDECs.

Stakeholders noted that COSDECs currently cannot meet demand and mentioned having an interest in their further expansion. Two COSDECs noted the need to expand to meet demand and provide accommodations for trainees. One board member noted that the next step would be to expand, both by enlarging existing COSDECs and by establishing new ones, thus fulfilling the vision that every region have at least one COSDEC. Regarding opportunities for expansion, the same board member noted that mass housing, a new development in Namibia, will increase demand for vocational training related to the construction of new homes. He also noted the growth of tourism, transportation, and agriculture, generating the need for vocational training in all of those areas.

B. Characteristics of trainees and features of trainings in the new and renovated COSDECs

In this section, we describe trainee characteristics and features of the trainings offered in the seven new and renovated COSDECs. In particular, we describe the sociodemographic characteristics of enrollees, examine perceptions related to changes in the availability of training, and describe the types of courses the COSDECs offer. The latter is directly related to the research question on the availability of training in these COSDECs. Finally, we explore perceptions of the role of COSDECs and the quality of training they offer.

Most COSDEC enrollees in the surveyed intake were female and in their mid-20s; most had completed grade 10, and almost half had completed grade 12.

As mentioned in Chapter II, our survey of COSDEC enrollees focused on the intake that enrolled in the seven new and renovated COSDECs between July and December 2014. The demographic characteristics of the analysis sample show that the typical COSDEC enrollee in the intake we selected for the evaluation was an unmarried female in her mid-20s who had completed at least 10 grades of formal education (Table III.1). About 70 percent of respondents were female, their average age at enrollment was about 27, and 85 percent were unmarried.¹⁶ These respondents tended to live in relatively large households, with an average household size of 6.7 compared to the estimated Namibian average of 4.7 (Namibia Statistics Agency 2015). About 16 percent of respondents had not completed junior secondary school (grade 10), about 41 percent had completed junior secondary school, and about 42 percent had completed senior secondary school (grade 12) or further education.¹⁷ About 45 percent of respondents reported

¹⁶ The percentage of female trainees might have been lower in the first intake of the year if more technical courses were offered because such courses tend to be in traditionally male skill areas. Therefore, the gender characteristics of our enrollee sample (and possibly other enrollee characteristics that differ by course type) might not reflect those of all enrollees served by the COSDECs throughout the year.

¹⁷ In contrast, there is a perception among many stakeholders that COSDECs traditionally serve junior secondary dropouts (those without a grade 10). Some stakeholders suggested that there might have been some displacement of these junior secondary dropouts in the new COSDECs. In particular, Namibia's public Vocational Training Centers (VTCs) have limited space and have raised their de-facto admissions requirements in recent years to a completed grade 12. Therefore, grade 10 graduates might now be applying to COSDECs—which are now more attractive because of the compact-funded improvements—in greater numbers than before, displacing some of those without a

speaking Oshiwambo, the majority language in Namibia, at home. Finally, about 19 percent of respondents reported that they had enrolled in vocational training in the past, before the start of their COSDEC course.

The characteristics of COSDEC enrollees were broadly similar to those of a sample of applicants for training funded by the VTGF subactivity (Borkum et al. 2016); although that sample is not representative of enrollees at all training providers in Namibia, it covers a broad range of public and private providers throughout the country.¹⁸ However, the typical level of

Table III.1. Characteristics of COSDEC enrollees in the analysis sample (percentages, unless otherwise indicated)

	Sample size	Estimate
Demographic characteristics		
Female	642	69.8
Age at the start of COSDEC training:		
Younger than 20 years	642	9.2
20–24 years	642	40.7
25–29 years	642	24.5
30–34 years	642	11.1
35 years or older	642	14.6
Mean (years)	642	26.8
Unmarried	640	85.0
Respondent's education:		
Less than grade 10	640	16.4
Completed grade 10	640	41.1
Completed grade 12	640	41.6
Higher	640	0.9
Household size:		
1	641	3.9
2	641	5.9
3	641	9.0
4	641	12.3
5	641	14.8
More than 5	641	54.0
Mean (number)	641	6.7
Home language:		
Oshiwambo	642	44.7
Otjiherero	642	18.2
Rukavango	642	14.0
Nama/Damara	642	11.1
Afrikaans	642	4.5
Other	642	7.5
Experience with training before July 2014		
Ever enrolled in vocational training	642	19.2

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

grade 10. However, this is just one possible explanation—we have no firm evidence of the educational profile before the subactivity or of this displacement effect.

¹⁸ The VTGF providers were almost all non-COSDEC providers. The VTGF did fund trainings at COSDEC Benguela, but these comprised a very small fraction of the trainings to which the VTGF sample applied.

education of COSDEC enrollees was lower than that of VTGF applicants. In particular, almost all VTGF applicants had completed at least junior secondary school, whereas 16 percent of COSDEC enrollees had not. Further, about 67 percent of VTGF applicants had completed at least senior secondary school, whereas only 42 percent of COSDEC enrollees had done so. This finding is consistent with the mission of the COSDECs to serve secondary school dropouts, who otherwise might not have opportunities for further education or training. Many stakeholders in the qualitative data collection emphasized that secondary school dropouts were COSDECs' main target population, especially those who did not pass grade 10. However, the survey data show that almost half of COSDEC enrollees had completed senior secondary school, suggesting that senior secondary graduates who are unable to find employment or take up other training opportunities (perhaps because of financial challenges, location, poor grades, or other reasons) are also an important educational group served by the COSDECs. Thus, the COSDEC enrollees were less educationally disadvantaged, on average, than perceived by stakeholders.

COSDECs offered a variety of technical and non-technical courses for the surveyed intake, although non-technical courses were more common; most trainings were at the most basic level in the VET system.

COSDEC national courses cover technical and non-technical subjects, and vary in duration across course type and COSDEC. Non-technical courses include hospitality, office administration, clothing design, and textile production. Technical courses include bricklaying and plastering, welding and fabrication, plumbing and pipefitting, and joinery and cabinet making. Typically, national courses are offered in two trainee groups per day, with the goal of 20 trainees per group, although one COSDEC manager stated that the NTA has implemented new rules to allow only 20 trainees in total per course. There are usually two intakes a year; however, technical courses often are available only to one intake a year due to their typically longer duration. In addition to national courses, COSDECs offer "short courses," which can last from one week to several months. These courses depend on the interests of and demand from the community, and can include, for example, computer literacy, jewelry making, domestic employee coaching, baking, brick making, English communication, driver's license training, and entrepreneurship.

Focusing on the July to December 2014 intake, on which our survey of COSDEC enrollees is based, administrative data suggest that COSDECs offered a total of 36 national courses during this intake period, with between 2 and 7 courses per COSDEC (an average of about 5). These courses accommodated a total of 934 enrollees, with between 3 and 46 enrollees per course (an average of about 26 enrollees per course). Trainees enrolled primarily in non-technical courses in office administration (25 percent), food preparation and serving (18 percent), information communication technology (15 percent), and clothing production (10 percent) (Table III.2). As mentioned, some technical courses might be available for only one intake per year and therefore might not have been available for the July to December intake at certain COSDECs but might have been available for the January to June intake. The courses in which trainees enrolled were between two and nine months in duration, with the mean and median duration about six months.

The follow-up survey sample used for the outcomes analysis consisted of the 642 enrollees from these courses who completed the survey. This sample had a distribution similar to that of the full roster of enrollees in the types of courses in which they enrolled and the duration of those

courses. Based on respondents' reports, the majority of these courses (70 percent) were at NQA Level 1—the lowest level in the vocational training system—or were not associated with an NQA level (11 percent).¹⁹ However, this finding should be interpreted with some caution because about 13 percent of respondents did not know the level of their course, suggesting that respondents might not have a good understanding of the NQA categorization of training levels.

Table III.2. Features of COSDEC training for the July to December 2014 intake (percentages, unless otherwise indicated)

	All enrollees		Analysis sample	
	Sample size	Estimate	Sample size	Estimate
Skill area or trade:				
Non-technical courses:				
Office administration	934	25.3	642	28.7
Food preparation and serving	934	18.1	642	19.0
Information communication technology	934	15.2	642	12.1
Clothing production	934	10.1	642	11.8
Technical courses:				
Bricklaying and plastering	934	9.1	642	7.9
Plumbing and pipefitting	934	8.8	642	7.9
Welding and metal fabrication	934	5.8	642	5.9
Carpentry and joinery	934	3.2	642	3.3
Other ^a	934	4.5	642	3.3
Duration of training:				
2 to 4 months	934	36.4	642	33.0
5 to 7 months	934	47.3	642	51.2
8 to 9 months	934	16.3	642	15.7
Mean (months)	934	5.7	642	5.8
Median (months)	934	6.0	642	6.0
Level of training:				
Level 1	--	--	589	70.1
Level 2	--	--	589	3.4
Level 3	--	--	589	1.4
Level 4	--	--	589	0.2
Level 5 or higher	--	--	589	1.0
No level/short course	--	--	589	10.9
Don't know	--	--	589	13.1

Source: Enrollee information provided by COSDECs (skill area and duration) and COSDEC survey (level).

Note: Sample sizes vary because of item nonresponse.

^aIncludes hairdressing, clothing design, and building maintenance.

Most stakeholders, including trainees and employers, had positive perceptions of the quality of the COSDECs; COSDECs perceived an increased demand for training due to the compact-funded improvements.

¹⁹ National trainings in Namibia are categorized based on criteria from the NQA into levels from 1 to 10, representing different levels of difficulty in learning and the application of knowledge and skills.

The enrollee survey data suggest that trainees' perceptions of training quality were generally very positive. The survey asked about trainee perceptions by requesting that they rate various dimensions of training quality on a four-point scale (excellent, good, fair, or poor). About 9 in 10 respondents, on average, reported that the COSDEC training was good or excellent as to instructors, written materials, tools, and overall quality (Table III.3). Only a very small percentage—less than 3 percent—reported that the training was poor along these dimensions. Consistent with these findings, the trainees in our focus groups all expressed satisfaction with their training, even though some had initially heard negative things about COSDECs from family or friends. Overall, these findings suggest that, at least from the trainees' perspectives, the improved COSDECs were meeting their goal of providing a high quality training experience.

Table III.3. Perceived quality of COSDEC training by enrollees (percentages)

	Sample size	Estimate
Quality of instructors:		
Excellent	576	41.1
Good	576	51.4
Fair	576	5.2
Poor	576	2.3
Quality of written materials:		
Excellent	576	41.0
Good	576	47.0
Fair	576	9.2
Poor	576	2.8
Quality of tools and equipment:		
Excellent	577	40.0
Good	577	47.8
Fair	577	9.9
Poor	577	2.3
Overall quality of program:		
Excellent	576	42.4
Good	576	49.3
Fair	576	5.9
Poor	576	2.4

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

These positive perceptions of training quality are consistent with the broader positive perceptions of COSDEC quality that other stakeholders expressed in the qualitative interviews. In the second round of qualitative data collection, all respondents noted that there had been substantial improvements in the COSDECs due to the subactivity. Many stakeholders mentioned that the interventions had positively impacted the COSDECs' physical infrastructure, funding, and policymaking, as well as the services they provide. One board member noted that, since the compact, the COSDECs had been running efficiently and had better relationships with the private sector, and that the number of enrollees had increased. COSDEC managers noted that trainers were also more engaged and held in higher regard; after the interventions, instructors

understood their work better, took more initiative, and were actively monitoring student's safety (for machinery courses). One board member and most center heads thought the infrastructure improvements had played a central role in improving the perceptions of the COSDECs in the community, which had been poor.

All four employers, as well as the member of the Namibia Chamber of Commerce and Industry we interviewed, had hired or worked with COSDEC trainees in some capacity; all noted that they were satisfied with their performance. They reported that most trainees were hard working, had good communication skills, were knowledgeable, and possessed some level of experience and technical skills. Several center heads concurred that employers in general were pleased with COSDEC trainees. They noted that trainees found employment as a result of the high quality of their work, receiving training on the "*right machinery*," and employers' improved awareness and perceptions of COSDECs.

All employers interviewed noted that they were generally aware of the courses being taught at the COSDECs and had open communications with them. The employers noted that they provide feedback to and interact with the COSDECs on trainees' performance and areas for improvement, which was well received by the COSDECs. Another employer in the hospitality industry noted that he had offered to send his top chef to provide training at the COSDEC, although he had yet to hear back. One of the employers interviewed observed that COSDECs had developed strong relationships with local employers, mentioning the regular job attachments for which COSDECs recruit employers.²⁰ Another employer noted that trainees participating in job attachments benefit substantially from the technical skills and theoretical knowledge they gain. Two center heads mentioned that employers reached out to them regarding job offers; one employer noted that he reached out to the COSDEC to seek trainees for available positions.

The positive perceptions reported by stakeholders might also be reflected in the increased demand for COSDEC training. As the COSDECs' reputation in the community has improved since the end of the compact, there has been an increase in trainee applications. COSDEC heads noted that they were receiving more applications than they were able to accept. One center head noted that for the following year, they had already received 600 applications; however, they were able to take only 140 students. Other COSDECs noted that they had to turn applicants away or had a waiting list. Most COSDECs had increased the number of trainees and courses offered, although some had increased the number of trainees only in short courses. Trainees in our focus group discussions reported that the main reason they applied to COSDEC training was to obtain a certificate to improve their employment prospects. A number of trainees thought that certification, which they understood COSDECs could provide, was the only way to gain employment if the job required qualifications. Other reasons mentioned for attending the COSDECs included encouragement from friends who had attended them, a part-time training schedule that enabled trainees to continue working during training, and an inability to gain admission to training at VTCs.

Despite the broad improvement in the reputation of the COSDECs, respondents believed there was still work to be done. One board member and a center head noted that, although

²⁰ Job attachments are short-term internships that trainees complete just before they graduate from a training program.

perceptions have improved, COSDECs were still perceived as “*substandard*” by some segments of the community, and employers still preferred VTC-trained students over COSDEC-trained students. The board member noted that COSDECs need to do a better job of promoting their programs, whereas the center head noted that the COSDEC had appointed a marketing manager to advertise its achievements. Many stakeholders highlighted communication between the COSDECs, employers, and communities as a means to maximize mutually beneficial opportunities. In particular, one external stakeholder suggested that further improving communication with employers could help ensure that COSDECs are teaching relevant qualifications and producing employable graduates. However, an employer and a COSDEC manager also noted that for employers to have faith in the trainings provided by the COSDECs, it would help if they knew the background and qualifications of the trainers.

C. Trainee outcomes

In this section, we use data from the enrollee survey to describe enrollee outcomes in each domain of interest: (1) vocational training (including use of SME units), (2) employment and productive engagement, (3) earnings and income, and (4) health behaviors. We also explore the variation in outcomes by enrollee and training characteristics.

1. Vocational training

Almost 9 in 10 enrollees in our sample completed their COSDEC training, and about two-thirds of completers experienced a job attachment.

About 85 percent of enrollees in our analysis sample reported that they had completed their COSDEC training (Table III.4).²¹ For the 15 percent who dropped out before completion, the most common reasons were finding employment (23 percent of dropouts) and inability to afford training (17 percent of dropouts).

A COSDEC manager also noted that some trainees drop out of training because of job offers. The respondent noted that this strategy is problematic because the trainees who drop out do not have a great deal of training and could earn more money if they completed it. Her perspective was that if they “*stayed in the full course, the money that [they would] ... get after [their training] certificate would be much more than what [they] are getting without completing their certificate.*” Another manager noted that during family orientation, the COSDECs try to help family members understand that if trainees stay and complete their courses, they will earn more later; the families can then help make sure the trainees complete their trainings. Overall, however, the survey data suggest that dropouts might not be as prevalent as perceived by COSDEC managers (because the dropout rate was only 15 percent), and that those who do drop out are explained only partly by funding constraints or trainees’ finding jobs.

Among those who completed COSDEC training, about 66 percent reported having participated in a job attachment or internship as part of the training, though only 28 percent reported having participated in a paid attachment or internship (Table III.4). The relatively high

²¹ As mentioned in Chapter II, our analysis omits 53 respondents (52 from COSDECs other than COSDEC Benguela) who did not enroll in COSDEC trainings. If we view these respondents as having dropped out of training before enrolling, the completion rate would decrease from 85 percent to 78 percent.

rate of job attachments is consistent with the qualitative evidence that COSDECs were actively and successfully forming relationships with local employers to offer these opportunities to their trainees. Few completers experienced more than 3 months of job attachment, however; the mean and median duration of job attachments among completers was 1.8 months and one month, respectively. Only about 12 percent of completers reported having received job placement assistance from a COSDEC.

Table III.4. Completion of COSDEC training (percentages, unless otherwise indicated)

	Sample size	Estimate
Full sample		
Completed COSDEC training	585	85.1
Among those who completed COSDEC training		
Experienced any job attachment or internship	502	65.9
Experienced any paid job attachment or internship	502	28.3
Total duration of job attachment or internship:		
None	493	36.7
1 to 3 months	493	52.1
4 to 6 months	493	8.7
7 months or more	493	2.4
Mean (months)	493	1.8
Median (months)	493	1.0
Received job placement assistance from COSDEC	499	11.6
Among those who did not complete COSDEC training		
Reasons for dropping out:		
Found a job during the training	87	23.0
Could not afford to complete the training	87	17.2
Moved away from the area	87	12.6
Other family commitments	87	12.6
Health-related issues	87	12.6
Other	87	21.8

Source: COSDEC survey.

Note: Sample sizes vary within respondent categories because of item nonresponse.

In our qualitative interviews, employers noted some challenges with trainees dropping out from job attachments. Three of the employers interviewed noted that some of the trainees they had hosted dropped out before completing their attachments. One employer noted that these reports contrasted with his experience of hiring employees from COSDECs—usually these employees have stayed with his company. This dropout phenomenon suggests that the lack of income during job attachments may make it difficult for trainees to continue (as shown earlier, the survey data suggest that most job attachments are unpaid).

Formative and summative assessments, as well as COSDEF-issued certificates of completion, were common but not universal, according to completers in our analysis sample.

We also examined the assessments associated with training completion, as they could serve as a proxy for completers' skills. About 84 percent of completers reported that they took formative assessments—used to monitor student learning and provide ongoing feedback—during COSDEC training (Table III.5). About 82 percent of completers reported that they took a summative assessment—used to evaluate learning against a standard—at the end of the COSDEC training. Combined with the completion rate, this finding suggests that only about 70 percent of all COSDEC enrollees in the cohort we interviewed had taken a summative assessment. Respondents reported that the summative assessments were typically administered at NQA Level 1 (27 percent of completers) or Level 2 (18 percent). However, they may have had a poor understanding of the level structure, given the large percentage (24 percent) who did not know the level of their assessment and some inconsistency with the earlier reports of the level of training. Almost all of those who reported taking a summative assessment reported that they passed it on their first attempt (79 percent of completers).

Table III.5. Assessments associated with COSDEC training (percentages)

	Sample size	Estimate
Among those who completed COSDEC training:		
Took formative assessments during training	487	84.0
Took summative assessment at the end of training	488	82.2
Took summative assessment at the following training level:		
Level 1	488	26.8
Level 2	488	18.2
Level 3	488	3.7
Level 4	488	0.8
Level 5	488	0.6
No level	488	8.4
Don't know	488	23.6
Passed summative assessment	467	79.7
Passed summative assessment on first attempt	466	78.8
Received COSDEF certificate of completion	500	65.2

Source: COSDEC survey.

Note: Sample sizes vary within respondent categories because of item nonresponse.

About two-thirds of completers reported that they received a COSDEF certificate of completion, which could potentially help graduates signal their skills to potential employers (Table III.5). However, employment rates at the survey date were very similar for completers with and without a certificate, and even slightly lower for completers who took a summative assessment than those who did not (not shown). Therefore, no evidence exists to suggest that employers use these assessments or certificates in their employment decisions, in contrast to the perceived importance of certificates mentioned by trainees during focus groups.

Few enrollees in our analysis sample had enrolled in further training since the end of COSDEC training, although most expressed interest in doing so in the future.

We also examined participation in further training, which is important because of the project's goal of enabling COSDEC graduates to “articulate” to higher levels of training—especially training offered at VTCs—to enhance their skills and improve their labor market prospects. Overall, only about 6 percent of respondents had enrolled in additional training since

the start of their COSDEC course, mostly at a COSDEC or another non-VTC provider (Table III.6). However, about 85 percent of respondents reported that they planned to enroll in additional vocational training in the two years after the survey, with more than one-third of respondents planning to enroll in training at a VTC. Consistent with the survey findings, trainees in our focus groups had a high level of interest in further training, especially VTC training. However, the limited enrollment in additional training by one year after training completion suggests that these plans might not be realistic for the intake surveyed, at least in the short term (it is possible that further training rates would have been higher with a longer follow-up period—for example, if graduates decide to seek further training based on their labor market experiences).

Table III.6. Enrollment in additional vocational training, by COSDEC enrollees (percentages)

	Sample size	Estimate
Enrollment in training since July 2014		
Enrolled in any additional training	642	6.2
Enrolled in additional training at ^a		
VTC	642	1.2
COSDEC	642	2.2
Other provider	642	3.0
Plans for future enrollment as of survey date		
Plans to enroll in any additional training in the next two years	611	85.4
Plans to enroll in additional training at ^a		
VTC	611	36.3
COSDEC	611	28.0
Other provider	611	15.2
Don't know	611	5.9

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aPercentages can sum to more than the percentage enrolled in/planning to enroll in additional training because respondents could select more than one option.

The extent to which these plans for further training will materialize depends in large part on whether COSDEC graduates will be able to articulate directly to higher levels of training at other providers. A particular concern is that, because the time-consuming and complex registration and accreditation processes are ongoing (as we discuss in Section D of this chapter), other providers might not recognize COSDEC qualifications. Therefore, COSDEC trainees who continue on to further training often must repeat a level and bear the associated costs. Many trainees in our second-round focus groups were unclear about the usefulness of their certificates and whether they would have to repeat a level if they continued to further training. Nonetheless, many stakeholders remained optimistic that with registration and accreditation process still underway, this issue would soon be solved. As one COSDEC staff member noted, “*Unfortunately, they have to start at Level 1 because the certification and awarding does not carry national recognition. ... Once we are accredited, our trainees will be able to be assessed under [the] national assessment and will be awarded [certificates] at a national level.*”

Some COSDECs also mentioned that they were taking direct action to facilitate further training, even in the absence of registration and accreditation. Two COSDECs conducted career fairs for their students (along with other grade 10 and grade 12 graduates in the community) and invited various employers and training institutions. Both COSDECs noted that the career fairs had been very successful in helping graduates to continue at other training providers, although they note that trainees typically have to repeat levels they have already completed at the COSDECs. In these cases, the COSDECs might be playing a role in helping youth advance in the training system, although not through direct articulation to higher levels. Two other center managers said that trainees from their COSDECs who were interested in further training managed to find it at VTCs or elsewhere but did not mention whether they needed to repeat any levels.

Use of SME units by enrollees in our sample was limited, likely because the units were not fully operational for the selected intake and because their physical capacity might be limited.

Finally, we examined the use of the SME units constructed by the COSDEC subactivity. Survey responses from enrollees in the July to December 2014 intake show that, around the end of the compact, only about 13 percent of enrollees in COSDECs with an SME unit reported using a unit during or after training (Table III.7). In part, this low usage rate could reflect the fact that these units were not all fully operational at the time, based on our first round of qualitative data. In addition, the units might not have had the physical capacity to accommodate a very large fraction of COSDEC enrollees, even once they were fully operational. (The estimated usage rate from the survey amounted to about 50 users across the four COSDECs with SME units.) The most common reason for non-use was a lack of awareness of the units (78 percent of non-users).

We also explored how enrollees in the July to December 2014 intake used the SME units, although the findings should be viewed with caution, given the relatively small sample size of users in the enrollee survey, which results in imprecise estimates. Only about one-third of users reported that they paid to use the unit (Table III.7), consistent with the flexibility on charging fees reported by COSDEC managers in the qualitative data collection. Almost two-thirds reported that they used the SME unit for four weeks or less (substantially less than the ideal one-year incubation period); more than two-thirds used it as part of training rather than for their own endeavors.

Users identified a wide range of attractive features associated with the SME units, including providing a workspace, materials, training, and practice; almost all users found the unit very helpful (67 percent) or a little helpful (31 percent). However, the sample size of users was too low to conduct a meaningful analysis of the correlation between use of the units and employment outcomes (especially self-employment), which would provide additional evidence of its benefits. In addition, as mentioned earlier, even by the end of 2015, stakeholders noted that it was too early to assess the long-term success of the SME units.

2. Employment and productive engagement

One year after the end of training, the majority of COSDEC enrollees in our analysis sample were not employed or productively engaged.

Our main measure of employment is a binary indicator for whether an individual held a paid job (including self-employment) at the time of the survey. About 40 percent of respondents reported that they were employed at the survey date (Table III.8).²² For individuals who were not employed, we also asked whether they would have been available for work if they had been offered a job in the previous 12 months, which enabled us to classify them as unemployed (if they were available for work) or out of the labor force (if they were not).²³ Based on this definition, about 50 percent of enrollees were unemployed, and about 5 percent were out of the labor force.²⁴ Our measure of productive engagement is a binary indicator for whether an individual held a paid job *or* was engaged in further vocational training at the time of the follow-up survey. About 42 percent of respondents were productively engaged at follow-up; their status was driven mainly by employment, with only about 3 percent engaged in training at follow-up.

We can also compare our sample to a sample of VTGF applicants who were surveyed about one year after the end of training. This sample, described in Borkum et al. 2016, is similar to the sample of COSDEC enrollees in most demographic characteristics, but had, on average, a higher level of formal education. As mentioned earlier, the VTGF sample is not representative of enrollees at all training providers in Namibia but does provide a benchmark of enrollee outcomes from a broad range of public and private providers. The employment rate of VTGF applicants who enrolled in training was only slightly higher than that of COSDEC enrollees (45 percent), although participation in additional training was substantially higher (17 percent), and therefore so was productive engagement (57 percent).²⁵ This finding suggests that challenges related to the employment of vocational training participants in Namibia are not unique to COSDECs. However, COSDEC graduates might be less well-positioned than those from other providers to engage in additional training—perhaps in part due to the ongoing challenges of articulation.

²² About 15 percent of those who were not employed at the survey date had short-term paid employment in the 12 months before the follow-up survey. Expanding our definition of employment to include these individuals would increase the employment rate from 40 percent to 48 percent. However, we focus on employment at the survey date because this measure is more likely to reflect the longer term outcomes in the logic model.

²³ This definition is a broad one for unemployment, common in southern Africa, which considers only *availability* for work and not *job search* (the strict definition would require both). However, our estimate of broad unemployment may not be precise because the reference period for the availability for employment was the 12 months before the follow-up survey rather than as of the survey date. Nevertheless, this measure is broadly indicative of labor force participation at the time of the follow-up survey.

²⁴ The survey did not ask about availability for employment for those who had short-term employment in the previous 12 months but were no longer employed at the survey date. Therefore, these individuals cannot be classified as unemployed or out of the labor force, and the sample size for these measures is smaller than it is for employment. Because of the difference in samples, the percentages of the analysis sample that were employed, unemployed, and out of the labor force do not add up to 100 percent.

²⁵ Borkum et al. (2016) estimated these outcomes for a sample of VTGF *applicants*, only some of whom were enrolled in VTGF training; the estimates here are from further analysis that restricted the sample to VTGF *enrollees*.

Table III.7. Use of SME units among those enrolled in COSDECs in which SME units were available (percentages, unless otherwise indicated)

	Sample size	Estimate
Used SME unit during or after training	396	12.9
Among those who used an SME unit		
Paid for use	49	32.7
Duration of use:		
0 to 4 weeks	44	63.6
5 to 8 weeks	44	11.4
More than 8 weeks	44	25.0
Mean (weeks)	44	7.7
Reason for use:		
Part of training	46	78.3
Own purposes	46	13.0
Employer-related purposes	46	13.0
Other	46	2.2
Attractive features of SME unit:		
Workspace	42	54.8
Materials	42	54.8
Training	42	45.2
Practice	42	33.3
Sales space/place to sell or serve customers	42	4.8
Other	42	33.3
Perception of SME units:		
Not helpful	48	2.1
A little helpful	48	31.3
Very helpful	48	66.7
Among those who did not use an SME unit		
Reasons for not using:		
Was not aware unit existed	314	78.3
Was not interested	314	5.1
Unit was not operational	314	4.5
Unit was occupied by someone	314	0.6
Cost of use was too high	314	4.5
Other	314	7.0

Source: COSDEC survey.

Note: SME units were available in COSDECs Ondangwa, Tukureno (Rundu), Mahetago (Swakopmund), and Tsumeb. Sample sizes vary within respondent categories (users and non-users) due to item nonresponse.

Table III.8. Employment and productive engagement at the survey date among COSDEC enrollees (percentages)

	Sample size	Estimate
Employed in a paid job	635	39.5
Other employment status:		
Unemployed ^a	549	49.7
Not in the labor force	549	4.6
Enrolled in vocational training	642	2.8
Engaged in any productive activity ^b	635	42.0

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aBroad definition: available to work if offered job in previous 12 months (does not include job search).

^bEmployed or enrolled in any vocational training.

The relatively low percentage of COSDEC enrollees who were employed in the follow-up survey (40 percent) contrasts with the more positive perceptions of employment expressed by stakeholders in our second round of qualitative interviews. The discrepancy could be due to several reasons. First, in the absence of regular tracer surveys, stakeholders likely have limited information about the overall employment experiences of COSDEC graduates; instead, they might be relying on anecdotal evidence of specific success stories. Second, the employers we interviewed were selected purposefully based on their experience and familiarity with the COSDECs and their trainees. If employers more broadly are unfamiliar with or have poor perceptions of the COSDECs, then graduates' employment prospects might not be as positive. Third, it is possible that the employment rate has improved relative to what it was before the interventions, but the overall rate is still low. Overall, these reasons suggest that providing more concrete information about the employment of COSDEC enrollees is an important contribution of the evaluation. At least one COSDEC center manager interviewed mentioned that their COSDEC was planning to start a regular graduate tracer study in 2016 to track the number of graduates who are employed, which would be a valuable initiative.

Few enrollees were employed in a job related to their vocational training or held high quality jobs, even among the employed.

We also explored several features of the employment of COSDEC enrollees at the time of the survey, both for the full analysis sample and for those who were employed (who, as mentioned earlier, composed about 40 percent of the analysis sample). The main findings from these analyses are as follows (Table III.9):²⁶

- The most common type of jobs held by respondents were cook or server (4 percent of all respondents), sales consultant (3 percent), and housekeeper or cleaner (3 percent). However, because respondents reported a wide variety of job types, which were difficult to interpret

²⁶ We focused on the job held at the survey date rather than other jobs held following the end of training because the former aligned with our main employment outcome. However, for most of those employed at the survey date (almost 90 percent), it was their only job in the 12 months before the survey.

and classify into broader categories, the “other” category was by far the most common (23 percent).

- Only about 13 percent of all respondents reported that they were employed in a job related to their vocational training at the COSDEC.
- The most common type of employment was permanent employment (18 percent of all respondents), followed by temporary employment (13 percent), and self-employment (8 percent). In contrast, almost half of the trainees in our focus group discussions stated they wanted to start their own business after graduating. It thus appears that respondents had high interest in self-employment, but in practice it was hard for graduates to achieve this goal.
- About 26 percent of all respondents were formally employed, defined as being employed at a workplace or business registered for tax purposes.
- On average, respondents worked about 17 hours per week, but most either did not work at all (61 percent) or worked a full 40 hours per week (32 percent).
- Average tenure in the job held at the survey date (zero for those who were not employed and censored at the survey date for those who were employed) was about eight months among all survey respondents; 19 percent of respondents had been in their job for more than one year. Because we conducted the survey about one year after the end of training, this finding suggests that many respondents were working at the same time they were attending training.
- Among those employed at the survey date, it took seven months, on average, from the end of COSDEC training to find their job; about half found their job within six months of graduating.
- The most common way of finding a job reported by those who were employed was through family and friends (56 percent), although the media (24 percent, driven mainly by newspapers) were also an important source. Very few of those who were employed found their job through the COSDEC (3 percent).
- About 23 percent of respondents held a job with which they were satisfied or very satisfied at the time of the follow-up survey.

Table III.9. Features of employment at the survey date (percentages, unless otherwise indicated)

	All survey respondents		Employed survey respondents	
	Sample size	Estimate	Sample size	Estimate
Type of job held:				
Not employed in a paid job	633	60.7	--	--
Cook or server in restaurant or food service	633	3.5	249	8.8
Sales consultant	633	3.2	249	8.0
Housekeeper or cleaner	633	3.0	249	7.6
Bricklayer and plasterer	633	2.2	249	5.6
Office administrator	633	1.9	249	4.8
Cashier	633	1.9	249	4.8
Welder	633	0.9	249	2.4
Other	633	22.7	249	57.8
Employed in a job related to vocational training	634	12.5	250	31.6
Type of employment:				
Not employed in a paid job	632	60.8	--	--
Self-employment	632	7.9	248	20.2
Permanent employment	632	17.9	248	45.6
Temporary employment	632	13.4	248	34.3
Employed in a formal job ^a	598	26.1	214	72.9
Hours per week worked:				
0 hours	625	61.4	--	--
1 to 19 hours	625	1.8	241	4.6
20 to 29 hours	625	1.9	241	5.0
30 to 39 hours	625	3.4	241	8.7
40 or more hours	625	31.5	241	81.7
Mean (hours)	625	17.1	241	44.4
Job tenure:^b				
0 months	630	62.4	246	3.7
1 to 6 months	630	12.2	246	31.3
7 to 12 months	630	6.7	246	17.1
More than 12 months	630	18.7	246	48.0
Mean (months)	630	7.8	246	19.9
Time between end of training and starting job:				
Less than 1 month	--	--	137	4.4
1 to 6 months	--	--	137	44.5
7 to 12 months	--	--	137	39.4
More than 12 months	--	--	137	11.7
Mean (months)	--	--	137	7.1
How respondent learned about job:				
Media	--	--	199	24.1
Vocational training provider	--	--	199	2.5
Family member or friend	--	--	199	55.8
Other	--	--	199	17.6
Satisfied or very satisfied with job ^c	630	22.9	246	58.5

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse. The sample size for the time between the end of training and starting the job is low because many respondents reported a job start date that was before the training end date; we omitted these respondents from this analysis.

^aDefined as a workplace or business registered for tax purposes.

^bZero for those not employed and censored at the survey date for those employed.

^cAvailable options were very satisfied, satisfied, dissatisfied, and very dissatisfied.

Focusing on those employed at the survey date, the findings suggest that the quality of employment was not always ideal. Specifically, although 82 percent of those employed worked a full 40 hours per week, only about one-third held a job relevant to their vocational training, more than one-third were employed in temporary jobs, and about 41 percent were dissatisfied or very dissatisfied with their job. Overall, only about 13 percent of those employed (or 5 percent of the full sample) were employed in a job relevant to their training, permanent (including self-employment), and with which they were satisfied or very satisfied (not shown). These findings suggest that considerable challenges remain not only in linking COSDEC graduates to jobs, but also linking them to high quality jobs.

3. Earnings and income

Consistent with the low employment rate, most enrollees in the analysis sample had no earnings from employment in the month before the survey; almost one-third had no individual income at all.

Our main outcome in the earnings and income domain is monthly earnings, defined as wages or profits from self-employment in the month before the survey (earnings are zero for unemployed individuals). About two-thirds of respondents had no earnings in this month;²⁷ only about 18 percent earned more than N\$2,000 (about US\$130 at the average exchange rate in the survey period) (Table III.10). Mean earnings were about N\$1,258 (about US\$82).²⁸ Among those employed at the survey date, mean monthly earnings were about N\$3,948, or US\$257 (not shown).

Again, we can use the mean earnings of a sample of VTGF enrollees (described in Borkum et al. 2016) as a rough benchmark of earnings of vocational training participants in Namibia more broadly. These mean earnings for VTGF enrollees were N\$1,327—very similar to the mean of N\$1,258 for COSDEC enrollees. This finding provides suggestive evidence that COSDEC enrollees were faring similarly in the labor market relative to enrollees in other types of vocational training.

²⁷ The percentage of enrollees with zero earnings (66 percent) is larger than the percentage not employed (60 percent) because the samples for the two estimates differ. Specifically, the sample for the former excludes 51 individuals who were employed but did not report earnings. The exclusion of these non-zero earnings results in a smaller sample, in which a higher proportion of individuals have zero earnings. Because of this missing information, the proportion of individuals with zero earnings in Table III.10 may be slightly overestimated. However, given the relatively small scale of this issue, the effect on mean earnings is likely to be limited.

²⁸ To account for outliers when reporting these means, we top-coded earnings at the third standard deviation above the mean of non-zero responses. However, the mean was similar without top-coding (N\$1,396). We also top-coded individual and household income in a similar way; again, this approach did not substantially affect the estimated means.

Table III.10. Earnings and income in the month prior to the survey date (percentages, unless otherwise indicated)

	Sample size	Estimate
Gross earnings from self-employment or wages:		
None	582	66.3
N\$1–1,000	582	6.2
N\$1,001–2,000	582	9.1
N\$2,001–4,000	582	11.3
N\$4,001 or more	582	7.0
Mean (N\$) ^a	582	1,258
Total gross individual income:^b		
None	563	29.1
N\$1–1,000	563	31.4
N\$1,001–2,000	563	13.1
N\$2,001–4,000	563	15.5
N\$4,001 or more	563	10.8
Mean (N\$) ^a	563	1,880
Monthly gross household income:^c		
None	300	9.0
N\$1–1,000	300	17.3
N\$1,001–2,000	300	20.7
N\$2,001–4,000	300	26.0
N\$4,001–6,000	300	9.0
N\$6,001 or more	300	18.0
Mean (N\$) ^a	300	3,961

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aTop-coded at the third standard deviation above the mean of non-zero responses to account for outliers.

^bIncludes income from earnings and other sources.

^cEstimated as the sum of earnings, respondent's other income, and income of other household members.

Additional outcomes in this domain are individual income and household income, both measured in the month before the survey, which are measures of overall individual and household well-being. Individual income is the combination of individual earnings and individual income from other sources, such as government grants and money from family. Most respondents who were not earning income from employment seem to have had other sources of income, because only about 29 percent reported zero income (compared to 66 percent reporting zero earnings) (Table III.10). Mean individual income was N\$1,880 (about US\$122), substantially higher than mean earnings.

Measuring monthly household income in the month before the follow-up survey—which includes individual income and income from all other household members—proved to be a challenge. In particular, about half of survey respondents were unable to estimate income from other household members, so we were unable to calculate household income for them. This high level of nonresponse suggests that our estimates of household income may be inaccurate for the full sample if those who were unable to report other household members' income were systematically different from the remaining respondents (for example, if the former group tended to be poorer, the means would be overestimated). However, the demographic characteristics and employment outcomes were similar for those who did and did not report other household

members' income (not shown), suggesting that this is unlikely to be the case. As shown in Table III.10, for those sample members for whom we had all of the relevant information, mean household income was about N\$3,961 (about US\$257).

4. Health behaviors

There were gaps in HIV/AIDS awareness among trainees in our analysis sample; also, conceiving a child around the time of the COSDEC trainings was potentially an important factor affecting the enrollees' training and employment outcomes.

As mentioned earlier, we examined several sexual health outcomes not directly targeted by the intervention but possibly relevant to the evaluation. Because trainees might have been exposed to prescribed HIV/AIDS modules during COSDEC training, we examined respondents' awareness of HIV/AIDS and knowledge of condom use. About 86 percent of enrollees had heard of AIDS, and 59 percent thought (correctly) that using a condom correctly and consistently could reduce the risk of HIV a lot or completely (as opposed to a little or not at all) (Table III.11). These findings suggests that important gaps remain in awareness of HIV/AIDS and knowledge of condom use among COSDEC enrollees, and that communication of these topics could be improved when it is part of training or introduced when it is not.

Table III.11. Health behaviors (percentages)

	Sample size	Estimate
HIV/AIDS awareness		
Heard of AIDS	642	86.4
Believe that condoms can reduce the risk of HIV a lot/completely ^a	641	58.7
Children conceived by female respondents		
Became pregnant in previous 24 months	447	20.1
Gave birth after COSDEC training start date	448	16.1
Children conceived by male respondents		
Impregnated a woman in previous 24 months	194	16.5
Had a child born after COSDEC training start date	193	11.9

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aThe survey asked respondents, "If condoms are used correctly and consistently, how much can they decrease the risk of getting HIV, the virus that causes AIDS: not at all, a little, a lot, or completely?"

We also examined reported pregnancies and parenthood among COSDEC enrollees, which could affect their training and labor market outcomes, and therefore provides important context for policymakers. Our survey questions focused on pregnancies in the 24 months before the follow-up survey. Because the survey ended in June 2016 and the included courses started no earlier than July 2014, this interval captures the full period since the start of COSDEC training for all enrollees. For reported births, we used the child's birth date to focus on births that occurred since the start of COSDEC training, thereby improving the accuracy of this measure. About 20 percent of female enrollees reported being pregnant in the 24 months before the survey, and 16 percent reported having given birth to a child since the start of COSDEC training

(Table III.11). For male enrollees, 17 percent reported having impregnated a woman, and 12 percent reported having had a child born over the relevant reference periods.

Some of these indicators are correlated with training and employment outcomes. For example, females who became pregnant were less likely to complete training than those who did not (76 percent compared to 88 percent), and females who gave birth were less likely to be employed at the survey date than those who were not (27 percent compared to 38 percent). In contrast, males who had a child born since the start of training were more likely to be employed at the survey date than those who had not (65 percent compared to 46 percent). Although not all of these correlations are statistically significant—and they do not necessarily imply a causal relationship—they do suggest that pregnancy and parenthood are potentially important factors affecting COSDEC enrollees' outcomes that COSDECs might consider. For example, it might be possible to build flexibility into the training schedule to enable more pregnant trainees to complete their training.

5. Subgroup analysis

Female enrollees had similar training completion rates but significantly lower employment rates and earnings than male enrollees; we also found weaker evidence of differences in enrollee outcomes by education level and language group.

One of the key research questions for the evaluation is whether key outcomes differ for subgroups defined by the characteristics of the enrollees. We explored the variation in outcomes based on the following enrollee characteristics available in the data: (1) gender (females versus males); (2) education level (those who had completed at least 12 years of formal education versus those who had not); and (3) home language (those who spoke Oshiwambo, the majority language, at home versus those who did not).

For each subgroup characteristic, we tested for statistically significant differences in outcomes using a simple *t*-test (for example, differences in outcomes for females versus males). We also estimated these differences in a regression framework, in which we tested for significant differences between subgroups while controlling for the COSDEC and course. This approach enabled us to explore whether any differences in outcomes reflect differences in the types of COSDECs or courses in which various subgroups tended to enroll (for example, employment opportunities might differ for courses in traditionally-male and traditionally-female skill areas, leading to differences in employment outcomes by gender).

Female enrollees—who comprised the majority of COSDEC enrollees in the July to December 2014 intake—appear to face substantial challenges in the labor market relative to male enrollees, although their training completion rates were similar. Specifically, a significantly higher fraction of male enrollees were employed at the time of the survey than female enrollees (48 percent compared to 36 percent, respectively), which was also reflected in a significantly higher fraction of male enrollees who were productively engaged relative to female enrollees (52 percent compared to 38 percent) (Table III.12). Mean earnings were almost three times higher for males (N\$2,316) than for females (N\$810), a strongly statistically significant difference. These gender differences are similar in statistical significance and even larger in magnitude after controlling for differences in COSDEC and course, and therefore cannot be explained by differences in the types of courses taken by males and females. They also cannot be explained by

differences in other demographic characteristics or labor force participation rates, which are very similar by gender (not shown). This rules out explanations such as female enrollees having lower levels of education or being less available for employment because of traditional family commitments. A similar pattern of significantly lower female employment and earnings is also evident for enrollees in VTGF vocational training programs (not shown), again suggesting that this situation is not unique to COSDEC enrollees.

For the subgroup defined by education, the only significant simple difference in outcomes is in productive engagement at the survey date, which was higher for those with a grade 12 education compared to those without (46 percent compared to 39 percent). This is driven by both slightly higher employment and engagement in training at the survey date for those with more formal education; these trainees may be more attractive to employers and more qualified to enter further training. However, the difference in productive engagement is only marginally significant (with or without controls for COSDEC and course); the difference in employment is not significant.

Table III.12. Variation in outcomes by enrollee characteristics (percentages, unless otherwise indicated)

	Completed COSDEC training	Employed at survey date	Productively engaged at survey date	Mean earnings in month before survey date [N\$]
Subgroups defined by gender:				
Females	85.5	35.7	37.7	810
Males	84.4	48.4	52.1	2,316
Difference	1.1	-12.8***	-14.4***	-1,506***
Difference with controls	-1.2	-13.9**	-15.1**	-2,096***
Subgroups defined by education:				
Completed grade 12	85.0	41.3	45.7	1,340
Did not complete grade 12	85.1	37.9	39.0	1,158
Difference	-0.1	3.4	6.7*	182
Difference with controls	-2.3	3.9	7.2*	171
Subgroups defined by language:				
Oshiwambo-speaking	83.7	35.1	38.6	1,013
Other language groups	86.3	43.1	44.9	1,460
Difference	-2.6	-8.1**	-6.3	-447*
Difference with controls	-0.3	-10.4**	-9.1*	-479
Sample size ^a	585	635	635	582

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse for outcome measures. We estimated differences in means using a simple *t*-test (simple differences) and a regression framework with binary controls for COSDEC and course (difference with controls).

*/**/**Difference in means statistically significant at the 10/5/1 percent level of significance using a two-tailed test.

^aSample size is smaller by two observations for the education subgroups because two respondents did not report their education level.

Finally, for the subgroup defined by language group, non-Oshiwambo speakers had significantly higher employment than Oshiwambo speakers (43 percent compared to 35 percent) and significantly higher earnings (almost 50 percent higher). However, the difference in earnings loses significance after controlling for the COSDEC and course in which respondents were enrolled.

Overall, the differences in employment and earnings outcomes by gender are the most striking, but there is some evidence of differences by education level and language group.

There are some significant differences in enrollee outcomes by COSDEC course characteristics, but these differences are difficult to interpret.

We also explored the variation in key outcomes by the characteristics of the COSDEC courses in which individuals were enrolled, including (1) whether the COSDEC had an SME unit; (2) the extent to which the COSDEC provided job attachments to its trainees (more than half of trainees accommodated versus half or less); (3) the duration of the course (at least six months versus less than six months); and (4) skill area of training (traditionally male versus traditionally female skill areas). As with the analysis by enrollee characteristics, we tested for statistically significant differences in outcomes for each characteristic using both a simple *t*-test and a regression framework with control variables. The control variables for this analysis were binary variables for enrollee demographic characteristics—gender, having completed at least 12 grades of education, and speaking Oshiwambo at home. These controls account for potentially different enrollee profiles across COSDECs and courses, which could affect enrollee outcomes independent of course characteristics.

We found that the training completion rate was significantly higher in COSDECs that were more likely to provide job attachments (a regression-adjusted difference of about 14 percentage points) and for courses that were less than six months in duration (a regression-adjusted difference of about 10 percentage points) (Table III.13). Although we cannot provide definitive explanations for these differences, we could speculate that job attachments might make completing the course more attractive to enrollees, and that they might be less likely to drop out due to other commitments if the courses were shorter. In contrast, the completion rate was statistically similar in COSDECs with and without an SME unit, and for courses in traditionally male versus traditionally female skill areas.

Some differences also exist in employment, productive engagement, and earnings across COSDEC courses. These outcomes were all significantly lower in those COSDECs that were more likely to provide job attachments, although the regression-adjusted differences were significant only at the 10 percent level. Earnings were also significantly lower for courses of at least six months in duration, although employment and productive engagement were similar. However, these findings should be interpreted with caution, given that we are unable to provide a strong explanation for them. There were no significant differences in any of these outcomes for COSDECs with and without an SME unit, consistent with the limited usage rates of these units.

Table III.13. Variation in outcomes by COSDEC course characteristics (percentages, unless otherwise indicated)

	Completed COSDEC training	Employed at survey date	Productively engaged at survey date	Mean earnings in month before survey date [N\$]
Subgroups defined by availability of SME unit:				
COSDEC has SME unit	85.2	40.0	42.4	1,204
COSDEC does not have SME unit	85.1	38.5	41.1	1,377
Difference	0.1	1.4	1.3	-173
Difference with controls	0.6	1.9	1.0	-243
Subgroups defined by provision of job attachments:				
Provided job attachments to at least half of trainees	92.2	35.2	37.9	941
Provided job attachments to less than half of trainees	79.0	43.2	45.5	1,540
Difference	13.2***	-8.0**	-7.6*	-598***
Difference with controls	13.9***	-7.7*	-7.3*	-454*
Subgroups defined by duration of training:				
Less than 6 months	90.3	41.4	43.1	1,471
More than 6 months	81.1	38.0	41.2	1,076
Difference	-9.2***	-3.4	-1.9	-394
Difference with controls	-9.8***	-2.3	-1.2	-518*
Subgroups defined by skill area:^a				
Traditionally male skill areas	82.3	44.5	48.8	1,653
Traditionally female skill areas	86.2	37.8	39.7	1,125
Difference	3.9	-6.7	-9.1**	-528*
Difference with controls	6.0	3.3	0.8	1,049***
Sample size	585	635	635	582

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse for outcome measures. We estimated differences in means estimated using a simple *t*-test (simple differences) and a regression framework with binary controls for gender, having completed at least 12 grades of formal education, and speaking Oshiwambo at home (difference with controls).

*/**/** Difference in means statistically significant at the 10/5/1 percent level of significance using a two-tailed test.

^aTraditionally male skill areas are bricklaying and plastering, building maintenance, joinery and cabinetmaking, plumbing and pipefitting, and welding and fabrication. Traditionally female skill areas are clothing design, clothing and textile production, food preparation and serving, hairdressing, office administration, and information communication technology.

Monthly earnings for enrollees in traditionally female skill areas were significantly lower compared to those in traditionally male skill areas (a simple difference of negative N\$528), although employment was similar. However, with the addition of demographic control variables, including gender, the difference in earnings was reversed and increased in magnitude and statistical significance (a difference of positive N\$1,049). That is, after accounting for differences in the gender profile of enrollees, traditionally female skill areas had *higher* earning potential. This finding suggests that lower earnings for traditionally female skill areas may not be

because of the skill area but might occur because females tend to earn less in the labor market, as discussed earlier.

D. COSDEC management and perceived sustainability

One year after the compact, COSDECs had successfully incorporated many new management practices into their operations, especially practices related to budget management, strategic planning, and pedagogical training.

One year after the end of the compact, a majority of center managers mentioned that they had incorporated management practices introduced by the technical assistance into their operations, although the use of specific practices varied across COSDECs. One COSDEC board member noted that institutionalizing effective management practices at the COSDECs had been a big challenge, but that after “*a long struggle,*” the situation was improving.

One example of a new management practice introduced through technical assistance that was being widely used was budget management. By the end of 2015, COSDECs could develop annual budget plans, which play an important role in the provision of funding to them by COSDEF, their main source of funding. The process was not perfect, but had improved to the point that most budget plans were approved without considerable reworking. The engagement of COSDEC staff in the new budget process was another success, but an informed stakeholder noted that having to compile budgets on an annual basis created a great deal of frustration among staff, as it was a big effort and the COSDECs had to operate for three months out of every year without a budget until funding was approved. This respondent noted that it would be better if budgeting could be done for a three- or five-year period.

Another management practice on which technical assistance made a big impact was strategic planning. During the compact, changing behavior around strategic planning was extremely difficult; a year later, however, the practice was being used and greatly appreciated by COSDEC and COSDEF staff alike. As COSDEC staff took more of an active and collaborative role in planning, it reduced the work of the COSDEF support unit, and reduced reasons for tension between the COSDEC and COSDEF leadership. COSDEF staff also noted that management-related interactions between COSDEF and the COSDECs had improved as the latter took a greater role in strategic planning. He noted, “*I think to a great extent this whole strategic plan[ning process] brought everyone on board ... [Center management is] currently 70 percent[at the] center level and 30 percent with the support unit. It is now ‘You guys are getting money, you guys are managing, and here is the financial support.’*” Center managers also mentioned the benefits of a more inclusive management style introduced through technical assistance; they noted improved collaboration between center management and other COSDEC staff through more engagement of staff in decision making, tackling problems as a group, and planning together.

COSDECs also continued to build on the instructor training conducted by Transtec through off-site training aimed at further improving instructors’ pedagogical skills and quality of instruction. This improvement was especially important because COSDEC managers said that one of their key challenges was having enough qualified trainers (they were especially concerned about having enough funding to attract and retain good trainers). New continuous training plans and heightened expectations for trainers were also put in place, including at one COSDEC that

expected trainers to draw up a training delivery plan for the year, budget for their classes, ensure needed materials were sourced quarterly, prepare daily lesson plans, conduct formative and summative assessments, and engage with or know about their industry and its current trainings. At least one COSDEC also provided training so that instructors could take the NTA assessor training, reporting that NTA was currently using their instructors to conduct national assessments at other training centers.

Various center managers mentioned that they had incorporated into their operations additional managerial practices introduced through technical assistance. Specific practices mentioned included improving the trainee application processes and implementing new ways to generate income for the centers. Some COSDEC managers noted that they had even tried to implement some of the management practices that had been introduced through technical assistance but not completed. One center manager said, *“We have really changed a lot, especially with our managerial practices. We have learned to do stock taking, and we also have a management plan ... It has really changed a lot. We know how to manage our center very well.”* COSDEF staff agreed that management practices had improved. They saw no major issues, such as corruption or financial challenges. Centers were also continuing with management learning, with at least two using a training program for managers through the Namibia University of Science and Technology (NUST), formerly known as Polytechnic of Namibia, an institute of tertiary education in Windhoek.

One area of technical assistance that apparently has been less successful was marketing the COSDECs. Many stakeholders noted that technical assistance did not result in meaningful changes to how the COSDECs advertise and market their centers to potential trainees, employers, and the community more broadly. Several stakeholders said that further assistance was needed to improve the branding and marketing skills of COSDEC staff so they could improve marketing and outreach to local communities.

Most COSDECs do not have a formal maintenance plan for their new facilities, tools, and equipment; however, they do conduct required maintenance using their annual budget, fee income, and trainee labor.

Before the end of the compact, MCA-N attempted to finalize a maintenance plan for the COSDECs' new facilities, tools, and equipment. COSDEF staff drafted a plan, but it was never finalized, and MCA-N was not able to obtain buy-in from the Ministry of Education or Ministry of Works to revise and implement their maintenance policy. Thus, in the second round of qualitative data collection, only one COSDEC reported having a maintenance plan in place that included making every instructor responsible for his or her department and ensuring that all the tools and equipment were managed properly. A second COSDEC manager noted they did not have a set plan but did have an officer responsible for maintenance. Most COSDECs were actively using or planning to use trainees to do maintenance and repairs. One center manager said, *“... we have bricklaying, painting, and plumbing sections [we can] ... give these small repair jobs to our trainees to do it for the center.”* Another confirmed, *“We have done everything in house.”*

Currently, each COSDEC includes a section for maintenance and operations in the annual budget it submits to COSDEF for approval and funding. This maintenance section covers

buildings, tools, and equipment, as well as capacity building for trainers to improve their knowledge of basic equipment maintenance. Although maintenance and operations at the COSDECs are funded primarily with money received through COSDEF, at least one COSDEC manager said the size of the budget for maintenance was small, and at least two COSDECs supplemented the maintenance funds they received in their annual budgets with funds from fees. In maintaining infrastructure, some respondents noted challenges once the compact ended in working with the original suppliers and builders to conduct maintenance and fix problems with construction, tools, and equipment.

Stakeholders were confident that the COSDECs were financially sustainable in the long term, mainly through government funding supplemented by additional sources.

The main funding for the COSDECs ultimately comes from the Namibian government—the government funds the NTA, which then funds COSDEF, which in turn funds the COSDECs. The mechanism for COSDECs to access funding is through the annual budget process, in which each one submits its budget to COSDEF for approval, upon which money is released by NTA. COSDECs also receive tuition fees and revenue from other income-generating activities, which supplement the funding received from NTA.

However, because COSDECs serve youth in disadvantaged communities, tuition fees must necessarily be kept low (one COSDEF staff member mentioned around N\$750 to N\$1,000 per course). Even then, not all trainees can afford to pay, but most COSDECs try to provide options for them. At one COSDEC, such trainees begin to pay once they obtain a job attachment. Another COSDEC manager mentioned that he tried to get permission to reduce or eliminate tuition for trainees who cannot pay. Trainees appreciate this aspect of the COSDECs. *“One thing I like about them [the management] is they give people a chance when paying. If you do not have the full amount they can help you pay 50 percent of your money while you look for the money with time,”* said one trainee.

Despite this reliance on government funding, most stakeholders did not see the long-term financial sustainability of the COSDECs as a problem. One board member noted that COSDECs have always been funded by the government and expressed optimism that this situation would continue, citing the success of the NTF levy in generating a substantial amount of money for accredited programs. COSDEF staff echoed their faith in NTA’s commitment and ability to fund accredited programs. For this reason, it is important for COSDECs to obtain accreditation so they can take advantage of funding from the NTF levy. At the same time, several COSDEC and COSDEF stakeholders noted that it is also important to focus on how to fund other COSDEC trainings (primarily short courses) that are not accredited because only accredited programs are eligible for NTF funding. Several center managers noted that COSDEF itself or other donors must fund their short courses and non-accredited courses. One COSDEC manager said it was engaging other government entities to seek a broader funding base. Specifically, it was seeking funding from the Ministry of Gender Equality and Child Welfare for trainings within communities and also creating links with the regional governor to provide a tender for trainees to fix broken furniture to practice their employment skills. Another center manager sought and received resources from an international nongovernmental organization.

Overall, instead of being concerned about the financial sustainability of the existing COSDECs, a key concern of COSDEF board members and COSDEC managers was increasing funding from the government so they could grow and expand the system. As one stakeholder said, “*Our key word is funding. For us to expand, we need more money.*”

COSDECs have made progress toward registration and accreditation, but these complex and time-consuming processes are still not complete; this situation is especially problematic for the articulation of COSDEC graduates to further training.

The processes set up for ensuring and certifying training quality in Namibia—accreditation and registration—are relatively new and still not well established. The registration process is managed by NTA and includes as prerequisites such infrastructure requirements as sufficient physical space and appropriate tools. Accreditation is managed by NQA and includes requirements similar but not identical to registration, as well as additional ones, such as adequate management systems and trainer qualifications. NQA also accredits specific courses offered by accredited training providers, which must include defined competencies or “unit standards.” Until relatively recently, NQA did not accredit courses or institutions focusing on courses lower than Level 5, and all COSDEC courses fall in that category. However, currently NQA requires accreditation for *all* national courses, even at the lower levels, as well as for the institutions that offer them. This requirement means that the COSDECs are expected to undertake both the registration and accreditation processes for their centers, as well as the accreditation process for the national courses they wish to run.

There are three main benefits to the COSDECs completing the registration and accreditation processes. First, accreditation is a prerequisite for receiving NTF levy funding for national courses. Second, if courses are not accredited, students who graduate do not have their training formally recognized by the government, which could affect their progress in the labor market. Third, registration and accreditation may be critical to enabling the articulation of students from COSDECs to other training institutions. COSDECs typically train up to Levels 1 and 2, and trainees then should be able to articulate to the next level at another institution. However, as mentioned earlier, due to the lack of accreditation, trainees are often asked to repeat the courses they completed at a COSDEC when entering other institutions, such as VTCs.

In our second round of qualitative data collection, COSDEC stakeholders reported that the registration and accreditation processes were long, duplicative, and cumbersome. Confusion persists regarding the roles of NTA and NQA, a point widely recognized by all parties. As one NQA representative noted “*We are duplicating things big time. That has caused frustration in the system.*” Government entities were taking steps to clarify the various roles and responsibilities, including the start of a review by the Ministry of Higher Education, Training, and Innovation (MHETI) to harmonize quality assurance nationally. Several people mentioned that perhaps one process would supplant the other, as they are very similar, but no decision had been made.

At the time of our second round of qualitative data collection in late 2015, none of the COSDECs was yet accredited or registered, although COSDEF staff noted that they were at an advanced stage with these processes. Unfortunately, one year later, in December 2016, communication with COSDEF revealed that COSDECs were still “*chasing the registration and*

accreditation agenda.” For accreditation, at the end of 2015, COSDEF had submitted applications for six of the largest centers, having left out two of them after an internal assessment showed they still needed improvement before they could meet accreditation requirements.²⁹ COSDEF staff said they believed their applications were moving to the next stage within NQA for accreditation. For registration, COSDEF staff reported that they believed the six centers for which accreditation applications had been submitted had met at least 60 percent of the requirements for registration.

As mentioned earlier, the absence of registration and accreditation poses specific challenges for the articulation of COSDEC graduates to further training—one of the goals of the project. An NQA staff member acknowledged this issue. *“Articulation is problematic...I have just signed off on a letter where we establish a committee which would look nationally on articulation. It is problematic nationally. It’s one of the principles of the qualifications framework but the implementation there is not very sound.”* The National Qualifications Framework (NQF) is a full register of all qualifications in Namibia, intended to cover lifelong learning and articulation by clearly defining qualifications at each level and the relationship between them. NQA planned to complete the NQF by the end of March 2016. However, at the time of the second round of qualitative data collection, it was still up to individual institutions or training providers to decide who was eligible for training, at what level an applicant should begin, and what credits were eligible for transfer.

E. Cost Analysis

In this section, we present summary information about training costs at the COSDECs, which was provided by COSDEF. Because our evaluation findings are descriptive and do not represent the effects of COSDEC training on enrollees’ outcomes, we are not able to conduct a cost-effectiveness analysis. Nevertheless, this cost information provides useful additional context for our findings; for example, it provides a basis for estimating the level of financial support required to sustain the COSDECs.

COSDEF estimated the average per-trainee costs across all COSDECs, by course type (Table III.14). These costs fall into the following categories: (1) direct labor, which covers the cost of COSDEC instructors’ wages and benefits; (2) training materials; (3) indirect labor, which covers the cost of COSDEC administration; (4) fixed overhead costs, for maintenance of buildings and equipment; (5) variable overhead costs, for operational expenses such as water and electricity; and (6) the cost of COSDEF support in terms of management time.

The largest component of COSDEC training costs is the direct labor cost (36 percent of the average total cost across course types). Other large components of the total cost are indirect labor costs (25 percent of the average cost), COSDEF management costs (18 percent of the average cost), and variable overhead costs (15 percent of the average cost). In contrast, the contribution of materials and fixed overhead costs is relatively small.

²⁹ COSDEF submitted applications for COSDECs Ondangwa, Tukuranu, Tsumeb, Omaheke, Otijwarongo, and Mahetago, but not for COSDECs Opuwo and Benguela.

Table III.14. Estimated costs of COSDEC training for 2015 (N\$ per trainee, unless otherwise indicated)

	Direct labor	Materials	Indirect labor	Fixed overhead	Variable overhead	COSDEF	Total
Non-technical courses:							
Office administration	2,593	119	1,106	236	1,070	1,256	6,380
Food preparation and serving	3,889	726	3,193	236	2,547	2,010	12,601
Information communication technology	2,593	119	1,106	236	1,070	1,256	6,380
Clothing production	3,956	419	3,162	305	1,710	2,079	11,631
Hairdressing	4,321	601	2,234	32	1,771	2,069	11,029
Clothing design	3,956	419	3,162	305	1,710	2,079	11,631
<i>Average</i>	<i>3,551</i>	<i>401</i>	<i>2,327</i>	<i>225</i>	<i>1,646</i>	<i>1,792</i>	<i>9,942</i>
Technical courses:							
Bricklaying and plastering	5,050	654	3,331	250	1,896	2,606	13,788
Plumbing and pipefitting	4,897	521	3,560	311	1,835	2,523	13,646
Welding and metal fabrication	5,914	559	4,267	305	2,704	2,606	16,356
Carpentry and joinery	6,202	784	5,088	413	2,732	3,158	18,376
Building maintenance	5,050	654	3,331	250	1,896	2,606	13,788
<i>Average</i>	<i>5,423</i>	<i>634</i>	<i>3,915</i>	<i>306</i>	<i>2,213</i>	<i>2,700</i>	<i>15,191</i>
All courses:							
<i>Average</i>	<i>4,402</i>	<i>507</i>	<i>3,049</i>	<i>262</i>	<i>1,904</i>	<i>2,204</i>	<i>12,328</i>
<i>Share of average total cost (percentage)</i>	<i>35.7</i>	<i>4.1</i>	<i>24.7</i>	<i>2.1</i>	<i>15.4</i>	<i>17.9</i>	<i>100.0</i>

Source: Cost information provided by COSDEF.

Note: COSDEF provided information for 2016 consisting of the 2015 estimates plus a 6.35 percent increase for inflation. The table removes the inflation adjustment and reports costs for 2015.

Total per-trainee costs vary substantially across courses, from N\$6,380 (US\$480, for office administration and information communication technology) to N\$18,376 (US\$1,384, for carpentry and joinery), with an average of N\$12,328 (US\$928).³⁰ On average, the total cost for technical courses is substantially higher than non-technical courses (N\$15,191 or US\$1,144 per trainee compared to N\$9,942 or US\$749). This number is driven by higher average per-trainee costs across all cost categories. Overall, these cost estimates confirm that substantial government support is needed to sustain the COSDECs financially, as they will be able to recover only a small fraction of these costs through fees, given the level of economic disadvantage of their target population.

³⁰ The conversions to US dollars use the average exchange rate in 2015, about N\$13.28 per US\$.

IV. CONCLUSION

The COSDEC subactivity, which was part of MCC's education project in Namibia, consisted of several interventions that aimed to improve the availability and quality of vocational training provided by Namibia's network of COSDECs. These interventions included the construction or renovation of seven of the eight COSDECs, the provision of new tools and equipment in these COSDECs, and wide-ranging technical support to COSDEF and the management of the individual centers. This report has presented the findings from a performance evaluation of the COSDEC subactivity, which included a qualitative analysis of the implementation, evolution, and sustainability of the interventions, as well as a quantitative outcomes analysis for one intake of COSDEC enrollees. In this chapter, we summarize the main findings and discuss their implications for policy and practice. We also describe the next steps related to dissemination of the findings.

A. Summary and discussion of findings

1. Implementation and evolution of the COSDEC subactivity

One year after the end of the compact, most stakeholders continued to view the COSDEC subactivity interventions favorably and pointed to their ongoing benefits. Stakeholders noted that the infrastructure improvements have improved the learning environment at the COSDECs, enabled them to enroll more students, and contributed to progress toward meeting requirements for registration and accreditation. Most COSDECs have or plan to undertake additional infrastructure improvements to address some conceptual design flaws in the original construction or accommodate more trainees in response to an increased demand for training. They are also actively conducting touch-ups and repairs to the original construction. Providing the COSDECs with new tools and equipment was less successful because of a supplier issue that resulted in the late delivery and poor quality of some of these items (mostly modest ones, such as trowels, wheelbarrows, and toolboxes, rather than large machinery or power tools). Although this issue adversely affected the quality of the trainings, COSDECs were able to mitigate these issues to some extent by obtaining locally-procured tools and equipment from MCA-N or purchasing it themselves, and some were continuing to negotiate with those suppliers that did not deliver tools and equipment of the expected quality. Despite the challenges stemming from the new tools and equipment, the current situation is still an improvement over the pre-compact period, and most of the workshops are now sufficiently equipped for training to proceed.

The new infrastructure also included the construction of SME units in four COSDECs. These units were intended to help COSDEC graduates and other entrepreneurs in the community start their own business by providing space, mentoring, and training for their new businesses. Construction of the SME units was complete by the end of the compact but their utilization generally was still in the planning phase at that point. One year after the end of the compact, stakeholders reported that the SME units were being used more heavily, operating at 80 to 100 percent of their capacity (although they still might not be able to accommodate a large fraction of COSDEC trainees). However, many COSDEC managers were waiving or lowering fees for use of the units because the users could not yet afford to pay them, and the envisaged incubation services for new enterprises had not been fully implemented. The stakeholders in the qualitative data analysis were broadly optimistic regarding the role of the SME units in supporting entrepreneurs but noted that it might still be too soon to assess their long-term success.

Finally, most stakeholders—including COSDEC managers, COSDEF staff, and COSDEF board members—viewed the technical assistance provided to the COSDECs in management and budgeting, formal registration, and instructor training as continuing to make an important contribution to the COSDECs after the compact. They specifically noted the importance of technical assistance in improving financial management at the COSDECs and introducing a strong strategic planning process. These stakeholders reported that this technical assistance helped COSDECs improve training courses, increase the services they offer, improve their visibility, compile accurate budgets, focus on strategic goals, and better integrate staff in decision making. Nevertheless, many stakeholders noted that the COSDEC management system still needed further strengthening, and suggested that the technical assistance ideally would have been provided for a longer period, either starting earlier in the compact or extending for several months after the compact.

Overall our findings suggest that most of the key immediate outcomes in the program logic were achieved. These include increased enrollment in the COSDECs, improved management practices, and higher quality of trainings through improved physical infrastructure and pedagogical practices. The achievement of intermediate outcomes in the program logic has been more mixed, although COSDECs seem to be making progress towards them. In particular, training completion rates are high, but the registration and accreditation processes are still ongoing and it is still too early to assess the extent to which SME units will be successful in supporting entrepreneurs.

2. Labor market outcomes of COSDEC enrollees

We examined the labor market outcomes of COSDEC enrollees through a survey of enrollees in the July to December 2014 intake at the seven new and renovated centers, conducted about one year after the end of training. About 70 percent of enrollees in the analysis sample were female, 65 percent were in their 20s, and 84 percent had completed at least 10 grades of formal education (split evenly between those who had completed grades 10 and 12). Most individuals in the sample were enrolled in non-technical courses, such as office administration or food preparation and serving, rather than technical courses, such as bricklaying or plumbing (technical courses might have been more prevalent in the first intake of the year).

A majority of COSDEC enrollees in the intake we surveyed were not employed one year after the end of training, and many of those who were employed did not hold high quality jobs. More specifically, only about 40 percent of enrollees were employed at that point, even though most (85 percent) successfully completed the training, and both the trainees and other stakeholders had very positive perceptions of the quality of training. Among the employed enrollees, many had jobs that were not related to their vocational training, were temporary, and/or were in the informal sector; almost half reported that they were dissatisfied or very dissatisfied with their job. These findings suggest that considerable challenges remain not only in improving the employability of COSDEC graduates, but also in improving their prospects of finding high quality employment. Consistent with the low employment rate, about two-thirds of all enrollees had zero earnings in the month before the survey (mean earnings were N\$1,258, or US\$82), and about one-third had no individual income at all (mean individual income was N\$1,880, or US\$122). Among those employed at the survey date, mean monthly earnings were about N\$3,948, or US\$257.

However, there is suggestive evidence that these employment challenges may be applicable more broadly to vocational training enrollees in Namibia, rather than being specific to COSDEC enrollees. Specifically, we found similar employment rates and patterns in a broader (albeit nonrepresentative) sample of other Namibian training providers in our evaluation of the education project's VTGF subactivity. This similarity existed despite the fact that enrollees at these providers had a higher level of education and were enrolled in higher levels of training, on average, than COSDEC enrollees. A broad lack of labor market demand for the skills of graduates produced by the Namibian vocational training system may be a key constraint to their employment prospects.

We also found that the female COSDEC enrollees in the intake we surveyed had significantly lower employment rates and average earnings relative to male enrollees. The employment rate was 48 percent for male enrollees compared to 36 percent for female enrollees, and mean earnings were almost three times higher for male than female enrollees (a similar pattern exists for VTGF enrollees). These differences persist even after controlling for differences in the types of courses in which females tend to enroll; also, they are not related to differences in the training completion rate, labor force participation, or other demographic characteristics, all of which are almost identical by gender. This finding suggests that females—who composed the majority of COSDEC enrollees in the intake we examined—face substantial challenges in the labor market relative to males that are not related to differences in the types of courses they take or other characteristics.

Finally, most of the enrollees not employed one year after the end of COSDEC training were unemployed rather than being engaged in further training, although a large fraction reported that they were interested in such training. This finding could be due partly to the complex and time-consuming registration and accreditation processes, which still were underway when the data were collected and are essential to enabling COSDEC graduates to articulate to higher levels of training at other providers. In contrast, participation in additional training reported by VTGF enrollees was relatively greater, possibly because many VTGF providers were already registered and accredited, and so did not face the same challenges with articulation as did the COSDEC graduates. However, it is still too soon to determine whether registration and accreditation alone are sufficient for articulation to occur. For example, COSDEC graduates might not be able to afford fees at other providers, which typically are substantially higher than COSDEC fees.

Overall, although we were not able to estimate the *impacts* of training in MCC-supported COSDECs on trainees' labor market outcomes, our findings suggest that it will be challenging to achieve the long-term outcomes in the program logic. In particular, the *levels* of employment as well as average earnings are still relatively low, and are unlikely to reflect a substantial improvement in the average trainee's economic well-being relative to the situation without MCC support. To achieve the anticipated long-term outcomes, further efforts to build on the work conducted during the compact may be required, including efforts to ensure that the outstanding intermediate outcomes such as registration and accreditation are achieved (we discuss the policy implications of our findings in Section B of this chapter).

3. Management practices and perceived sustainability

COSDEF staff, COSDEC center heads, and many other stakeholders expressed appreciation for the technical assistance related to new management practices. COSDECs are now able to develop annual budgets and play more of a role in strategic planning. Most centers have also continued to build on the instructor training conducted as part of the technical assistance by further investing in improving instructors' pedagogical skills, with the goal of increasing the quality of instruction.

COSDECs are conducting maintenance of the new facilities, tools, and equipment, even though a system-wide maintenance plan was not finalized during the compact, and only one of the seven COSDECs reported having such a plan. Although maintenance and operations at the COSDECs are funded primarily with money received through COSDEF, these funds are limited. Some COSDECs therefore supplement these funds with income from fees, and several centers are using trainees to conduct maintenance and repairs.

An important question for the evaluation is whether the COSDECs are financially sustainable. Their funding primarily comes from the Namibian government, although they also collect tuition fees (which are kept low because they primarily serve youth in disadvantaged communities) and revenue from other income-generating activities. COSDEF staff and board members and COSDEC managers were optimistic that government funding of COSDECs would continue at the required level, and are even focusing on increasing funding from the government to expand the COSDEC system. Nevertheless, COSDECs are actively diversifying their funding sources by engaging other government entities and donors.

Finally, COSDECs continue to face challenges related to the complex and time-consuming accreditation and registration processes. In late 2015, COSDEF staff noted that many COSDECs were at an advanced stage with these processes. However, subsequent communication with COSDEF suggests that, as of December 2016, these processes were ongoing and none of the COSDECs was yet accredited or registered. The main implications of not having completed accreditation and registration are that COSDECs cannot access NTF levy funding for national courses; training graduates cannot attain recognized certification of their qualifications, which could affect them in the labor market; and graduates have difficulty articulating to higher qualification levels at other training institutions, such as VTCs, without having to repeat courses.

4. Costs of COSDEC training courses

We also examined summary information about per-trainee training costs at the COSDECs to provide additional context for our findings. The largest component of total training costs across courses is the direct labor cost, which covers instructors' wages and benefits. Other large components of the total costs are indirect labor costs (administrative staff wages and benefits), COSDEF management costs, and variable overhead costs (operational expenses, such as water and electricity). In contrast, the contribution of materials and fixed overhead costs (maintenance of buildings and equipment) is relatively small. Total per-trainee costs vary substantially across courses, with an average of N\$12,328 per trainee—substantially higher than our estimates of average enrollee income. This finding suggests that, as mentioned earlier, COSDECs will have to continue to rely substantially on government funding and other sources of revenue (such as

donor and COSDEF funding) to keep their fees affordable for their low-income target population.

B. Implications for policy and practice

1. The high unemployment rate among COSDEC graduates a year after they completed training suggests the need for a more effective process to align national course offerings at the COSDECs with market demand. The lack of alignment between vocational training and market demand is not unique to the COSDECs but a broader problem in the vocational training sector in Namibia that the NTF was specifically designed to address. In assessing market demand, COSDECs could also draw on broader national studies of market demand conducted for the NTF (although market demand for the basic skill levels taught at the COSDECs might still be limited). In addition, although trainees commonly participated in job attachments, relatively few completers reported being offered job placement help by their COSDEC. This finding suggests that COSDECs could consider extending their involvement in the job search process beyond arranging job attachments (for example, by assisting trainees with resume compilation, reference letters, and interview techniques). However, given the small size of the private sector in Namibia, it might still be difficult to absorb all vocational training graduates in the formal sector; future policy might therefore need to focus more on the informal sector and encouraging entrepreneurship and self-employment.
2. Special attention should be given to enhancing the employment prospects of female COSDEC enrollees, who have significantly lower employment and earnings than male enrollees. These differences persist even after accounting for differences in the types of courses they take and are not explained by differences in training completion, labor force participation, or other characteristics. Although we do not have definitive evidence of the types of inherent barriers that females face in the labor market, efforts to support them could include linking them with female mentors in the community (for example, female-owned businesses) or undertaking affirmative action initiatives to provide direct and stronger support to female COSDEC graduates.
3. It will be important for the COSDECs to closely monitor the use of SME units and the labor market outcomes of users because it was too early to assess the success of these units as part of our evaluation. Maintaining systematic data on users (for example the number of users, their characteristics, the duration of use, and the type of support received) would provide the COSDECs with useful information about the profile of their users and patterns of use. For example, information about the types of users could be used to target information about SME units to enrollees in certain courses, and information about number of users and duration of use could be used to plan the allocation of SME unit resources. Focus group-type discussions between COSDEC managers and users would also be helpful to better understand the experiences and needs of the latter. Finally, a simple phone-based tracer survey of users would be helpful in assessing the extent to which users' enterprises were established and functional after use of the units ended, as well as the key challenges they face.
4. It will be important for the COSDEF and the COSDECs to persevere with the registration and accreditation processes, although they are complex and time-consuming. Completing these processes will be critical both for the receipt of funding for training through the NTF and for COSDEC enrollees to have the option of articulating to further training at other

providers (as a large fraction of enrollees report being interested in doing). In addition, COSDEF may want to strive to make articulation effective retrospectively so that recent COSDEC graduates can take advantage of it. COSDEF also must engage closely with ongoing developments related to NQA's finalization and implementation of the NQF, which will be important in facilitating articulation in the future.

5. Several valuable lessons can be drawn from the implementation of the COSDEC subactivity for similar MCC interventions in the future. First, for future investments in the VET sector, MCC should continue to emphasize the importance of having a credible approach to identifying and addressing skills gaps in the labor market. Second, given the limited capacity at the COSDECs, it would have been ideal to start technical assistance earlier to build in more of a time cushion within the compact timeframe. This would have provided a crucial extra few months to solidify many of the new practices before the end of the compact. For example, it might have been possible to finalize COSDEC maintenance plans; implement any outstanding technical assistance regarding new managerial practices; and provide support as the COSDECs began to implement the new practices. Alternatively, funding and support for a few months into the post-compact period could have been coordinated through another donor, such as GIZ. Third, consulting with COSDEC staff earlier in the implementation process would have helped avoid design flaws in the new infrastructure that required adjustments after the compact ended. Fourth, having the construction occur concurrently with changes in management practices was overwhelming for many centers. Relocating the COSDECs temporarily before renovations began could have allowed their staff to focus on the technical assistance changes without also managing the day-to-day operations of a training center in a construction zone. Alternatively, the technical assistance could have been started well before the construction work. Finally, the MCA-N procurement process for tools and equipment would have been more effective and resulted in better value for the project if it had not selected a supplier based solely on price, but had also considered quality.

C. Next steps

To ensure that the findings in this report are informative for MCC, policymakers in Namibia, and the wider vocational education and training field, we plan to disseminate them in several forums. These include presentations to MCC in Washington, DC and to local stakeholders in Namibia (the findings may be especially informative for COSDEF as it continues to improve the COSDECs). We also plan to present these findings at conferences and workshops that may be organized by MCC or other organizations. In addition, we plan to prepare an issue brief summarizing the findings for policymakers and practitioners, and will also seek to publish the findings in an appropriate professional journal.

This page has been left blank for double-sided copying.

REFERENCES

- African Development Bank (AfDB), Organization for Economic Cooperation and Development (OECD), and United Nations Development Programme (UNDP). “African Economic Outlook 2015: Regional Development and Spatial Inclusion.” Paris, France: OECD Publishing, 2015. Available at http://www.africaneconomicoutlook.org/sites/default/files/content-pdf/AEO2015_EN.pdf.
- Alcid, Annie. “A Randomized Controlled Trial of Akazi Kanoze Youth in Rural Rwanda.” Report submitted to USAID. Waltham, MA: Education Development Center, October, 2014.
- Asian Development Bank. “Viet Nam: Vocational and Technical Education Project.” Performance Evaluation Report. Manila, Philippines: ADB, 2013.
- Attanasio, Orazio, Adriana Kugler, and Costas Meghir. “Subsidizing Vocational Training for Disadvantaged Youth in Colombia: Evidence from a Randomized Trial.” *American Economic Journal: Applied Economics*, vol. 3, no. 3, 2011, pp. 188–220.
- Attanasio, Orazio, Arlen Guarín, Carlos Medina, and Costas Meghir. “Long Term Impacts of Vouchers for Vocational Training: Experimental Evidence for Colombia.” National Bureau of Economic Research Working Paper No. w21390, 2015.
- Blattman, Christopher, Nathan Fiala, and Sebastian Martinez. “Generating Skilled Self-Employment in Developing Countries: Experimental Evidence from Uganda.” *Quarterly Journal of Economics*, vol. 129, no. 2, May 2014, pp. 697–752.
- Borkum, Evan, Arif Mamun, and Malik Khan Mubeen. “Evaluation of the Vocational Training Grant Fund in Namibia: Final Report.” Draft report submitted to the Millennium Challenge Corporation. Washington, DC: Mathematica Policy Research, November 15, 2016.
- Brown, Annette, Kristen Rankin, Mario Picon, and Drew Cameron. “The State of Evidence on the Impact of Transferable Skills Programming on Youth in Low- and Middle-income Countries.” International Initiative for Impact Evaluation (3ie) Scoping Paper No. 4, September 2015.
- Card, David, Pablo Ibararán, Ferdinando Regalia, David Rosas-Shady, and Yuri Soares. “The Labor Market Impacts of Youth Training in the Dominican Republic.” *Journal of Labor Economics*, vol. 29, no. 2, 2011, pp. 267–300.
- Cho, Yoonyoung, Davie Kalomba, Ahmed Mushfiq Mobarak, and Victor Orozco. “Gender Differences in the Effects of Vocational Training: Constraints on Women and Drop-Out Behavior.” IZA Discussion Paper No. 7408, 2013.
- Hirshleifer, Sarojini, David McKenzie, Rita Almeida, and Cristobal Ridao-Cano. “The Impact of Vocational Training for the Unemployed: Experimental Evidence from Turkey.” *Economic Journal*, vol. 126, no. 597, 2016, pp. 2115–2146.
-

- Ibarrarán, Pablo, and David Rosas Shady. “Evaluating the Impact of Job Training Programmes in Latin America: Evidence from IDB Funded Operations.” *Journal of Development Effectiveness*, vol. 1, no. 2, 2009, pp. 195–216.
- Ibarrarán, Pablo, Laura Ripani, Bibiana Taboada, Juan Miguel Villa, and Brigida Garcia. “Life Skills, Employability and Training for Disadvantaged Youth: Evidence from a Randomized Evaluation Design.” *IZA Journal of Labor and Development*, vol. 3, no. 10, 2014.
- Ibarrarán, Pablo, Jochen Kluge, Laura Ripani, and David Rosas Shady. “Experimental Evidence on the Long Term Impacts of a Youth Training Program.” Ruhr Economic Papers No. 562, Ruhr-Universität Bochum, Bochum, Germany. June 2015.
- Kelly, Alan, Richard Willing, and Marivic Puzon. “The Philippines-Australia Technical and Vocational Education Project (PATVEP).” AusAID Evaluation No. 4. Canberra, Australia: AusAID, 1998.
- Maitra, Pushkar, and Subha Mani. “Learning and Earning: Evidence from a Randomized Evaluation in India.” GCC Working Paper Series 14-05, University of Pennsylvania, Population Studies Center, February 2014.
- Mamun, Arif, Luke Heinkel, Evan Borkum, and Kristen Velyvis. “Evaluation of MCC’s Vocational Education and Training Activity in Namibia: Findings from Analysis of the First Round of Qualitative Data.” Report submitted to the Millennium Challenge Corporation. Washington, DC: Mathematica Policy Research, September 15, 2015.
- Millennium Challenge Account Namibia. “National Fact Sheet.” Windhoek, Namibia: September 2014. Available at <http://www.mcanamibia.org/files/files/MCA%20National%20Fact%20Sheet%20Book%20Final%20Smallest.pdf>.
- Namibia Statistics Agency. “Namibia Labour Force Survey 2014 Report.” Windhoek, Namibia: 2015.
- Tripney, Janice, Jorge Garcia Hombrados, Mark Newman, Kimberly Hovish, Chris Brown, Katarzyna T. Steinka-Fry, and Eric Wilkey. “Post-Basic Technical and Vocational Education and Training (TVET) Interventions to Improve Employability and Employment of TVET Graduates in Low- and Middle-Income Countries.” *Campbell Systematic Reviews*, vol. 9, no. 9, 2013.
- U.S. Agency for International Development. “State of the Field Report: Examining the Evidence in Youth Workforce Development.” Washington, DC: USAID, 2013.
- U.S. Agency for International Development. “USAID/Namibia Country Strategic Plan FY 2004–2010.” Washington, DC: USAID, 2003.

Velyvis, Kristen, Arif Mamun, Anca Dumitrescu, Luke Heinkel, and Ananya Khan. “Evaluation of MCC’s Investments in the National Training Fund in Namibia: Findings from the Second Round of Qualitative Data.” Draft report submitted to the Millennium Challenge Corporation. Washington, DC: Mathematica Policy Research, November 14, 2016.

World Bank. “Country Partnership Strategy for the Republic of Namibia for the period FY2014–FY2017.” June 26, 2013.

This page has been left blank for double-sided copying.

APPENDIX A

RESULTS WITH THE ADDITION OF COSDEC BENGUELA

This page has been left blank for double-sided copying.

In this appendix, we present the results from the outcomes analysis with the addition of COSDEC Benguela (Lüderitz) to the sample. As mentioned earlier, this was the only COSDEC that did not benefit directly from the construction and retooling under the COSDEC subactivity and is therefore excluded from the estimates in the body of the report. However, including COSDEC Benguela in the sample enables us to estimate outcomes for the universe of COSDECs in Namibia, which help to place the results for the MCC-supported COSDECs into context and may provide useful information to the COSDEF and other stakeholders. Because the COSDEC Benguela sample was relatively small (63 respondents compared to 642 respondents from the other seven COSDECs), adding these responses does not result in major changes to the estimates in the body of the report.

Table A.1. Characteristics of COSDEC enrollees in the analysis sample (percentages, unless otherwise indicated)

	Sample size	Estimate
Demographic characteristics		
Female	705	69.5
Age at the start of COSDEC training:		
Younger than 20 years	705	9.2
20–24 years	705	39.7
25–29 years	705	24.3
30–34 years	705	10.4
35 years or older	705	16.5
Mean (years)	705	27.0
Unmarried	702	85.2
Respondent's education:		
Less than grade 10	703	16.5
Completed grade 10	703	41.3
Completed grade 12	703	41.3
Higher	703	1.0
Household size:		
1	703	4.0
2	703	6.4
3	703	9.1
4	703	12.8
5	703	15.1
More than 5	703	52.6
Mean (number)	703	6.6
Home language:		
Oshiwambo	705	44.8
Otjiherero	705	16.7
Rukavango	705	13.0
Nama/Damara	705	10.8
Afrikaans	705	7.5
Other	705	7.1
Experience with training before July 2014		
Ever enrolled in vocational training	704	18.5

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

Table A.2. Features of COSDEC training for the July to December 2014 intake (percentages, unless otherwise indicated)

	Sample size	Estimate
Skill area or trade:		
Office administration	705	30.8
Food preparation and serving	705	19.0
Information communication technology	705	11.1
Clothing production	705	10.8
Bricklaying and plastering	705	8.4
Plumbing and pipefitting	705	7.2
Welding and metal fabrication	705	6.8
Carpentry and joinery	705	3.0
Other ^a	705	3.0
Duration of training:		
2 to 4 months	705	39.0
5 to 7 months	705	46.7
8 to 9 months	705	14.3
Mean (months)	705	5.6
Median (months)	705	5.0
Level of training:		
Level 1	650	69.8
Level 2	650	3.1
Level 3	650	1.2
Level 4	650	0.2
Level 5 or higher	650	0.9
No level/short course	650	12.2
Don't know	650	12.6

Source: Enrollee information provided by COSDECs (skill area and duration) and COSDEC survey (level).

Note: Sample sizes vary because of item nonresponse.

^aIncludes hairdressing, clothing design, and building maintenance.

Table A.3. Perceived quality of COSDEC training by enrollees (percentages)

	Sample size	Estimate
Quality of instructors:		
Excellent	633	40.3
Good	633	52.6
Fair	633	5.1
Poor	633	2.1
Quality of written materials:		
Excellent	633	40.6
Good	633	47.9
Fair	633	9.0
Poor	633	2.5
Quality of tools and equipment:		
Excellent	634	39.9
Good	634	48.3
Fair	634	9.8
Poor	634	2.1
Overall quality of program:		
Excellent	633	41.2
Good	633	49.9
Fair	633	6.6
Poor	633	2.2

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

Table A.4. Completion of COSDEC training (percentages, unless otherwise indicated)

	Sample size	Estimate
Full sample		
Completed COSDEC training	646	84.8
Among those who completed COSDEC training		
Experienced any job attachment or internship	650	53.5
Experienced any paid job attachment or internship	650	23.1
Total duration of job attachment or internship:		
None	542	40.4
1 to 3 months	542	49.4
4 to 6 months	542	7.9
7 months or more	542	2.2
Mean (months)	542	1.7
Median (months)	542	1.0
Received job placement assistance from COSDEC	549	11.1
Among those who did not complete COSDEC training		
Reasons for dropping out:		
Found a job during the training	98	24.5
Could not afford to complete the training	98	16.3
Moved away from the area	98	12.2
Other family commitments	98	13.3
Health-related issues	98	12.2
Other	98	21.4

Source: COSDEC survey.

Note: Sample sizes vary within respondent categories because of item nonresponse.

Table A.5. Assessments associated with COSDEC training (percentages)

	Sample size	Estimate
Among those who completed COSDEC training:		
Took formative assessments during training	537	82.9
Took summative assessment at the end of training	538	81.6
Took summative assessment at the following training level:		
Level 1	538	27.3
Level 2	538	18.0
Level 3	538	3.5
Level 4	538	0.7
Level 5	538	0.6
No level	538	9.5
Don't know	538	21.9
Passed summative assessment	516	78.7
Passed summative assessment on first attempt	515	77.9
Received COSDEF certificate of completion	550	65.3

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

Table A.6. Enrollment in additional vocational training by COSDEC enrollees (percentages)

	Sample size	Estimate
Enrollment in training since July 2014		
Enrolled in any additional training	705	6.7
Enrolled in additional training at: ^a		
VTC	705	1.3
COSDEC	705	2.7
Other provider	705	2.8
Plans for future enrollment as of survey date		
Plans to enroll in any additional training in the next two years	668	85.0
Plans to enroll in additional training at: ^a	668	35.5
VTC	668	28.1
COSDEC	668	15.7
Other provider	668	5.7
Don't know	705	6.7

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aPercentages can sum to more than the percentage enrolled in/planning to enroll in additional training, because respondents could select more than one option.

Table A.7. Use of SME units, among those enrolled in COSDECs in which SME units were available (percentages, unless otherwise indicated)³¹

	Sample size	Estimate
Used SME unit during or after training	396	12.9
Among those who used an SME unit		
Paid for use	49	32.7
Duration of use:		
0 to 4 weeks	44	63.6
5 to 8 weeks	44	11.4
More than 8 weeks	44	25.0
Mean (weeks)	44	7.7
Reason for use:		
Part of training	46	78.3
Own purposes	46	13.0
Employer-related purposes	46	13.0
Other	46	2.2
Attractive features of SME unit:		
Workspace	42	54.8
Materials	42	54.8
Training	42	45.2
Practice	42	33.3
Sales space/place to sell or serve customers	42	4.8
Other	42	33.3
Perception of SME units:		
Not helpful	48	2.1
A little helpful	48	31.3
Very helpful	48	66.7
Among those who did not use an SME unit		
Reasons for not using:		
Was not aware unit existed	314	78.3
Was not interested	314	5.1
Unit was not operational	314	4.5
Unit was occupied by someone	314	0.6
Cost of use was too high	314	4.5
Other	314	7.0

Source: COSDEC survey.

Note: SME units were available in COSDECs Ondangwa, Tukureno (Rundu), Mahetago (Swakopmund), and Tsumeb. Sample sizes vary within respondent categories (users and non-users) because of item nonresponse.

³¹ This table is identical to Table III.7 in the body of the report because the sample is restricted to COSDECs with an SME unit, which does not include COSDEC Benguela. Nevertheless, we include this table for completeness.

Table A.8. Employment and productive engagement at the survey date among COSDEC enrollees (percentages)

	Sample size	Estimate
Employed in a paid job	698	41.5
Other employment status:		
Unemployed ^a	604	47.5
Not in the labor force	604	4.5
Enrolled in vocational training	705	2.8
Engaged in any productive activity ^b	698	44.0

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aBroad definition: available to work if offered job in previous 12 months (does not include job search).

^bEmployed or enrolled in any vocational training.

Table A.9. Features of employment at the survey date (percentages, unless otherwise indicated)

	Full sample		Sample employed	
	Sample size	Estimate	Sample size	Estimate
Type of job held:				
Not employed in a paid job	696	58.6	--	--
Cook or server in restaurant or food service	696	3.6	288	8.7
Sales consultant	696	3.6	288	8.7
Housekeeper or cleaner	696	3.6	288	8.7
Bricklayer and plasterer	696	2.0	288	4.9
Office administrator	696	2.0	288	4.9
Cashier	696	1.9	288	4.5
Welder	696	1.3	288	3.1
Other	696	23.4	288	56.6
Employed in a job related to vocational training	697	13.2	289	31.8
Type of employment:				
Not employed in a paid job	692	59.0	--	--
Self-employment	692	7.4	284	18.0
Permanent employment	692	18.4	284	44.7
Temporary employment	692	15.3	284	37.3
Employed in a formal job ^a	653	28.3	245	75.5
Hours per week worked:				
0 hours	683	59.7	--	--
1 to 19 hours	683	1.9	275	4.7
20 to 29 hours	683	1.8	275	4.4
30 to 39 hours	683	3.7	275	9.1
40 or more hours	683	32.9	275	81.8
Mean (hours)	683	18.1	275	44.8
Job tenure ^b :				
0 months	690	60.6	282	3.5
1 to 6 months	690	11.9	282	29.1
7 to 12 months	690	7.2	282	17.7
More than 12 months	690	20.3	282	49.6
Mean (months)	690	8.2	282	20.1
Time between end of training and starting job				
Less than 1 month	--	--	157	5.1
1 to 6 months	--	--	157	42.0
7 to 12 months	--	--	157	39.5
More than 12 months	--	--	157	13.4
Mean (months)	--	--	157	7.3
How respondent learned about job				
Media	--	--	233	26.2
Vocational training provider	--	--	233	2.1
Family member or friend	--	--	233	54.1
Other	--	--	233	17.6
Satisfied or very satisfied with job ^c	690	24.2	282	59.2

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse. The sample size for the time between the end of training and starting the job is low because many respondents reported a job start date that was before the training end date; we omitted these respondents from this analysis.

^aDefined as a workplace or business registered for tax purposes.

^bZero for those not employed and censored at the survey date for those employed.

^cAvailable options were very satisfied, satisfied, dissatisfied, and very dissatisfied.

Table A.10. Earnings and income in the month prior to the survey date (percentages, unless otherwise indicated)

	Sample size	Estimate
Gross earnings from self-employment or wages:		
None	631	65.0
N\$1–1,000	631	6.3
N\$1,001–2,000	631	9.5
N\$2,001–4,000	631	12.0
N\$4,001 or more	631	7.1
Mean (N\$) ^a	631	1,287
Total gross individual income^b:		
None	612	28.6
N\$1–1,000	612	30.4
N\$1,001–2,000	612	14.1
N\$2,001–4,000	612	15.7
N\$4,001 or more	612	11.3
Mean (N\$) ^a	612	1,918
Monthly gross household income^c:		
None	325	8.9
N\$1–1,000	325	16.3
N\$1,001–2,000	325	20.6
N\$2,001–4,000	325	26.8
N\$4,001–6,000	325	8.9
N\$6,001 or more	325	18.5
Mean (N\$) ^a	325	3,970

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aTop-coded at the third standard deviation above the mean of non-zero responses to account for outliers.

^bIncludes income from earnings and other sources.

^cEstimated as the sum of earnings, respondent's other income, and income of other household members.

Table A.11. Health behaviors (percentages)

	Sample size	Estimate
HIV/AIDS awareness		
Heard of AIDS	705	86.1
Believe that condoms can reduce the risk of HIV a lot/completely ^a	704	56.8
Children conceived by female respondents		
Became pregnant in previous 24 months	489	21.3
Gave birth after COSDEC training start date	490	16.5
Children conceived by male respondents		
Impregnated a woman in previous 24 months	215	17.7
Fathered a child after COSDEC training start date	214	12.6

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aThe survey asked respondents, "If condoms are used correctly and consistently, how much can they decrease the risk of getting HIV, the virus that causes AIDS: not at all, a little, a lot, or completely?"

Table A.12. Variation in outcomes by enrollee characteristics (percentages, unless otherwise indicated)

	Completed COSDEC training	Employed at survey date	Productively engaged at survey date	Mean earnings in month before survey date [N\$]
Differences by gender:				
Females	85.7	37.5	39.6	847
Males	83.0	50.7	54.0	2307
Difference	2.7	-13.2***	-14.4***	-1459***
Difference with controls	-2.3	-13.5**	-14.3**	-2068***
Differences by education:				
Completed grade 12	86.0	42.2	46.6	1358
Did not complete grade 12	83.9	40.8	41.8	1199
Difference	2.2	1.4	4.8	159
Difference with controls	0.3	2.6	6.0	147
Differences by language group:				
Oshiwambo-speaking	83.6	38.5	42.0	1146
Other language groups	85.9	44.0	45.6	1405
Difference	-2.4	-5.5	-3.5	-258
Difference with controls	-0.3	-6.7	-5.0	-221
Sample size ^a	646	698	698	631

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse for outcome measures. We estimated differences in means using a simple *t*-test (simple differences) and a regression framework with binary controls for COSDEC and course (difference with controls).

*/**/** Difference in means statistically significant at the 10/5/1 percent level of significance using a two-tailed test.

^aSample size is smaller by two observations for the education subgroups because two respondents did not report their education level.

Table A.13. Variation in outcomes by COSDEC course characteristics (percentages, unless otherwise indicated)

	Completed COSDEC training	Employed at survey date	Productively engaged at survey date	Mean earnings in month before survey date [N\$]
Differences by availability of SME unit:				
COSDEC has SME unit	85.2	40.0	42.4	1,204
COSDEC does not have SME unit	84.2	44.3	46.7	1,431
Difference	1.0	-4.4	-4.2	-227
Difference with controls	1.3	-4.6	-5.0	-304
Differences by provision of job attachments:				
Provided job attachments to at least half of trainees	92.2	35.2	37.9	941
Provided job attachments to less than half of trainees	79.5	46.1	48.3	1,552
Difference	12.7***	-10.9***	-10.4***	-611**
Difference with controls	12.6***	-10.1**	-9.6**	-454*
Differences by duration of training:				
Less than 6 months	88.7	45.0	46.7	1,495
More than 6 months	81.1	38.0	41.2	1,076
Difference	-7.6***	-7.1*	-5.6	-419*
Difference with controls	-7.4**	-7.9**	-6.7*	-577**
Differences by skill area:^a				
Traditionally male skill areas	80.1	47.3	51.1	1,661
Traditionally female skill areas	86.6	39.5	41.5	1,159
Difference	6.5**	-7.7*	-9.6**	-502*
Difference with controls	9.0*	3.2	0.9	1,108***
Sample size	646	698	698	631

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse for outcome measures. We estimated differences in means estimated using a simple *t*-test (simple differences) and a regression framework with binary controls for gender, having completed at least 12 grades of formal education, and speaking Oshiwambo at home (difference with controls).

*/**/***Difference in means statistically significant at the 10/5/1 percent level of significance using a two-tailed test.

^aTraditionally male skill areas are bricklaying and plastering, building maintenance, joinery and cabinetmaking, plumbing and pipefitting, and welding and fabrication. Traditionally female skill areas are clothing design, clothing and textile production, food preparation and serving, hairdressing, office administration, and information communication technology.

This page has been left blank for double-sided copying.

APPENDIX B

ROBUSTNESS TO NONRESPONSE WEIGHTS

This page has been left blank for double-sided copying.

In this appendix, we examine the robustness of the estimated means for key outcomes to the inclusion of nonresponse weights. These weights were designed to make the weighted analysis sample reflect the enrollee sample in its distribution across COSDEC courses. To create the weights, we weighted each survey respondent by the inverse of the response rate in the COSDEC course in which they were enrolled. For example, if 80 percent of enrollees in a certain COSDEC course responded to the survey, those individuals received a weight of $1/0.8$. We then top-coded these weights at three standard deviations above the mean to account for outliers and normalized the sum of the weights to equal the number of observations.

The estimated means for key outcomes were very similar with or without weights (Table B.1)—the difference was no larger than 1.1 percentage points for binary outcomes. The lack of sensitivity of the estimated means to the inclusion of weights justifies focusing on the simpler unweighted results in the body of the report.

Table B.1. Key outcomes with and without nonresponse weights (percentages, unless otherwise indicated)

	Sample size	Unweighted mean	Weighted mean
Vocational training:			
Completed COSDEC training	585	85.1	84.8
Employment and productive engagement at the survey date:			
Employed in a paid job	635	39.5	40.6
Engaged in any productive activity ^a	635	42.0	43.0
Earnings in the month before the follow-up survey:			
Gross earnings from self-employment or wages:			
None	582	66.3	65.2
N\$1–1,000	582	6.2	6.1
N\$1,001–2,000	582	9.1	9.2
N\$2,001–4,000	582	11.3	11.9
N\$4,001 or more	582	7.0	7.6
Mean (N\$) ^b	582	1,258	1,340

Source: COSDEC survey.

Note: Sample sizes vary because of item nonresponse.

^aEmployed or enrolled in any vocational training.

^bTop-coded at the third standard deviation above the mean of non-zero responses to account for outliers.

www.mathematica-mpr.com

**Improving public well-being by conducting high quality,
objective research and data collection**

PRINCETON, NJ ■ ANN ARBOR, MI ■ CAMBRIDGE, MA ■ CHICAGO, IL ■ OAKLAND, CA ■
SEATTLE, WA ■ TUCSON, AZ ■ WASHINGTON, DC

MATHEMATICA
Policy Research

Mathematica® is a registered trademark
of Mathematica Policy Research, Inc.